The future of water management

Patrick Atwater, CaDC Project Manager
Drew Atwater, Director of Planning MNWD
Mission: provide tools and analytics to support water managers in meeting their reliability objectives
The California Data Collaborative
Water managers working together to pioneer new data infrastructure

Current members

Prospective members

Partnerships

PASADENA

The City of

SAN DIEGO
1. Participating agencies provide metered water use and contextual data
2. Data shared through an NDA to protect customer privacy
3. Regular quarterly in person technical working group meetings and webinars
CaDC Staff

Patrick Atwater
Project Manager

Christopher Tull
Civic Data Scientist

Graham Henke
Data Systems Engineer

David Marulli
Front End Data Scientist

Varun Adibhatla
Head of Rapid Prototyping

Eric Schmitt
Consulting Statistician

Wendy Greene
Public Affairs Intern

Brianna Pagan
Urban Water Efficiency Research Fellow

Tony Castalletto
System Architecture Research Fellow
CaDC Governance

1. Inter-agency MOU with MNWD as administrator & In-Kind Partnerships
2. Work prioritized by agencies
3. Nonprofit status through FCNY
Top CaDC priorities
1. Deploy CaDC efficiency explorer tool (funded by RLF).
2. Complete study of turf removal program effectiveness
3. Operationalize CaDC rate comparison tool
2017 Objectives (Continued)

Pilots and early stage collaborations
1. Water Demand Forecasting tool deployment
2. Support AB 1755 Implementation
3. Storm-Water inter-institutional collaboration
4. Water rate data specification deployment
5. Improving public administrative boundary and land use data
Informing statewide policy

Scenario Builder
Agency: Moulton Niguel Water District
Residential Usage Target: 23653 acre-feet
Total Efficiency: 4971 acre-feet under target in this scenario

Date Range: Jul 2014 - Jun 2015
GPCD: 55
Plant Factor: 0.8
Data driven demand management

Blue – actual water usage
Red – expected water usage
How much water did turf removal save?

Monthly predicted savings estimates shown below
Evaluating the cost effectiveness of the turf rebate program

Ultimate cost effectiveness of the turf rebate program depends on how turf market transformation develops in the future

*Uses conservative 5% hyperbolic discounting to value future water saved
Ensuring revenue stability in times of water scarcity
Key Benefits of CaDC participation

1. Water Budget rates provide a wealth of data
2. Targeted marketing heat map of efficiency
3. Operationalize WUE masterplans instead of waiting for them
4. Evaluate revenue between rate studies to check-in
5. Evaluate different landscape definition impacts from EO
6. Operationalize Academic studies and lower cost to participate
**Current dues structure**

Run on a non-profit, cost of service basis

<table>
<thead>
<tr>
<th># Connections</th>
<th>Phase 1B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15k meter</td>
<td>$12,500</td>
</tr>
<tr>
<td>15k-150k meters</td>
<td>$25,000</td>
</tr>
<tr>
<td>&gt;150k meters</td>
<td>$50,000</td>
</tr>
</tbody>
</table>
Jan 16

Launch

GSB Summit

Stanford

Jan 17

Pragmatic, phased implementation of May EO

Integrated suite of analytics supporting any of CA’s water managers

Trusted data platform integrating the entire lifecycle of CA water use data and beyond
“The people of California have not lost their pioneering spirit or their capacity to meet life’s challenges.”

– Jerry Brown

Contact:
Patrick@argolabs.org