About me...

KnowYourFishFarm.Info

GoodFoodLa.org
“In a single lifetime, the world has changed more than in all of human history combined.”

Jonathan Foley
California Academy of Science
Traditional planning:
   “What is most likely to happen?”

Planning for uncertainty asks, instead:
   “What has already happened that will create the future?”

- Peter Drucker
Infrastructure

Our transportation and water infrastructure systems were designed in the early to mid-20th Century.

What assumptions on which those investments were based, are no longer applicable?
What do these have in common?
20th Century California

1892

1948

1955

1963

1978

Disneyland Announcement

OPENS MONDAY JULY 18

WALT DISNEY'S MAGIC KINGDOM

The World's Most Fabulous Wonderland
Comes to Life in Anaheim, California

For the first time in the history of motion pictures, you will join the incomparable Walt Disney in his newest, greatest adventure: Disneyland! Come see it, and you'll never forget Disneyland! A wonderful, magical experience for the whole family, Disneyland is the most exciting place on Earth!
Percentage of overweight and obese adults with BMI greater than 25, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>1980</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
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<td>20</td>
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<tr>
<td>India</td>
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<tr>
<td>Japan</td>
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<td>Mexico</td>
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<td>South Africa</td>
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<td>UK</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>US</td>
<td>40</td>
<td>60</td>
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</tbody>
</table>

Source: Overseas Development Institute
TO PRODUCE 1 POUND OF MEAT IT TAKES...

- **Beef**
  - Gallons of Water: 1.799
  - Pounds of Grain: 6.6
  - Pounds of CO2: 15

- **Lamb**
  - Gallons of Water: 0.731
  - Pounds of Grain: 3.1
  - Pounds of CO2: 16

- **Goat**
  - Gallons of Water: 0.127
  - Pounds of Grain: 2.9
  - Pounds of CO2: 13

- **Pork**
  - Gallons of Water: 0.576
  - Pounds of Grain: 4.2
  - Pounds of CO2: 6.75

- **Rabbit**
  - Gallons of Water: ?
  - Pounds of Grain: ?
  - Pounds of CO2: ?

- **Chicken**
  - Gallons of Water: 0.468
  - Pounds of Grain: 4.2
  - Pounds of CO2: 3.37

- **Grasshopper**
  - Gallons of Water: ?
  - Pounds of Grain: ?
  - Pounds of CO2: ?

Image courtesy of Bloomberg.com
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1948
1947 – Nation’s first Air Pollution Control District established in Los Angeles; Governor Warren signs law to create them statewide

1948 – Cal Tech researcher links smog to automobiles

1961 -- The first automotive emissions control technology in the nation mandated by the California Motor Vehicle State Bureau of Air Sanitation

1966 -- Auto tailpipe emission standards were adopted by the California Motor Vehicle Pollution Control Board. They were the first of their kind in the nation.
Franklin D. Roosevelt  
1936

“The history of every Nation is eventually written in the way in which it cares for its soil. The United States, as evidenced by the progressive public opinion and vigorous demand which resulted in the enactment of this law, is now emerging from its youthful stage of heedless exploitation and is beginning to realize the supreme importance of treating the soil well.”
Healthy Neighborhood Market Network

- Product Handling & Storage
- Marketing
- Merchandising
- Store Design & Layout
- Brand Strategy
- Fresh Food Profitability
- Use of CalFresh
- Sourcing & Supplier Relations
- Energy Efficiency
- Human Resources & Management
- Accounting & Bookkeeping
- Market Intelligence
- Customer Service
- Community Relations
- Value of Organic and Local Foods
Healthy Food Retail

Community Market Conversion
- Provide initial technical, marketing & business training for stores interested in conversion
- Develop and plan local sourcing/cooperative purchasing model

Basic produce installation from CRA/LA’s Community Market Conversion Program Pilot.
Estimated Impact of Store Conversion: 13,500 households with expanded food access
GoodFoodPurchasing.org

“Governments have few sources of leverage over increasingly globalized food systems - but public procurement is one of them.”

When sourcing food for schools, hospitals and public administrations, Governments have a rare opportunity to support more nutritious diets and more sustainable food systems in one fell swoop.

