Tools for Tracking Climate Action Progress in San Mateo County

Presentation to California Climate Action Planning Conference
August 14, 2015
Background

SAN MATEO COUNTY

energy

watch

PG&E + C/CAG + COUNTY OF SAN MATEO CALIFORNIA
Background

RICAPS
Regionally Integrated Climate Action Planning Suite

- Funded during the recession
- Help remaining cities adopt a CAP
- Regional approach
- Tools and technical support
# Tool #2  Menu of Measures

## Benefit - Cost Analysis Worksheet

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Participate in County Green Business program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions Category</td>
<td>All Sectors</td>
</tr>
<tr>
<td>Measure Description</td>
<td>Promote San Mateo County Green Business program and set goals for participation. (Voluntary program that allows businesses to brand themselves as green by following sustainable practices.)</td>
</tr>
</tbody>
</table>

### Key Assumptions for Example Calculations Below

<table>
<thead>
<tr>
<th></th>
<th>Category 1: Benefit</th>
<th>Category 2: Costs Score</th>
<th>Category 3: Feasibility Score</th>
<th>Total Measure Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial space participating by 2020</td>
<td>100,000 square feet</td>
<td>Score</td>
<td>1.40</td>
<td>3.33</td>
</tr>
<tr>
<td>Energy savings</td>
<td>5% percent</td>
<td>Weighting</td>
<td>0.33</td>
<td>0.33</td>
</tr>
<tr>
<td>Staff time needed for this measure</td>
<td>1.0 FTE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Category 1: Benefits

<table>
<thead>
<tr>
<th>Measure</th>
<th>GHG Reduction Scale for Scoring (less than)</th>
<th>Score</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Annual GHG Reduction (Metric Tons CO2e)</td>
<td>Score</td>
<td>Weighting</td>
<td></td>
</tr>
<tr>
<td>2. Annual Resource Savings (units)</td>
<td>Score</td>
<td>Weighting</td>
<td></td>
</tr>
<tr>
<td>3. Annual government dollar savings estimate</td>
<td>Score</td>
<td>Weighting</td>
<td></td>
</tr>
</tbody>
</table>

### Category 1: Score

<table>
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</table>
Tool #3 Working Group

- Monthly meeting
- CAP development
- Implementation
- Tracking
Strategy

Federal Level: Fuel Efficiency and Emission Standards

State Level: Low Carbon Fuel Standard
Higher Miles per Gallon (Pavley)
Renewable Portfolio Standard (energy)

Countywide Level: Transportation Demand Mgt.
Public Transit Ridership
Safe Routes to Schools
Bicycle/Pedestrian
Teleworking

City Level: Transit Oriented Development/Parking Programs
Community Energy
Community Solid Waste
Government Operations
### Realistic Measures

- Quantifiable
- Most common
- Repeatable
- Transparent calculations

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**Benefit - Cost Analysis Worksheet**

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<th>Category 3: Feasibility Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Participate in County Green Business program</td>
<td>2.40</td>
<td>3.33</td>
<td>4.20</td>
<td>2.98</td>
</tr>
<tr>
<td>All Sectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote San Mateo County Green Business program and set goals for participation. (Voluntary program that allows businesses to brand themselves as green by following sustainable practices.)</td>
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<td>3.33</td>
<td>4.20</td>
<td>2.98</td>
</tr>
</tbody>
</table>

**Key Assumptions for Example Calculations Below**

- Commercial space participating by 2020: 100,000 square feet
- Energy savings: 5% percent
- Staff time needed for this measure: 1.0 FTE

**Category 1: Benefits**

1. **Annual GHG Reduction (Metric Tons CO2e)**
   - Score:
   - Weighting:

2. **Annual Resource Savings (units)**
   - Scale for Scoring:
     - No Resource Savings: 1
     - Moderate Resource Savings: 2
     - Significant Resource Savings: 3

3. **Annual government dollar savings estimate**
   - Scale for Scoring:
     - No savings: 1
     - Moderate savings: 2
     - Significant savings: 3
Internal Tracking
Online Tracking Tool

GHG Municipal Inventory
2005

GHG Municipal Inventory
2010

- Ongoing documentation
- Integration into business practices

Multiple log-ins within the organization
• 3-year subscription
• Converted ICLEI inventory reports to Hara format
• Plans for measure tracking
3 years later...

- Ongoing documentation
- Integration into business practices

Multiple log-ins within the organization
3 years later...

GHG Inventory 2005  GHG Inventory 2010  ANNUAL collection of data

Multiple log-ins within the organization
3 years later...

GHG Inventory 2005  GHG Inventory 2010  \textbf{ANNUAL} collection of data

Multiple log-ins within the organization
3 years later...

GHG Inventory 2005  GHG Inventory 2010  →  **ANNUAL** collection of data

Sustainability Coordinator handles data collection and reporting
Going forward...

