SB 852 by **Siplin**; Healthy Foods Retail Act

The Florida Senate

COMMITTEE MEETING EXPANDED AGENDA

AGRICULTURE
Senator Siplin, Chair
Senator Bullard, Vice Chair

MEETING DATE: Thursday, January 12, 2012
TIME: 8:30 —10:00 a.m.
PLACE: *Mallory Horne Committee Room,* 37 Senate Office Building

MEMBERS: Senator Siplin, Chair; Senator Bullard, Vice Chair; Senators Alexander, Dockery, Garcia, Hays, Montford, and Simmons

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
1	**SB 852** Siplin	Healthy Foods Retail Act; Directing the Department of Agriculture and Consumer Services to establish a financing program to help fund projects that increase access to fresh fruits and vegetables in underserved areas; authorizing the department to contract with other organizations to administer the program; specifying how the funding is to be used; providing who is eligible for funding; providing criteria for project funding and evaluation; requiring an annual report to the Legislature; authorizing available funds to be leveraged to access federal funding; authorizing the department to adopt rules, etc. AG 01/12/2012 BC	
2	Presentation "The Institute for Food Safety: Training Workers for Florida's Agriculture, Aquaculture, and Food Processing Industries" By Dr. Christal Albrecht, President Downtown Campus Florida State College Jacksonville, FL		
3	**Issue Brief 2012-201** (Status of Health-related Consequences to Muck Farm Workers in the Lake Apopka Region)		
4	Other Related Meeting Documents		

The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Agriculture Committee

BILL:	SB 852
INTRODUCER:	Senator Siplin
SUBJECT:	Healthy Foods Retail Act
DATE:	January 6, 2012
REVISED:	

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Weidenbenner	Buford	AG	**Pre-meeting**
2.			BC	
3.				
4.				
5.				
6.				

I. Summary:

This bill makes legislative findings regarding obstacles to a healthy diet, obesity resulting from a poor diet, the effect of inadequate access to retailers selling healthy, affordable foods, and the resulting impact on the health of low income families, children, and elderly people. It provides definitions for certain terms used in the act. The bill requires the Department of Agriculture and Consumer Services (DACS) to establish a financing program, to the extent funds are available, to fund healthy food retailers and it sets guidelines for participation, funding limitations, determination of eligible projects, types of expenditures authorized, requirements to be met by applicant, basis for setting the amount of funding, establishment of controls and compliance monitoring, and legislative reporting. It authorizes funding to be leveraged with other funding and it provides rule making authority for the department to administer this program.

This bill creates unnumbered sections in the Florida Statutes.

II. Present Situation:

Let's Move is a comprehensive initiative aimed at solving the problem of obesity. At its launch in February, 2010, the President of the United States signed a Presidential Memorandum creating a Task Force on Childhood Obesity. Let's Move reports that one in three children in America is overweight or obese and likely to suffer from diabetes at some point in their lives as well as other obesity-related health problems like heart disease, high blood pressure, cancer and asthma.[1] Among other suggestions, the organization has outlined actions to foster healthier food choices in school and recommendations for providing access to healthy, affordable food. In connection

[1] See http://www.letsmove.gov. website. Last visited December 12, 2011.

with this initiative, the nation's leading health foundations have created the Partnership for a Healthier America to facilitate partnerships with States, communities, and the non-profit and private sectors to address childhood obesity.[2]

It is estimated that more than 23 million Americans, more than one-fourth of them being children, live in low-income urban and rural neighborhoods that are more than a mile from a supermarket with access to affordable, quality, and nutritious foods, resulting in many children not eating recommended levels of fruits, vegetables, and whole grains.[3]

PolicyLink is a national research and action institute that was founded in 1999 for the purpose of advancing economic and social equity with a focus on low income communities and communities of color by relying on the experience of and sharing findings and analysis with national and local policymakers.[4] In a publication issued July 20, 2011, Policy Link followed up on a prior report prepared by PolicyLink and The California Endowment, a private health foundation, in 2005.[5] The publication highlights the relationship between obesity and lack of access to healthy, fresh food, and particularly the problem it poses for low-income children and children of color, who face some of the highest rates of obesity. It found the situation to exist in both urban and rural communities. Strategies suggested by the report to develop new healthy food retail opportunities include: create financing sources to develop new grocery stores in low-income neighborhoods; improve small stores; start and sustain farmers' markets; and connect local farmers to low-income consumers. In summary, the PolicyLink report maintains that better access contributes to healthier eating which contributes to lower rates of obesity and diet-related disease. The Policy Link, in conjunction with the Food Trust,[6] reported similar findings in a publication issued March 15, 2010[7] emphasizing that the lack of access to healthy and affordable foods in low-income communities has created "food deserts" due to the abundance of convenience stores and fast food restaurants that sell cheap, high-fat, high-sugar, processed foods while offering few healthy options, with a corresponding high presence of obesity, diabetes, and other diet-related diseases. There is a general agreement about the consequences of the lack of access to healthy foods and suggested solutions range from developing and expanding retail outlets to removing transportation barriers to allow for better access.

At the federal level, the Healthy, Hunger Free Kids Act of 2010[8] reauthorizes expiring provisions of the Richard B. Russell National School Lunch Act and the Child Nutrition Act of 1966 to provide funding for federal school meal and child nutrition programs and increase access to healthy food for low-income children. One of its aims is to ensure that more local foods are used in the school setting by helping communities establish local farm to school networks. On November 30, 2011, bipartisan bills were introduced in both the United States Senate and House

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[2] See http://www.ahealthieramerica.org. website. Last visited December 13, 2011.
[3] First Lady Michelle Obama Launches Let's Move: America's Move to Raise a Healthier Generation of Kids; press release dated February 9, 2010. Found at http://www.whitehouse.gov/the-press-office/first-lady-michelle-obama-launches-lets-move.
[4] See http://policylink.org. Last visited January 3, 2012.
[5] Healthy Food, Healthy Communities, http://www.policylink.org/site/c.lkIXLbMNJrE/b.5158569/k.A334/Publications.htm.
[6] The Food Trust was founded in 1992 as a non profit entity whose goal is to make affordable, healthy food available to all. See http://thefoodtrust.org. Last visited January 3, 2012.
[7] The Grocery Gap;, Who Has Access to Healthy Foods and Why It Matters, www.policylink.org/atf/cf/...BB43-406D.../FINALGroceryGap.pdf.
[8] Public Law 111-296, Dec 13, 2010; found at http://www.gpo.gov/fdsys/pkg/PLAW-111-publ296/pdf.

to establish a Healthy Food Financing Initiative (HFFI)[9] which will, if it becomes law, appropriate $125 million to improve access to healthy foods in underserved areas by providing loans and grants to eligible fresh, healthy food retailers as administered by a National Fund Manager in partnership with local groups, and state and municipal governments.

Several states have adapted financing initiatives aimed at facilitating access to healthy foods in underserved areas.[10] Louisiana adopted the first statewide Healthy Food Retail Act in 2009 contingent upon funding by the state.[11] While there has been no appropriation to fund this program on a statewide basis, the National Policy & Legal Analysis Network to Prevent Childhood Obesity cites the city of New Orleans' use of Community Development Grant Money as a creative way to fund the state's Healthy Food Retail program.[12]

DACS has created the Florida "Farm to School" program to bring nutritious, fresh fruits and vegetables from local farms to schools. DACS is not intended to be a party to any agreement but a source of information to promote opportunities for schools and growers to work together to increase the volume of locally grown produce that is served in school cafeterias and dining halls.[13]

The Junior League of Greater Orlando (League) is a community service organization that created HIP kids (Healthy Informed Playful Kids) to address immediate and long term challenges faced by hungry children. As an outgrowth of that cause, the Chair of the Public Affairs Committee researched nationwide programs aimed at bringing healthy foods into food deserts, defined for their purposes as low-income communities whose closest grocery store or market is at least 1-5 miles from that community resulting in little to no access to fresh fruits and vegetables and other healthy foods.[14] Examples of successful efforts were found in several states. A result was that this bill, which is modeled after the Louisiana Healthy Food Retail Act of 2009, was filed.

III. Effect of Proposed Changes:

Section 1 provides that the act may be cited as the "Healthy Foods Retail Act."

The bill suggests the following legislative findings:

a) Low income families, children, and elderly people face obstacles to a healthy diet when fresh fruits and vegetables and other healthy foods aren't readily available or affordable. National research indicates that these types of residents are most often affected by inadequate access to supermarkets and other retailers that sell healthy foods as well as by high rates of obesity.