- Olivier De Schutter, UN Special Rapporteur on the Right to Food (2014)

The Center for Good Food Purchasing
Making Good Food for All Possible.
Core Values

**VALUES SHAPE POLICY**

**NUTRITION**
Promote health and well-being by offering seasonal fruits and vegetables, using whole grains, reducing salt and added sugars, and eliminating the use of deep frying.

**ENVIRONMENTAL SUSTAINABILITY**
Source from producers that employ sustainable production systems that reduce or eliminate synthetic pesticides and fertilizers; avoid the use of hormones, antibiotics, and genetic engineering; conserve soil and water; protect and enhance wildlife habitat and biodiversity; and reduce on-farm energy consumption and greenhouse gas emissions.

**LOCAL ECONOMIES**
Support small and mid-sized agricultural and food process operations within the local area or region.

**VALUED WORKFORCE**
Provide safe and healthy working conditions and fair compensation for all food chain workers and producers from production to consumption.

**ANIMAL WELFARE**
Provide healthy and humane care for livestock.
Metrics drive results

MEASURING IMPACT

Since implementation in 2012, the Good Food Purchasing Program has demonstrated the following impact in Los Angeles Unified School District:

- **LOCAL**
  - $12M in new local produce purchases

- **SUSTAINABLE**
  - 19.6M gallons of water saved per week via Meatless Mondays

- **FAIR**
  - 150 new well paying jobs created along supply chain in processing & manufacturing

- **HEALTHY**
  - Reformulated products including low-sodium bread without high fructose corn syrup, made from 100% sustainable, local wheat

- **HUMANE**
  - 15% reduction in meat purchases; commitment to sourcing 100% antibiotic-free chicken by December 2016
THE POWER OF SCALING-UP

Impact on School Meals
LA USD = 716,000 daily meals
- Austin independent School District
- Chicago Public Schools
- Long Beach Unified School District
- Los Angeles County
- Minneapolis & St. Paul School Districts
- New York Public Schools
- Oakland Unified School District

PROJECTED NEAR-TERM REACH:
1,497,047 DAILY MEALS

SCHOOL FOOD PROCUREMENT:

THE NATIONAL SCHOOL LUNCH PROGRAM

$13 billion in federal dollars spent on lunches annually
• Nearly 100,000 schools serve lunches each day to 30.5 million students
• 19.8 million free lunches; 2.2 million reduced price; 8.5 million full price
• 5 billion lunches served annually
Know Your Fish Farm
World Farmed Fish and Beef Production, 1980-2012
US and World Aquaculture Production, 2012

- **China**: 61.4%
- **India**: 7.8%
- **Vietnam**: 4.5%
- **Indonesia**: 3.8%
- **Bangladesh**: 2.2%
- **Thailand**: 2.1%
- **Egypt**: 1.5%
- **Norway**: 1.7%
- **Myanmar**: 1.4%
- **Philippines**: 1.2%
- **United States**: 0.8%
- **Other**: 11.52%

**US is 3rd largest consumer of seafood**

**US imports of fish are second to imports of petroleum**
Aquaponics System
Aquafeed: a $25 billion market

Fishmeal
Increasing price due to overfishing

Soybean protein isolate
Low digestibility, lack of nutrients

Insects and Algae
High digestibility, proper nutrition profile
Raise Black Soldier Fly Larvae using organic waste

Emerging Concept

Native in all 50 states
Consumes organic waste
Rapid lifespan and growth
Natural food for chickens and fish
Mark Cuban Invested In A Startup That Feeds You Crickets

By Bernhard Widmann

Last night on Shark Tank, Mark Cuban invested in a sustainable, nutritional bar fueled by cricket flour.

Will Americans Buy Bug Snacks? Maybe ... If They're Made Right

By Claire Martin

Jiminy Cricket! Bugs Could Be Next Food Craze

By Claire Martin

Alibaba's Founder on Why His Company Is Killing It

By Christopher Kang

In October 2017, Megan Miller walked out of a San Francisco pet store carrying a bag filled with mealworms squirming in soil. When she arrived at her apartment, she took them straight to her kitchen.
Based on a working list of 168 regional food hubs identified by the National Food Hub Collaboration.
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Back to the Future