• Everyone understands it
• Easy to forward within organization
• Plans to create a collection template

Excel!
How are we doing on our climate action progress?
### Results matching category of Environment

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverage Container Recycling Centers</td>
<td>Location of beverage container recycling centers in San Mateo County.</td>
</tr>
<tr>
<td>County Trails</td>
<td>Trails in San Mateo County <a href="http://maps.smcgov.org/arcgis/rest/services/Socrata/Socrata_Environment/MapServer/0">http://maps.smcgov.org/arcgis/rest/services/Socrata/Socrata_Environment/MapServer/0</a></td>
</tr>
<tr>
<td>Reports from Report It! SMC</td>
<td>Report It! SMC allows citizens, residents, and visitors to report illegal dumping issues quickly and easily via web tools and mobile apps. You can even take photos of issues and submit them on your phone! These reports are then forwarded directly to County departments to respond and address. See more at: <a href="http://nfofoward.org/about-our-community/report-it-smc">http://nfofoward.org/about-our-community/report-it-smc</a></td>
</tr>
<tr>
<td>Beach and Creek Monitoring Results</td>
<td>Water samples from natural recreational waters in San Mateo County are sampled each week for concentrations of indicator bacteria including E. Coli, Enterococcus, and Coliform bacteria. If concentrations of indicator bacteria exceed State or County standards, the area is posted to warn users that they may become ill if they engage in water contact activities in the posted area. More information about results and testing can be found on the San Mateo County Health System site: <a href="http://smchealth.org/environment/beaches">http://smchealth.org/environment/beaches</a> This dataset contains readings from January, 2012 to the present and is updated weekly.</td>
</tr>
<tr>
<td>San Mateo County Water Use by District 2006-2013</td>
<td>Water used by Water district listed in CCF (Hundred Cubic Feet) for fiscal years 2006-2007 through 2012-2013. Source provided by: <a href="http://bawsca.org/annual-survey/">http://bawsca.org/annual-survey/</a></td>
</tr>
<tr>
<td>San Mateo County Energy Use 1990 - 2012</td>
<td>Energy data gathered from: <em>1990-1996 Electricity Use: PG&amp;E Environmental Quality Reports, 2001, 1990-1996 Natural Gas Use: California Energy Commission, 2001,</em> Both electricity and natural gas figures have been changed to reflect revisions given to us by Andrea Gough on 1/27/07 and 1/22/08. Additional Data from Silicon Valley Environmental Partnership (SVEP), 2003 Silicon Valley Environmental Index. Data from Peter Melhus, former SVEP Board Chair &amp; Data Source: <a href="http://www.ecdmis.energy.ca.gov/">http://www.ecdmis.energy.ca.gov/</a></td>
</tr>
</tbody>
</table>
Public Works: Waste Management (4820B)

Program Outcome Statement

Administer and implement resource conservation programs and policies throughout the County.

Program Services

-Solid waste planning and management
-Resource conservation program implementation
-Public education and outreach
-Management of the San Mateo County Energy Watch Program

Overview

The Program’s mission is to advance environmental sustainability by working with residents, businesses and institutions throughout San Mateo County to encourage environmental stewardship, implement resource conservation programs and policies, and comply with the California Integrated Waste Management Act (AB 939) and the California Mandatory Commercial Recycling Act (AB 341).
Public Works: Waste Management (4820B)

Story Behind Performance

The Recycle Works Program conducts many outreach activities in the community. One of the programs is the RecycleWorks Schools Outreach Program, which focuses on students and teachers in San Mateo County. One of the activities conducted in the program is providing environmental educational tours to students in San Mateo County of local closed landfills, transfer stations, and recycling facilities. The teachers on these tours are required to include pre- and post-tour activities to participate in one of these trips. The focus on the Field Trips is explaining to students how garbage and recycling is processed and its final disposition, as well as discussing the negative long term environmental impacts of improper disposal. A post-tour activity of the participating students will measure their retention of key educational facts that are presented during these Field Trips. It will help measure whether the information presented is retained by the students. A program target of 75% retention rate will indicate that the educational components of the program are resonating with the students and may contribute to behavior changes and the practice of enhanced Resource Conservation.

The San Mateo County Energy Watch is a grant-funded program that operates under a staff services contract between the County and the City/County Association of Governments (C/CAG). The program targets buildings and operations with inefficient energy use in predefined sectors, including municipalities, schools, non-profits, farms, and certain sections of

Daily Garbage Disposal Rate Per Person in Unincorporated San Mateo County

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Residential Disposal</th>
<th>Commercial Disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2011-12</td>
<td>3.2</td>
<td>2.8</td>
</tr>
<tr>
<td>FY 2012-13</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>FY 2013-14</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>FY 2014-15</td>
<td>2.9</td>
<td>2.9</td>
</tr>
</tbody>
</table>
**By Measure**

- **Solar Electricity**: 1,278.1 kilowatt hours per month
- **City Operations Greenhouse Gases**: 328,868 annual tonnes
- **Community Greenhouse Gases**: 16.6M annual tonnes
- **ECO Station Users**: 31,841 users
- **Missed Waste Collection Stops**: 3 per 10,000 stops
- **Construction Waste Recycled**: 79.4% of construction waste

**Audience:** Government staff, Industry personnel

**By Jurisdiction**

- Atherton
- Belmont
- Brisbane
- Burlingame
- Colma
- Daly City
- East Palo Alto
- Foster City
- Half Moon Bay
- Hillsborough
- Menlo Park
- Millbrae
- Pacifica
- Portola Valley
- Redwood City
- San Bruno
- San Carlos
- San Mateo
- South San Francisco
- Woodside

**Audience:** Community
By Measure

- Solar Electricity: 1,278.1 KILOWATT HOURS PER MONTH
- City Operations Greenhouse Gases: 328,868 ANNUAL TONNES
- Community Greenhouse Gases: 16.6M ANNUAL TONNES
- Eco Station Users: 31,841 USERS
- Missed Waste Collection Stops: 3 PER 10,000 STOPS
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Audience: Community
Industry Audience: Depth

• Easy-to-access data
• Narrative to tell the story, provide context
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**Audience:** Community
Community Audience: Engagement

- Infographic for each measure
- Developed by graphic designer
- Updated annually
Next Steps

- Get input from RICAPS city subcommittee – most common measures to track
- Consider how to leverage/integrate
- Pilot the technology with first few data sets
- Develop infographics
Susan Wright
Resource Conservation Specialist
County of San Mateo  Office of Sustainability
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