[9] S. 1926 and H.R. 3525.
[10] Pennsylvania, see http://www.thefoodtrust.org/php/programs/fffi.php. Site last visited January 3, 2012; Illinois, see http://www.rwjf.org/publichealth/digest.jsp?id=10962. Site last visited January 4, 2012; New York, see http://www.esd.ny.gov/BusinessPrograms/HealthyFoodHealthyCommunities.html. Site last visited January 4, 2012; and New Jersey, see http://www.trfund.com/financing/realestate/NJ_FoodAccessInitiative_HandoutwApp.pdf. Site last visited January 4, 2012.
[11] Chapter 3-D. Healthy Food Retail Act, http://legis.state.la.us/lss/newWin.asp?doc=670617.
[12] Financing Healthy Food Retail & Promoting Physical Activity Opportunities, Manel Kappagoda, JD, MPH, April 9, 2010, see http://www.ncsl.org/portals/1/documents/health/MKappagodaSF10.pdf.
[13] Http://www/florida-agriculture.com/FarmToSchool. Site last visited December 12, 2011.
[14] Telephone conversation with Katherine Martin, Chairperson, December 3, 2012.

b) Obesity, resulting from poor diet and physical inactivity, is the fastest growing cause of disease and death in the United States and especially puts adults and children at risk for developing serious health problems.
c) People who have better access to retail food outlets that sell fresh fruits, vegetables, and other healthy food tend to have healthier diets and lower levels of obesity according to studies.
d) The development of quality retail food outlets creates jobs, expands markets for farmers, and supports economic vitality in underserved communities.
e) The purpose is to establish a program to:
    - provide a source of financing for food retailers in underserved communities;
    - increase access to affordable healthy food;
    - promote sale and consumption of fresh fruits and vegetables, especially those that are locally grown; and
    - support expanded economic opportunities in low-income and rural communities.

The bill provides the following definitions for this act:
a) "Department" means the Department of Agriculture and Consumer Services.
b) "Funding" means grants, loans, or a combination of grants and loans.
c) "Healthy food retailers" means for-profit or not-for-profit retailers that sell high-quality fresh fruits and vegetables at competitive prices.
d) "Program" means a public-private partnership administered by the department to provide a dedicated source of financing for food retailers that provide increased access to the supply of healthy food contemplated by this act.
e) "Underserved community" means a geographic area located in a lower income or high-poverty area with limited access to healthy food retailers.

The bill directs the department to establish a financing program, to the extent funds are available to fund healthy food retailers that provide access to affordable healthy food in underserved communities in accordance with the following guidelines:
a) The department may contract with qualified nonprofit organizations or community development financial institutions to administer the program, raise matching funds, provide marketing support, evaluate applicants, make award decisions, underwrite loans, and monitor compliance and impact as well as coordinate with complementary nutrition assistance and educational programs.
b) Funding shall be provided on a competitive, one-time basis for eligible projects.
c) Types of projects that may be funded by the program are:
    - new construction of supermarkets and grocery stores;
    - store renovations and expansion and infrastructure upgrades that improve availability and quality of fresh produce;
    - marketing and distribution outlets that enable food retailers in underserved communities to regularly obtain fresh produce; and
    - other projects that meet the intent of this act to create or improve access to healthy food retailers.
d) Specific purposes for which funds may be used, excluding any use for a restaurant, are:
    - site acquisition and preparation;
    - construction costs;

- equipment and furnishings;
- workforce training;
- security;
- predevelopment costs such as market studies and appraisals; and
- working capital for first-time inventory and start-up costs.

e) For-profit or not-for-profit entities, both private and public, may apply for funding.

f) Applicants must meet the following criteria:
- the project must benefit an underserved community;
- a meaningful commitment to sell fresh fruits and vegetables must be demonstrated that will be measured by standards developed by the department;
- vouchers issued by the Supplemental Nutrition Assistance Program (SNAP) must be accepted and clients of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) must be served. For program applicants that are not eligible to be included in either of these two categories, the department shall establish standards to measure a meaningful commitment to serve low-income households.

g) The amount of funding shall be based on the following criteria:
- a demonstrated capacity to successfully implement the project, including relevant experience and likelihood of self-sustainability;
- the ability of applicant to repay debt;
- the degree to which the project requires public funding and the level of need in the area to be served. Consideration may be given to factors that indicate accessibility to retail outlets for low-income residents, such as proximity to public transit lines;
- the degree to which the project will promote sales of fresh produce, especially locally grown;
- the degree to which the project will have a positive impact on the underserved community, including job creation or retention for local residents; and
- other criteria consistent with this act as determined by the department.

h) The department shall establish benchmarks and reporting requirements to make certain the program benefits both rural and urban communities, in addition to establishing monitoring and accountability mechanisms, such as tracking fruit and vegetable sales data.

i) The department shall prepare an annual report for the Legislature for any projects funded.

To the extent practicable, funds described in this act may be leveraged with other funding, including, but not limited to, the New Markets Tax Credits Program, federal and foundation grants, incentives available to Empowerment Zones or Renewal Communities, operator equity, and funding from private sector financial institutions under the federal Community Reinvestment Act of 1977.

The department may adopt rules as necessary to administer this section.

Section 2 provides that this act shall take effect July 1, 2012.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

Private entities and public-private partnerships will benefit in an unknown amount to the extent they are awarded grants and may further benefit from loans and loan terms that facilitate or accelerate the growth or expansion of business opportunities.

C. Government Sector Impact:

DACS is charged with implementing and administering this program and it estimates that it would incur expenditures as shown in the table below. This impact may be offset by an anticipated application fee but the amount of revenue from this source is unknown at this time.

Expenditures		FY 11-12	FY 12-13	FY 13-14
Recurring				
FTEs (3)		$141,430	$141,430	$141,430
Support		$ 15,000	$ 7,500	$ 7,500
Total recurring		$156,430	$148,930	$148,930

The bill provides that the financing program proposed will be established to the extent funds are available. As there is no dedicated appropriation of funds for the program, the establishment of the program will depend upon a reallocation in an undetermined amount of existing department funds.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.

By Senator Siplin

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A bill to be entitled

An act relating to the Healthy Foods Retail Act; providing legislative findings; providing definitions; directing the Department of Agriculture and Consumer Services to establish a financing program to help fund projects that increase access to fresh fruits and vegetables in underserved areas; authorizing the department to contract with other organizations to administer the program; specifying how the funding is to be used; providing who is eligible for funding; providing criteria for project funding and evaluation; requiring an annual report to the Legislature; authorizing available funds to be leveraged to access federal funding; authorizing the department to adopt rules; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Healthy Foods Retail Act.—

(1) This section may be cited as the "Healthy Foods Retail Act."

(2) The Legislature finds that:

(a) When fresh fruits and vegetables and other healthy foods are not easily available or affordable, people, particularly low-income families, children, and the elderly, face serious barriers to eating a healthy diet. National research indicates that residents of low-income, minority, and rural communities are most often affected by inadequate access to supermarkets and other retailers selling healthy food, as

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well as by high rates of obesity.

(b) Obesity, which results from poor diet and physical inactivity, is the fastest growing cause of disease and death in the United States, putting growing numbers of adults and children at risk for developing heart disease, type 2 diabetes, hypertension, certain cancers, and other health problems.

(c) Increasing access to retail food outlets that sell fresh fruits, vegetables, and other healthy food is an important strategy for fighting the obesity epidemic and improving health. Studies have shown that people who have better access to supermarkets and fresh produce tend to have healthier diets and lower levels of obesity.

(d) Developing quality retail food outlets also creates jobs, expands markets for farmers, and supports economic vitality in underserved communities.

(e) The program established pursuant to this section is intended to provide a dedicated source of financing for food retailers operating in underserved communities in this state, in both urban and rural areas; to increase access to affordable healthy food in order to improve diets and health; to promote the sale and consumption of fresh fruits and vegetables, particularly those that are locally grown; and to support expanded economic opportunities in low-income and rural communities.

(3) As used in this section, the term:

(a) "Department" means the Department of Agriculture and Consumer Services.

(b) "Funding" means grants, loans, or a combination of grants and loans.

(c) "Healthy food retailers" means for-profit or not-for-profit retailers that sell high-quality fresh fruits and vegetables at competitive prices, including, but not limited to, supermarkets, grocery stores, and farmers' markets.

(d) "Program" means a public-private partnership established under this section and administered by the department to provide a dedicated source of financing for food retailers that provide increased access to fresh fruits and vegetables and other affordable healthy food for state residents.

(e) "Underserved community" means a geographic area that has limited access to healthy food retailers and is located in a lower income or high-poverty area, or an area that is otherwise found to have serious limitations on access to healthy food.

