Urban Agriculture and the Drought

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Our Research

Our focus was “community serving” urban agriculture sites.

We reviewed:

• California state water restrictions

• Los Angeles City water restrictions

• CA Model Water Efficient Landscape Ordinance (MWELO)

• Urban agriculture and policy landscape

• Survey of local Los Angeles gardens re: water use
Core Findings

• Los Angeles City Emergency Water Ordinance does not clearly distinguish types of landscapes
  • i.e. food vs. grass growing

• Lack of clear guidance to community serving urban agriculture sites
Urban Agriculture

• 1,200 documented sites in L.A. County

• Increased access to healthy food for low-income individuals

• Environmental Benefits
  • Potential to decrease Urban Heat Island effect
  • Green infrastructure assists in water management
Policy Support for Urban Agriculture in California and Los Angeles

• Urban Agriculture Specific Policies
  • UA Incentives Zone Act
  • Curbside Planting Ordinance

• Pro-Urban Agriculture Statements
  • Los Angeles Sustainability pLAN
  • Health Element to City’s General Plan
  • Schedule F, L.A. Department of Water and Power
California Drought Response

- Restrictions target *unreasonable* uses of water
  - Average of 23,725 gallons/year used to water outdoor landscapes of single-family homes

- California State
  - Governor Jerry Brown Executive Order B-29-15, 4/2015
    - Directs State Water Board to implement % reduction
Los Angeles County Response

- Subject to % reduction as determined by State Water Board
  - Based on 2013 water use

- Malibu to reduce by 36%
Los Angeles Drought Response

• Mayor Eric Garcetti Executive Order #5, 10/2014
  • Designates Los Angeles Department of Water and Power as authority on water conservation
  • Asks Angelenos for voluntary reduction in water use

• Los Angeles Department of Water and Power Emergency Water Conservation Plan
  • Mandatory drought restrictions applicable to L.A. city water users
Ordinance: Water Restrictions

• “No landscape irrigation shall be permitted...”
  • 3-day per week maximum

• “Watering times shall be limited to...”
  • Non-conserving nozzles (spray head sprinklers and bubblers)
    • 8 minutes per watering day per station, 24 total min/week
  • Conserving nozzles (standard and multi-stream rotary heads)
    • 15 minutes per cycle, up to 2 cycles per day per station, 90 total min/week

• “These provisions do not apply to drip irrigation supplying water to a food source or to hand-held hose watering of vegetation, if the hose is equipped with a self-closing water shut-off device, which is allowed every day except between the hours of 9am and 4pm”
Urban Agriculture during Drought

- Food growing only mentioned once
  - Fewer restrictions for use of drip irrigation for food growing

- Undefined/ambiguous terms
  - Landscape irrigation
  - Vegetation

- Drip irrigation preferred
Urban Agriculture during Drought – Pilot Survey

• 23 responses (limited, self-selected respondents)

• Lack of a uniform understanding of applicable water regulations

• 7/23 use drip irrigation

• More extensive research needed
Example Water Conservation Techniques in UA

• Drip irrigation

• Rain catching systems

• Mulching

• Greywater use
  • Infrastructure costly to install
  • Only permitted for subsurface irrigation for non-root crops or edible parts of food crops
Preliminary Recommendations

• Incorporate more comprehensive discussion of food growing in LADWP Emergency Water Conservation Plan

• Facilitate stakeholder input and communication

• Clarify applicability of water use restrictions

• Incentivize drip irrigation installation at community serving sites

• Continue to investigate the potential to use greywater for landscape irrigation and urban agriculture
Questions?

Comments?