(4) To the extent funds are available, the department, in cooperation with public and private sector partners, shall establish a financing program that provides funding to healthy food retailers that provide increased access to fresh fruits and vegetables and other affordable healthy food in underserved communities.

(a) The department may contract with one or more qualified nonprofit organizations or community development financial institutions to administer the program, raise matching funds, provide for marketing the program statewide, evaluate applicants, make award decisions, underwrite loans, and monitor compliance and impact. The department and its partners shall coordinate with complementary nutrition assistance and education programs.

(b) The program shall provide funding on a competitive,

one-time basis as appropriate for eligible projects.

(c) The program may provide funding for projects such as:

1. New construction of supermarkets and grocery stores.

2. Store renovations, store expansion, and infrastructure upgrades that improve the availability and quality of fresh produce.

3. Farmers' markets and public markets, food cooperatives, mobile markets and delivery projects, and distribution projects that enable food retailers in underserved communities to regularly obtain fresh produce.

4. Other projects that create or improve access to healthy food retailers and meet the intent of this section as determined by the department.

(d) Funding made available for projects may be used for the following purposes:

1. Site acquisition and preparation.

2. Construction costs.

3. Equipment and furnishings.

4. Workforce training.

5. Security.

6. Predevelopment costs such as market studies and appraisals.

7. Working capital for first-time inventory and start-up costs.

A restaurant is not eligible for funding under this section.

(e) An applicant for funding may be a for-profit or a not-for-profit entity, including, but not limited to, a sole proprietorship, partnership, limited liability company,

corporation, cooperative, nonprofit organization, nonprofit community development entity, university, or governmental entity.

(f) In order to be considered for funding, an applicant must meet the following criteria:

1. The project for which the applicant seeks funding must benefit an underserved community.

2. The applicant must demonstrate a meaningful commitment to sell fresh fruits and vegetables, according to a measurable standard established by the department.

3. Generally, the applicant must accept vouchers issued by the Supplemental Nutrition Assistance Program and be able to serve clients of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The department shall establish an alternative standard for demonstrating a meaningful commitment to making healthy food affordable to low-income households for categories of program applicants that are not eligible to accept vouchers issued under the Supplemental Nutrition Assistance Program or serve WIC clients.

(g) In order to determine the amount of funding to award, project applicants shall be evaluated on the following criteria:

1. Demonstrated capacity to successfully implement the project, including the applicant's relevant experience, and the likelihood that the project will be economically self-sustaining.

2. The ability of the applicant to repay debt.

3. The degree to which the project requires an investment of public funding to move forward, create impact, or be competitive, and the level of need in the area to be served.

Additional factors that will improve or preserve retail access for low-income residents, such as proximity to public transit lines, may also be taken into account.

4. The degree to which the project will promote sales of fresh produce, particularly locally grown fruits and vegetables.

5. The degree to which the project will have a positive economic impact on the underserved community, including creating or retaining jobs for local residents.

6. Other criteria the department determines to be consistent with the purposes of this section.

(h) The department shall establish program benchmarks and reporting processes to make certain that the program benefits both rural and urban communities. The department shall also establish monitoring and accountability mechanisms for projects receiving funding, such as tracking fruit and vegetable sales data.

(i) The department shall prepare and submit an annual report to the Legislature, including outcome data, on any projects funded.

(5) To the extent practicable, funds described in this section may be used to leverage other funding, including, but not limited to, the New Markets Tax Credits Program, federal and foundation grants, incentives available to federally designated Empowerment Zones or Renewal Communities, operator equity, and funding from private sector financial institutions under the federal Community Reinvestment Act of 1977.

(6) The department may adopt rules as necessary to administer this section.

Section 2. This act shall take effect July 1, 2012.

The Institute for Food Safety - *Phase 2*

Biotechnology Program

at Florida State College at Jacksonville

CASEY MARION

Quality Assurance Manager Beaver Street Fisheries

DR. CHRISTAL ALBRECHT

President Downtown Campus Florida State College at Jacksonville

The Institute for Food Safety - *Phase 2*

BEAVER STREET FISHERIES

- Leading supplier of fish and other seafood products to wholesalers, retailers, and food service operators
- Imports from more than 50 countries a wide variety of fresh and frozen seafood, including such products as octopus, shrimp, and frog legs, sold under the Sea Best brand
- Imports lamb products from New Zealand, along with pork and beef though its Florida-New Zealand Lamb & Meat division, which are sold under the Silver Fern brand name
- Warehouse facility covers more than two city blocks
- Alfred and Hans Frisch started the family-owned business as a retail fish shop in 1950

The Institute for Food Safety - *Phase 2*

THE PROBLEM

- Difficult to insure safety of food
  - Chemical, microbial, authenticity, additives
  - Lack of testing facilities
  - Lack of trained technicians
- Increased costs to business
  - Cost of storage while waiting for lab tests performed out of state
  - Cost of having to store inventory longer
- Quality of food deteriorates over time (flavor and appearance)

The Institute for Food Safety - *Phase 2*

PROBLEM EXACERBATED

- Food Safety Modernization Act (FSMA) aka Fizzmah) signed January 2011
- While FSMA critical for protecting consumers, it intensified the existing problems
  - More sampling required
  - More testing required
  - Still not enough labs or technicians – estimate tens of thousands of positions needed

The Institute for Food Safety - *Phase 2*

THE WORKERS NEEDED

- **Field tester** — Even some family farms will fall under FDA with full **FSMA** implementation; Florida identified this as an area of job growth
- **Laboratory** — Currently, nearly $3 billion of microbial testing; projected to be $4.2 Billion by 2015
- **Inspector** — Inspectors check the safety or veracity of components
- **Auditor** — Conduct top-to-bottom reviews of entire plants. Top of the hierarchy of safety jobs

The Institute for Food Safety - *Phase 2*

THE SOLUTION

- Beaver Street Fisheries asked FSCJ for help
- Collaborated on a solution with the College
- Contributed funding
- Helped assemble other industry partners
- Envisioned a public-private partnership

The Institute for Food Safety - *Phase 2*

THE PARTNERS

eurofins

BSF
Beaver Street Fisheries, Inc.®
Seafood Frozen at its Freshest

MAYO CLINIC

DARDEN

ThermoFisher SCIENTIFIC
The world leader in serving science

Employ Florida BannerCenter for Life Sciences

UF

PREFERRED FREEZER SERVICES
Established 1989
Your **Preferred Choice** for Refrigerated Warehousing

BIOFLORIDA
Florida's Bioscience Industry Association

The Institute for Food Safety - *Phase 2*

THE RESULTS

- FSCJ hired architects to design and build a laboratory using state and donor funds
- FSCJ posted RFP to attract industry partner to lab facility
- Eurofins - an International company with over 150 sites in 30 countries was selected to be the fee-for-service food testing lab on the FSCJ campus

The Institute for Food Safety - *Phase 2*

THE RESULTS

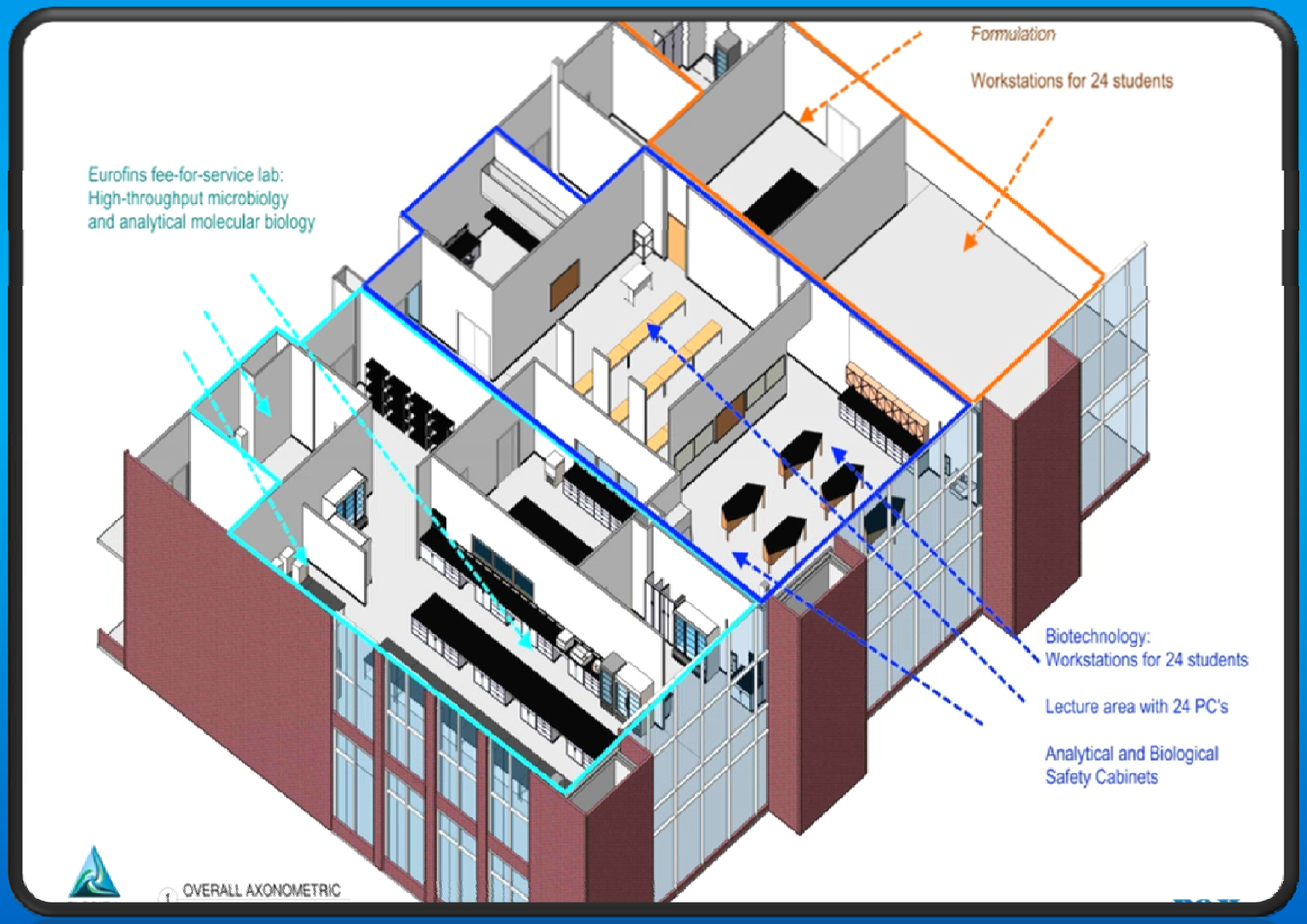
- Eurofins leases space from FSCJ
- When company makes profit, % goes to FSCJ
- Money used for
  - Further development of the program
  - Replacement of worn equipment
  - Student scholarships

The Institute for Food Safety - *Phase 2*

FSCJ FACILITIES

The Institute for Food Safety - *Phase 2*

THE CURRENT SHARED FACILITY



The Institute for Food Safety - *Phase 2*

THE CURRICULUM

- IFS Biotech Program first offered in Fall 2010
  - Curriculum includes instruction in Chain of custody, QC, Media prep, Sample prep, Advanced Instrumentation and Microbial identification techniques, Pathogen detection using FDA and USDA techniques, Enumeration tests and more
- Students job shadow from first day
- Internship at end of program
- Students hired by Eurofins and other local companies

The Institute for Food Safety - *Phase 2*

ADVANCED INSTRUMENTATION

- **Gas Chromatograph** - separates and identifies complex organic mixtures: Example: the determination of contamination of seawater by oil spills

- **High Pressure Liquid Chromatograph** – used extensively in the identification and quantitation of food contaminants

- **Polymerase Chain Reaction MasterCycler** - used to amplify pieces of DNA

The Institute for Food Safety - *Phase 2*

ADVANCED INSTRUMENTATION

- **Real-time PCR** – used to rapidly amplify pieces of DNA for identification

- **Genetic Sequencer** - normally used in research and large universities. This instrument was the only one in the State Colleges in Florida when purchased in 2010. This is essential in the determination of the DNA sequence. Example: used to determine species substitution in the market place (Catfish for Chilean Sea Bass)

- **Stomacher** - a sample preparation device which duplicates the action of the stomach on various food products

The Institute for Food Safety - *Phase 2*

THE STUDENTS

- # of students has doubled since start of program: 35 to 77
- 10 graduates since the start of program
- Graduates from first year of program working in industries such as Mayo Clinic, Beaver Street Fisheries, Nemours, Eurofins, and elsewhere

The Institute for Food Safety - *Phase 2*

THE GRADUATES

- **Mayo** - Neuroscience and Cancer Cell Biology
  - Research biotech positions
- **Nemours Research Department** - Biomedical Laboratory Analyses
  - Research Biotech position
- **Eurofins Analytical Laboratory** - located at FSCJ
  - Food safety analysis
- **Beaver Street Fisheries**
  - Food safety (intern)

The Institute for Food Safety - *Phase 2*

THE FUTURE

- When FSMA is fully implemented – tremendous demand for trained technicians
- FSCJ has launched a capital campaign to build a larger facility to increase capacity to meet needs
- Seeking NSF grant to replicate model in other states:
  - CA – City College of San Francisco (produce)
  - NY – Tompkins Cortland Community College (dairy & wine)
  - NC – Forsyth Technical College (agricultural Feed)

The Institute for Food Safety - *Phase 2*

THE FUTURE

- Eurofins Jacksonville lab is in a position to support local food industries such as Beaver Street Fisheries and others
- FSCJ program is in position to supply needed technicians

The Institute for Food Safety - *Phase 2*

THE CONCLUSION

- IFS at FSCJ can respond to workforce training needs as companies recognize the rigor of the new regulations
- IFS at FSCJ is good for Florida
  - Increase consumer food safety
  - Increase trained workforce
  - Curriculum available statewide

The Institute for Food Safety - *Phase 2*

The Florida Senate

Issue Brief 2012-201 *December 14, 2011*

Committee on Agriculture

STATUS OF HEALTH-RELATED CONSEQUENCES TO MUCK FARM WORKERS IN THE LAKE APOPKA REGION

Statement of the Issue

Lake Apopka, located 15 miles northwest of Orlando,[1] is Florida's fourth largest lake.[2]

During the 1940s, the State of Florida gave away thousands of acres of wetlands along the north shore of Lake Apopka to encourage row crop, or "muck," farming operations on the fertile peat soils.[3] During World War II, in an effort to increase crop production to support the war effort, the northern marshlands of the lake were drained to expose the rich muck soil bottom.[4] A series of dikes and levees was constructed to separate some 20,000 acres of land from the lake itself.[5] This area was cultivated for the agricultural production of vegetables, including corn, carrots, cucumbers, radishes, and lettuce.[6] According to the St. Johns River Water Management District, 35 large and small farms worked the north-shore muck.[7] The farms employed about 2,500 workers at peak season.[8]

Over time, pollutants entered Lake Apopka and it became Florida's most polluted large lake.[9] The decline of Lake Apopka can be traced to the loss of 20,000 acres of wetlands along the lake's north shore to farming operations in the 1940s, agricultural discharges laden with phosphorus until the late 1990s, treated wastewater discharges from shoreline communities prior to the 1980s, discharges from citrus processing plants prior to the 1980s,[10] organic compounds from nearby fiberglass and plastics manufacturing companies, and other industries located within the community, two local industrial landfills, two Superfund sites on Lake Apopka, and a medical waste incinerator.[11] Additionally, in 1947, a hurricane destroyed most native aquatic vegetation and stirred up the bottom sediments.[12] The increased nutrients caused an increase in algae production and the suspended sediments turned the lake water cloudy and prevented sunlight from reaching underwater vegetation. Without sufficient sunlight, the submerged vegetation died, resulting in even more nutrient releases to the lake, eliminating the bottom stabilization function of the vegetation and destroying habitat critical to fish and wildlife.[13]

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[1] Industrial Economics, Incorporated and St. Johns River Water Management District, "Final Lake Apopka Natural Resource Damage Assessment and Restoration Plan," (June 2004): 1.
[2] Daniel Canfield, Jr., Roger Bachmann, and Mark Hoyer, "A Management Alternative for Lake Apopka," (2000): 206.
[3] Mary Jane Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," *Nebraska Law Review*, Vol. 87, Issue 4, (2008): 966.
[4] Ron Habin, PhD and Geraldean Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," (May 2006): 30.
[5] Ibid.
[6] Ibid.
[7] Parcels in St. Johns River Water Management District's Lake Apopka Restoration Area, North Shore, as of October 4, 2011.
[8] Ron Habin, PhD and Geraldean Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," (May 2006): 8.
[9] Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," 967.
[10] St. Johns River Water Management District, "Lake Apopka," (2011), Retrieved from http://www.sjrwmd.com/lakeapopka/.
[11] Habin and Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 4.
[12] Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," 967.
[13] Ibid., 968.

The Florida Legislature enacted legislation in 1996 (Chapter 96-207, Laws of Florida) that provided for restoration of the Lake Apopka Basin through acquisition of the land and facilities in agricultural production to reduce a major source of phosphorus pollution to the lake. The intent of the Legislature, as expressed in s. 373.461(1), F.S., was to provide for a fair and equitable program of acquisition of the lands and facilities, with the St. Johns River Water Management District in charge of the buy-out.

Many of the former Lake Apopka farm workers are experiencing significant and life-threatening health problems which they believe to be connected to their exposure to multiple sources of environmental contamination.[14]

This issue brief will review the history of muck farming near Lake Apopka, the efforts to end farming in the region through acquisition of the land used for farming, publications describing the degradation of Lake Apopka, and reports that nonpoint source pollution associated with the degradation of Lake Apopka has caused health problems for some Lake Apopka area farm workers.

Discussion

History of Lake Apopka

The following timeline is a general overview of significant events, relevant to the purpose of this issue paper, which contributed to the changes in the environmental health of Lake Apopka. The timeline is not intended to be comprehensive, but to serve as general information concerning the degradation of the lake, its restoration, and the farm workers who lived and worked around the lake:

1880 – The Apopka-Beauclair Canal was constructed to create a waterway for navigation and agricultural use.[15]

1883 – Lake levels dropped three feet and exposed the sediment surface of the marshes, allowing small farms to spring up around the lake.[16]

1893 – Twelve miles of canal connecting Lake Apopka through Lakes Beauclair, Dora, Eustis, and Griffin were completed which lowered the water surface of Lake Apopka by approximately one meter, exposing the sediment surface of most of the sawgrass marsh on the north shore.[17]

1922 – The Winter Garden Control Facility (sewage treatment plant) was constructed and began releasing effluent into the lake. It served a population of between 1,500 and 3,250. In addition, discharges from nearby citrus packing and processing plants began entering the lake.[18]

1926 – 4A hurricane in September placed 6 to 8 feet of water in the north-shore wetlands.[19]

1940 – Dense growths of aquatic weeds appeared in the lake.[20]

1941 – The Legislature created the Zellwood Drainage and Water Control District which constructed a levee between the north shore marshlands and the lake, causing the lake level to rise two feet above the farm lands.[21]

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[14] Habin, PhD and Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 9.

[15] Friends of Lake Apopka, "Lake Apopka Timeline," (2011): 2.
Schelske, Lowe, Battoe, Brenner, Coveney and Kenney, "Abrupt Biological Response to Hydrologic and Land-Use Changes in Lake Apopka, Florida, USA," *Ambio*, Volume 34, No. 3, (May 2005): 192.

[16] Ibid.

[17] Ibid.

[18] Ibid.

[19] Ibid.

[20] Friends of Lake Apopka, "Lake Apopka Timeline, " 2.
Canfield, Jr., Bachmann, and Hoyer, "A Management Alternative for Lake Apopka," 207.

[21] Ibid.

1942 – Farms began drainage water discharges into Lake Apopka.[22]

1946 – A documented die-off of submerged vegetation began.[23]

1947 – Algal blooms were reported for the first time on Lake Apopka. A hurricane destroyed most native aquatic vegetation and stirred up bottom sediments.[24]

1962-63 – Major fish die-offs were reported.[25]

1964 – Winter Garden sewer treatment plant now serving a population of 5,000, with effluent to Lake Apopka. Effluent enters mile long ditch (channelized Lulu Creek) which also serves Winter Garden Citrus Products plant.[26]

1965 – Almost all former marsh and land on the north-shore of the lake now being farmed, most producing three crops annually. Commercial catfish harvesting stopped because DDT concentration in fish exceeded allowable limits.[27]

1966 – The state threatens citrus plant with legal action over discharges to Lake Apopka. Orange County and Lake County share cost of biochemical study of Lake Apopka ($5,000).[28]

1969 – Winter Garden Citrus Products adds treatment process, reduces strength of effluent discharged to Lake Apopka.[29]

1971-1973 – Outbreak of bacterial disease kills thousands of fish, and many birds, alligators, snakes and turtles, gets nationwide attention. Fish camps begin to disappear.[30]

1977 – Winter Garden Citrus Products completes percolation ponds and spray fields, reduces discharge to cooling water.[31]

1979 – Final Environmental Impact Statement for Lake Apopka restoration project completed by the U.S. Environmental Agency.[32]

Analysis of HB 1609, (1999): 2.

[22] Friends of Lake Apopka, "Lake Apopka Timeline," 2.

St. Johns River Water Management District, "Florida Water Management History: 1900 through 1949." (2011): 2.

[23] Friends of Lake Apopka, "Lake Apopka Timeline," 2.

Industrial Economics, Incorporated, "Final Lake Apopka Natural Resource Damage Assessment and Restoration Plan," 2.

[24] Friends of Lake Apopka, "Lake Apopka Timeline," 2.

Schelske, Lowe, Battoe, Brenner, Coveney and Kenney, "Abrupt Biological Response to Hydrologic and Land-Use Changes in Lake Apopka, Florida, USA," 197-198.

Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," 967.

[25] Friends of Lake Apopka, "Lake Apopka Timeline, 3.

Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," 967-968.

[26] Friends of Lake Apopka, "Lake Apopka Timeline," 3.

Jason Garcia, "Pollution Rises as Talk Lingers on." *Orlando Sentinel*, (May 31, 2004).

[27] Friends of Lake Apopka, "Lake Apopka Timeline," 3.

Jim Thomas, "The Story of Lake Apopka—A Historic Review," *Florida Naturalist*, (1999).

[28] Friends of Lake Apopka, "Lake Apopka Timeline," 3

United States Environmental Protection Agency, "Complete Mix Activated Sludge Treatment of Citrus Process Wastes," (August 1971): 6.

[29] Ibid.

[30] Friends of Lake Apopka, "Lake Apopka Timeline," 4.

Allan Woodward, Franklin Percival, Michael Jennings, and Clinton Moore, "Low Clutch Viability of American Alligators on Lake Apopka," *Florida Scientist*, Volume 56(1), (1993): 54.

[31] Friends of Lake Apopka, "Lake Apopka Timeline," 4.

Canfield, Jr., Bachmann, and Hoyer, "A Management Alternative for Lake Apopka," 207.

1981 – Massive fish kills in Lake Apopka reported. Revised restoration plan proposed which includes a partial drawdown at a cost of $3 million.[33]

1985 – The Legislature created the Lake Apopka Restoration Act of 1985, establishing the Lake Apopka Restoration Council and Technical Advisory Committee, which paved the way for the restoration work to begin. A total of $2.265 million was appropriated to initiate feasibility studies, evaluate restoration techniques, and develop a nutrient budget. The District and the council reviewed a full range of proposals and reported to the Legislature on the plan's development and the consensus for action.[34]

1986 – Comprehensive pilot projects recommended by the Lake Apopka Restoration Council to the SJRWMD were initiated. The development of internal and external nutrient budgets for the lake are begun.[35]

1987 – The Legislature passed the Surface Water Improvement and Management Act. Lake Apopka was named as a priority for restoration, one of seven water bodies so designated statewide.[36]

1993 – Watershed modifications (e.g. farm retention ponds) to reduce nutrient loading began and are presently ongoing as parcels on the former farms are flooded and drainage water discharges are reduced.[37]

1995 – University of Florida researcher, Dr. Louis Guillette, published studies linking reproductive abnormalities of the Lake Apopka alligators to organochlorine pesticides in various peer-reviewed scientific journals.[38] Several small patches of eelgrass were observed near north shore.[39]

1996 – The Legislature passed the Lake Apopka Improvement and Management Act which found it to be in the public interest to save the lake by purchasing all the muck farms to reduce a major source of phosphorus pollution. The SJRWMD was put in charge of the buy-out program.

> s. 373.461(1) FINDINGS AND INTENT.—
> (a) The Legislature has expressed its intent that economically and technically feasible methods be developed to restore the Lake Apopka Basin through the Lake Apopka Restoration Act and the Surface Water Improvement and Management Act. It is the Legislature's intent to enhance and accelerate the restoration process begun by those previous acts of the Legislature.
>
> (c) Acquisition of the lands in agricultural production which discharge phosphorus to Lake Apopka, and their related facilities, would serve the public interest by eliminating the impacts of

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[32] Friends of Lake Apopka, "Lake Apopka Timeline," 4-5.
U.S. Environmental Protection Agency, "Final Environmental Impact Statement for Lake Apopka Restoration Project, Lake and Orange Counties, Florida," (1979), EPA 904/9-79-043.
[33] Friends of Lake Apopka, "Lake Apopka Timeline," 5.
Town of Oakland, Florida, "Oakland Time Line." (2011), retrieved from http://www.oaktownusa.com/oakland-time-line/.
[34] Friends of Lake Apopka, "Lake Apopka Timeline, " (2011): 5.
Industrial Economics, Incorporated, "Final Lake Apopka Natural Resource Damage Assessment and Restoration Plan," (June 2004): 2.
Kevin Spear, "Lake Apopka Cleanup Panel is Disbanded," *Orlando Sentinel*, (January 10, 1990).
[35] Friends of Lake Apopka, "Lake Apopka Timeline," 5.
Ramsey Campbell. "Strain on Water Quality Increasing with Growth," *Orlando Sentinel*, (November 9, 1986).
[36] Friends of Lake Apopka, "Lake Apopka Timeline, " (2011): 5.
Southwest Florida Water Management District, *About the Surface Water Improvement and Management Program*, (2011).
[37] St. Johns River Water Management District, "Water Quality Changes in Lake Apopka, Florida," (March 2010): 3.
[38] Louis Guillette, Jr., Timothy Gross, Andrew Rooney, and Franklin Percival, "Gonadal Steroidogenesis in Vitro from Juvenile Alligators Obtained from Contaminated or Control Lakes, " *Environmental Health Perspective*, Vol. 103, Supplement 4 (May 1995): 31-36.
[39] Friends of Lake Apopka, "Lake Apopka Timeline," 6.
St. Johns River Water Management District, "Water Quality Changes in Lake Apopka, Florida," 13.

> introduction of phosphorus from these sources into the lake. It is the Legislature's intent that a fair and equitable program of acquisition of the lands necessary to achieve the purposes of this section be implemented.

1997 – The Legislature specified how funds were to be used for the buy-out program.

> s. 373.461 (5)(g) PURCHASE OF AGRICULTURAL LANDS.—
> (g)1. The proceeds of sale of tangible personal property authorized by paragraph (f) shall be distributed as follows: 60 percent to Orange County; 25 percent to the City of Apopka; and 15 percent to Lake County.
>
> 2. Such proceeds shall be used to implement the redevelopment plans adopted by the Orange County Board of County Commissioners, Apopka City Commission, and Lake County Board of County Commissioners.
>
> 3. Of the total proceeds, the Orange County Board of County Commissioners, Apopka City Commission, and Lake County Board of County Commissioners, may not expend more than:
> a. Twenty percent for labor force training related to the redevelopment plan;
> b. Thirty-three percent for financial or economic incentives for business location or expansion in the redevelopment area; and
> c. Four percent for administration, planning, and marketing the redevelopment plan.
>
> 4. The Orange County Board of County Commissioners, Apopka City Commission, and Lake County Board of County Commissioners must spend those revenues not expended under subparagraph 3. for infrastructure needs necessary for the redevelopment plan.

1996-1998 – The state and federal government purchased about 13,978 acres of farmland east of the Apopka-Beauclair Canal from 34 large and small landowners, spending $100,939,000. One hundred acres were later surplused, leaving 13,878. In addition to the land, the buy-out included the purchase of farm infrastructure and farm equipment.[40] This left about 2,500 farm workers out of work.[41] Having no use for the farm equipment, SJRWMD sold the equipment at auction, with the money from the sale to be divided among local governments to address the economic impacts of the buy-out to the local economies. Twenty percent of the money the state got when it auctioned off the farm equipment was to be provided for retraining and re-employment of the farm workers.[42]

1998 – Farming and pesticide applications cease with the last farm crop, summer 1998.[43] The St. Johns River Water Management District reported expenditures exceeding $90 million for the acquisition of land and equipment for the Lake Apopka restoration project pursuant to s. 373.461, F.S. Approximately $86 million of the $90 million was for the acquisition of land and equipment for ten farms and equipment for one farm. The 1999-2000 General Appropriations Act proviso language allocated $11 million for the purchase of additional Lake Apopka lands.[44]

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[40] Mike Slayton, St. Johns River Water Management District, information by telephone, July 19, 2011; and
State of Florida Auditor General, "Management of the Acquisition and Disposition of Equipment Related to the Lake Apopka Restoration by the St. Johns River Water Management District and the Florida Department of Management Services," (April 26, 2000): 13.

[41] Habin, PhD and Mathew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 8.

[42] s. 373.461 (5)(g), F.S.

[43] Friends of Lake Apopka, "Lake Apopka Timeline," 7.
Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," 982.

[44] "Management of the Acquisition and Disposition of Equipment Related to the Lake Apopka Restoration by the St. Johns River Water Management District and the Florida Department of Management Services,": 13.

1999 – According to SJRWMD, close to 700 fish-eating birds were found dead on the flooded farm lands. A subsequent 2001 investigation by the U.S. Fish and Wildlife Service revealed that they believed the birds died due to high levels of a combination of organochlorine pesticides.[45]

2002 – The St. Johns River Water Management District Governing Board adopted a new regulation specific to the Lake Apopka Basin which placed severe restrictions on the amount of phosphorous that can be discharged into Lake Apopka or its tributaries.[46]

2007-2010 – After years of studies on residual pesticides, deep soil inversion was begun in the North Shore Restoration area. Testing of fish tissue indicated low levels of pesticides. This is important because if this holds for the necessary time period, it confirms that the soil inversion was successful in that area.[47]

Farm Worker Community

About 2,500 Haitian, Hispanic, Caucasian, and African-American farm workers worked in the Lake Apopka farm fields and the processing and packing houses planting, harvesting, packing and shipping produce to market. This population contained individuals and families of all age groups, including the elderly.[48] Most of them worked the seasons from September to June. The majority of workers were seasonal, many returning to the area year after year. The Lake Apopka farm worker community was a more established community and many lived in the area even during the farms' off seasons. The majority were not migrants and chose to remain in the area after the farm buy-outs rather than relocating to find other work. Many of the farm workers worked for decades on the farms and some even worked generationally, with grandparents, parents and children all having worked on the farms at some point in their lives, or for their whole lives. Though there were established communities of Hispanics and Haitians in the area, in general the Hispanics and Haitians who worked on the Lake Apopka farms were less likely to have put down permanent roots in the Apopka area.[49]

Farm workers, who earned a living from these farming operations for years and even generations, lost their livelihoods when the state purchased the farms from the owners and some, who lived in company-provided housing, no longer had that option.[50] Most Hispanic farm workers relocated to other areas and/or found employment in construction or other industries, and most Haitian farm workers either relocated or began working in other industries after the farms closed.[51] The lifelong residents of the area sought work at day labor pools, temporary services, other agricultural jobs, or other industries far from the Apopka area. Many of the farm workers were too old to find other work and were left with no other source of income. Others, suffering from various health problems, began the process of applying for disability benefits.[52]

Post-Lake Apopka Restoration Job Re-Training

In the fall of 1998, a retraining/re-employment program was implemented for the former farm workers through the federal Jobs and Training Partnership Program, with funds administered by the Central Florida Jobs and

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[45] Industrial Economics, Incorporated, "Final Lake Apopka Natural Resource Damage Assessment and Restoration Plan," (June 2004): 3.
Lab Results Released From Lake Apopka Wildlife Death Investigation. U.S. Fish and Wildlife Service, Southeast Region, Press Release: June 11, 2001.
John Elliot, "Wildlife Ecotoxicology:Forensic Approaches," *Restoration of Lake Apopka's North Shore Marsh: High Hopes, Tough Times, and Persistent Progress*, 199.
[46] Angelo, "Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience," 989.
[47] Friends of Lake Apopka, "Lake Apopka Timeline," 8.
St. Johns River Water Management District, Memorandum to Governing Board, (November 22, 2010).
[48] Jeannie Economos, "Future is Uncertain for Lake Apopka Farmworkers as Layoffs Near," *The Slant*, June 25, 1998.
[49] Jeannie Economos, The Farmworker Association of Florida, email to Senate Agriculture Committee, July 7, 2011.
[50] Habin, PhD and Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 31.
[51] Ibid., 11.
[52] Jeannie Economos, The Farmworker Association of Florida, email to Senate Agriculture Committee, July 7, 2011.

Education Partnership, and in partnership with the Farmworker Association of Florida. Re-training programs such as secretarial, nursing, English as a Second Language and GED classes were offered in the area. Through this education program, small amounts of monetary assistance for childcare and transportation were offered to those participating in the classes. According to the Association, programs did not start until long after the farm workers were unemployed. Because of this, few farm workers were able to take advantage of the programs because many had to leave after the farms had closed to find immediate work. In addition, many of the older farm workers had known nothing but farm work for most of their lives and were not able to find the types of jobs that they could or would re-train to do. Computers were set up to help unemployed workers find jobs, but for workers who were older and/or who were not very literate, or for whom English was not their first language, the use of the computers was not feasible without the aid of a technical assistant. About 70 farm worker families received relocation assistance, most of whom were Hispanic and who had previously lived in company-provided housing through the Federal Uniform Relocation Assistance Act.[53] The farm owners also contributed funds and other resources to assist the displaced farm workers.[54]

2005 - The Farmworker Association of Florida Survey of Lake Apopka Farm Workers

In 2005, the staff of the Farmworker Association of Florida, under the direction of local community leaders and Dr. Ron Habin, an independent anthropologist, who served as the principal investigator for the project, designed and implemented a health survey in which the farm workers were interviewed to assess their health problems and their exposure to pesticides and other environmental contaminants. The Farmworker Association of Florida interviewed 148 former Lake Apopka farm workers, and in May 2006 issued a report titled "Lake Apopka Farm Workers Environmental Health Project, Report on Community Health Survey, May 2006."[55]

The participants of the survey were selected by the following methods:[56]

- Identifying former co-workers of the project leaders and interviewers;
- Consulting a list of displaced Lake Apopka farm workers provided by the Department of Labor during FWAF's project with Central Florida Jobs and Education Partnership (1998-1999);
- Referral of other former Lake Apopka farm workers by survey participants; and
- Word of mouth.

The survey results show that 92 percent of the 148 farm workers surveyed indicated that they were exposed to pesticides in the workplace through such routes as spray from an airplane, pesticide drift, touching plants with pesticide residues, and inhaling pesticides, among others.[57] When asked to characterize the current state of their health, 83 percent stated that they were in either "fair" or "poor" health. Eighty-five percent felt that their exposure to pesticides had affected their health, and 79 percent felt that their exposure to pesticides directly related to their current health problems.[58] No scientific study on the farm workers' health problems could be found that would support the findings in the survey.

Pesticide Regulations

The federal government has regulated pesticides since the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was first passed in 1947. Since then, pesticide products have been subject to federal regulation under FIFRA.[59] Administered by the U.S. Environmental Protection Agency (EPA), FIFRA requires that pesticide products be registered and labeled. Additionally, it requires that applicators of pesticides that may be hazardous

[53] Ibid.
[54] Larry Beasley, PhD, email to Senate Agriculture Committee, August 19, 2011.
[55] Habin, PhD and Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 3.
[56] Ibid., 9.
[57] Ibid., 4.
[58] Ibid., 4.
[59] U.S. Environmental Protection Agency Worker Protection Standard, 57 Final Rule 38102-01, "Legal Authority," (1992): 3.

be certified. This federal regulatory scheme applies to the distribution, sale, or use of pesticides in any state. While the EPA is responsible for regulating, labeling, and packaging, states may regulate pesticide use and sales to the extent that such regulation does not conflict with federal law.[60]

In 1974, EPA promulgated the regulations found at 40 CFR part 170. This part, entitled "Worker Protection Standards for Agricultural Pesticides," dealt only with the pesticide-related occupational safety and health of "farm workers performing hand labor operation in fields after ground (other than those incorporated into the soil), aerial, or other type of application of pesticides." Part 170 consisted of four basic requirements: (1) A prohibition against spraying workers and other persons; (2) a general reentry interval for all agricultural pesticides prohibiting reentry into treated fields until the sprays had dried or dusts had settled and longer reentry intervals for twelve specific pesticides; (3) a requirement for protective clothing for any worker who had to reenter treated fields before the specific reentry period had expired; and (4) a requirement for "appropriate and timely" warnings.[61]

In August, 1992, the EPA revised the Worker Protection Standard (WPS); see 40 CFR Part 170. The WPS is designed to protect a labor force of 3.9 million exposed either directly or indirectly to pesticides as a result of their occupations on farms, in forests, in nurseries, and in greenhouses, or in commercial pesticide-handling operations. This work force includes 1.4 million hired workers and handlers on farms, 92,000 hired workers and handlers in nurseries and greenhouses, and 10,000 hired workers and handlers in forests. There are also 38,000 commercial handlers who handle agricultural-plant pesticides. In addition, 2.36 million agricultural-establishment operators and unpaid workers (presumably family members) handle agricultural-plant pesticides or perform tasks related to the production of agricultural plants on farms, nurseries, and greenhouses.[62]

The Federal Food, Drug, and Cosmetic Act (FFDCA) requires EPA to set tolerances, or maximum residue limits, for pesticide residues on foods. It further requires the EPA to make a finding that the tolerance is "safe." Safe is defined as meaning that there is a "reasonable certainty that no harm will result from aggregate exposure to the pesticide residue." To make the safety finding, EPA considers, among other things: the toxicity of the pesticide and its break-down products, aggregate exposure to the pesticide in foods and from other sources of exposure, and any special risks posed to infants and children. Some pesticides are exempted from the requirement to have a tolerance. EPA may grant exemptions in cases where the pesticide residues do not pose a dietary risk under reasonably foreseeable circumstances.[63]

Likewise, the state of Florida has regulated the distribution, sale, and use of pesticides since 1965.[64] The Department of Agriculture and Consumer Services is responsible for enforcing the state's version of the federal laws, called the "Florida Pesticide Law." The state law is intended to protect people and the environment from the adverse effects of pesticides. To that end, the state has established the Pesticide Review Council. This council advises the Commissioner of Agriculture regarding the sale, use, and registration of pesticides within the state and serves as a forum for the coordination of pesticide-related activities.[65]

According to the Florida Department of Agriculture and Consumer Services, prior to the inception of the Worker Protection Standard, the department relied on language that was stated on pesticide labels and could enforce that language through s. 487.031(10), F.S. It states that it is unlawful for any person to use any pesticide, including restricted-use pesticide, or to dispose of any pesticide containers in a manner other than as stated in the labeling or on the label or as specified by the department or the U.S. Environmental Protection Agency.[66]

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[60] The Environmental & Land Use Law Section of the Florida Bar, "Pesticide Regulation in Florida," Retrieved from http://www.eluls.org/pest_reg.html.

[61] U.S. Environmental Protection Agency Worker Protection Standard, 57 Final Rule 38102-01, "History of WPS," (1992): 4.

[62] EPA Worker Protection Standard, 57 FR 38102-01, "Regulatory Requirements," (1992): 74-75.

[63] U.S. Environmental Protection Agency, "Summary of the Federal Food, Drug, and Cosmetic Act," (2002), Retrieved from http://epa.gov/lawsregs/laws/ffdca.html.

[64] Chapter 487, F.S.

[65] The Environmental & Land Use Law Section of the Florida Bar, "Pesticide Regulation in Florida," Pesticide Regulation in Florida," Retrieved from http://www.eluls.org/pest_reg.html.

[66] Craig Bryant, Department of Agriculture and Consumer Services, email to Senate Agriculture Committee, September 6,

The department indicates that the labels prior to WPS contained a version of the following statement: "It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations." Prior to WPS, the department would cite s. 487.031(10), F.S., or reference that part of the label or both if a violation regarding exposure to agricultural workers was identified. Labels also contained specific language that prohibited the re-entry of agricultural workers for a specified length of time into fields that had been treated with a pesticide.[67]

Originally the purpose of pesticide laws and regulations was to protect consumers from fraudulent claims about product performance, as well as to provide directions for application and safe use. Over the years, the focus has evolved to include the protection of health and the environment, and assuring that farm workers have safe working conditions.[68]

2004 - St. Johns River Water Management District Report on Lake Apopka Soil Testing

In 2004, SJRWMD contracted with MACTEC Engineering and Consulting, Inc., to complete a Feasibility Study for a portion of the Lake Apopka North Shore Restoration Area (NSRA) located on the northern shores of Lake Apopka. The purpose of the feasibility study was to summarize the nature and extent of contamination and risks posed by organochlorine pesticides in soil, and to evaluate remedial alternatives that would permit planned restoration of wetlands that had been drained for agricultural use between 1941 and 1985. The feasibility study was performed using procedures adapted from U.S. Environmental Protection Agency guidance for performing feasibility studies for contaminated sites.[69]

Extensive sampling revealed that toxaphene and dichlorodiphenyldichloroethylene (DDE) were the most prevalent organochlorine pesticides followed by dichlorodiphenyltrichloroethane (DDD), dieldrin, DDT, chlordane compounds, and endosulfan II.[70]

2006 – Community Survey of Residents of Lake Apopka Communities

A community survey was conducted between February and July, 2006, with residents of communities adjacent to Lake Apopka in Lake and Orange Counties. The purpose of the survey was to assess perceptions of the community, health, and environmental issues that residents face in their communities. This study was funded by the University of Florida School of Natural Resources and the Environment, and was a collaboration between the Farmworker Association of Florida, the University of Florida College of Public Health and Health Professions, and the University of Florida Center for Governmental Responsibility. More than 250 people participated in the survey. The primary focus of the study was the Orange and Lake County residents who live near Lake Apopka. The sample was not population-based,[71] but drawn from respondents gathering at local community centers, medical centers and clinics, nursery schools, continuing education programs, churches, and with fishers on Lake Apopka and adjacent streams.[72]

2011.
[67] Ibid.
[68] U.S. Environmental Protection Agency, "Agricultural Pesticides," Retrieved from http://epa.gov/agriculture/ag101/croppesticideuse.html.
[69] MACTEC Engineering and Consulting, Inc., "Lake Apopka North Shore Restoration Area Feasibility Study," (January 2005): i.
[70] Ibid., 1-6.

[71] Natalie Freeman, Joan Flocks, and Jeannie Economos, "The Environmental Health Needs Assessment in Lake Apopka Communities," (May 2007): 2.
[72] N. Freeman, M. Schuck, Z. Finch, E. Economos, S. Roberts, and J. Flocks, "Assessment of Residents' Environmental Health Perceptions," *Epidemiology*, Volume 17, Issue 6, (November 2006): S451.

Most of the respondents were young (47% under the age of 35), the majority (66%) was female, and the gender proportions did not vary greatly across ethnic groups.[73] Respondents reported a wide range of occupations and work activities. Primary reported work activities were homemaker, agriculture, and construction. Numerous individuals indicated multiple jobs. Only 23% of the respondents were over the age of 50 and only 9% were over the age of 65. While this is representative of the age distribution in Orange County, it under-represents the older population found in Lake County.[74] Survey questions inquired about the availability and quality of services within the community and what the respondent perceived as community needs. There were a total of 49 topics in the survey that addressed these various services and needs. Economic conditions appeared to drive many of the respondents' concerns. The most prevalent community concerns focused on low wages, local drug trafficking, and lack of access to dental care, health insurance and affordable housing. Many residents also raised concerns about gangs in the communities, a topic not addressed in the survey.[75]

Concerns about low wages, job availability, and access to health care were greatest among those who lacked health insurance. Concerns about access to dental care and affordable housing were greater among those with at least a high school diploma. Concern about local drug trafficking was also greater among those with at least a high school diploma, although for all groups it was a major concern. In contrast, concerns about job availability and utility costs were consistent across all groups.[76] Most people were concerned about access to dental care.[77]

Traffic congestion was the most frequently cited environmental concern. The environmental health issues which originally prompted this study (that is, issues related to health effects caused by environmental contamination) were of more concern for men than for women. Men were more likely to express concern about fishing and hunting conditions around Lake Apopka than were women. Proximity to Lake Apopka was not associated with concern about exposure to pesticides or environmental concerns other than fishing conditions. While some individuals were aware of potential environmental hazards in their communities, such as the garbage dump or contaminants from other sources, most of the concerns focused on more immediate issues such as traffic congestion and lack of street lights. About half of the respondents raised concerns about drinking water quality.[78]

Survey respondents were asked what they believed the most important health concerns in their communities. Thirty-four topics were provided in the questionnaire and respondents could also add others. Of the 34 topics, the most important concerns were drug and alcohol abuse (37%), diabetes (35%), and dental problems (34%). Other health concerns included allergies, hypertension, asthma, and pneumonia/flu. Respondents did not know if lupus and autoimmune diseases were concerns, yet there are active lupus programs in Orange County and anecdotal evidence of high prevalence rates of autoimmune disease in the area.[79]

The report concluded that survey respondents revealed many concerns that could be addressed through community actions or discussions with municipal and county government. These include concerns about drug trafficking, gangs, and lack of street lights. Traffic congestion may also be addressed at a community level. Concerns about access to health and dental care may be address in collaboration with the Orange and Lake County Health Departments or the University of Florida dental clinic in the Apopka area.[80]

The Orange County Department of Health received funding in 2006 through a Protocol for Assessing Community Excellence in Environmental Health (PACE-EH) grant to conduct the Environmental Health Issue Survey.[81] PACE-EH requires that surveys be self-reported by the community.[82] Community activists interviewed 276 respondents in churches, community centers and door-to-door. The survey identified the priority environmental

[73] Freeman, Flocks, and Economos, The Environmental Health Needs Assessment in Lake Apopka Communities, 4.
[74] Ibid., 5.
[75] Ibid., 7.
[76] Ibid., 7.
[77] Ibid., 8.
[78] Natalie Freeman,, Joan Flocks, and Jeannie Economos, "The Environmental Health Needs Assessment in Lake Apopka Communities," 10.
[79] Ibid., 11.
[80] Ibid., 13.
[81] Florida Department of Health, "Department of Health: Related Activities for Apopka, FL," (2006-2011): 1.
[82] Orange County Health Department , "PACE-EH Progress Report," (April, 2007): 2.

and community health and safety issues that were of most concern to the Lake Apopka community. Twenty nine issues were identified as environmental health concerns. The top two concerns were the need for more medical and dental clinics and the need for more medical specialty care.[83]

Apopka Area Health Care Services Delivery System

In 1973, four nuns founded what is now the Community Health Center, Inc. The mission of the original clinic was to give the Apopka area migrant workers and elderly access to affordable health care.[84] They opened a farm workers clinic in a trailer that was staffed by a doctor, nurse and an assistant. In 1978, the first permanent health center, the Apopka Family Health Center, was constructed in Apopka and continues to provide care to this day as part of the clinics in the Community Health Center, Inc., network.[85] It provides medical care, preventive dental care, health education and promotion, health assessments and screening, pharmaceuticals, laboratory, and X-ray services. Medical providers include physicians certified in Family Practice, Pediatrics, Obstetrics/Gynecology, and Internal Medicine.[86] According to the Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey, area health care clinics and local health department facilities need to have on staff specialists to address the muck farm workers' specific health needs, such as, dermatologists, rheumatologists, endocrinologists, and auto-immune specialists.[87]

The Orange County Department of Health, Environmental Health Division, also works with community leaders and other service providers, such as the local community health center, to try to improve access to primary and specialty health and dental services and nutrition education. It employs approximately 641 professional and paraprofessional staff serving an estimated population of 1.2 million. These staff include: board certified physicians, registered nurses, advanced registered nurse practitioners, certified nurse midwives, dieticians, epidemiologists, social workers, and various other heath care workers, disease intervention specialists, health educators, and environmental health specialists.[88] It has an office in Apopka that provides a Women, Infant and Children's program, Vital Statistics, and Healthy Start services. Two Environmental Health Services staff are also at this location.[89]

In 1998, the Greater Florida Chapter of the Lupus Foundation of America established a local office in Apopka because more and more people in the area were being diagnosed with the disease.[90] The Lupus Foundation of Florida's Apopka branch office holds support group meetings every other month on the fourth Saturday of the month to provide information to persons with Lupus and their relatives.[91]

Proposed Funding for Health Care for Lake Apopka Area

The Legislature included a $500,000 appropriation in the 2011 General Appropriations Act to address rural and minority health services in Apopka;[92] the specific appropriation was vetoed by Governor Scott.[93] This budget item would have allowed the Apopka Family Health Center to bring in specialists such as rheumatologists, dermatologists, endocrinologists, nephrologists, and laboratory technicians to treat the serious, chronic health problems being experienced by the uninsured or underinsured members of the community. The appropriation

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[83] Ibid., 1.
[84] Community Health Centers, Inc., "2007-2008 Annual Report."
[85] Community Health Center, Inc., "History," Retrieved from http://chcfl.org/about/history/ .
[86] Community Health Center, Inc., "Medical Services," Retrieved from http://chcfl.org/services/medical/ .
[87] Habin, PhD and Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 28.
[88] Orange County Health Department, "Annual Report," (2010): 4.
[89] Florida Department of Health, "Department of Health: Related Activities for Apopka, FL," (2006-2011): 1.
[90] Habin, PhD and Matthew, "Lake Apopka Farmworkers Environmental Health Project Report on Community Health Survey," 21.
[91] Telephone conversation on September 6, 2011, with Lupus Foundation staff person.
[92] Chapter 2011-69, Section 3, Specific Appropriation 434, pp. 83 & 84.
[93] Veto Message for Senate Bill 2000, 2011-2012 General Appropriations Act, pp. 83 & 84.

would also have provided transportation services for patients needing treatment and would have provided financial assistance for prescription medications.