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United We Save

Benefits of Consistent Regional Conservation Performance Monitoring



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Presentation Overview

- BAWSCA's mission and overview
- BAWSCA's regional water conservation planning and implementation
- Purpose and benefits of developing a regional water conservation database (WCDB)
- WCDB operational overview and site diagram
- WCDB Framework
 - Development
 - Testing
 - Implementation
 - User training
- Lessons learned

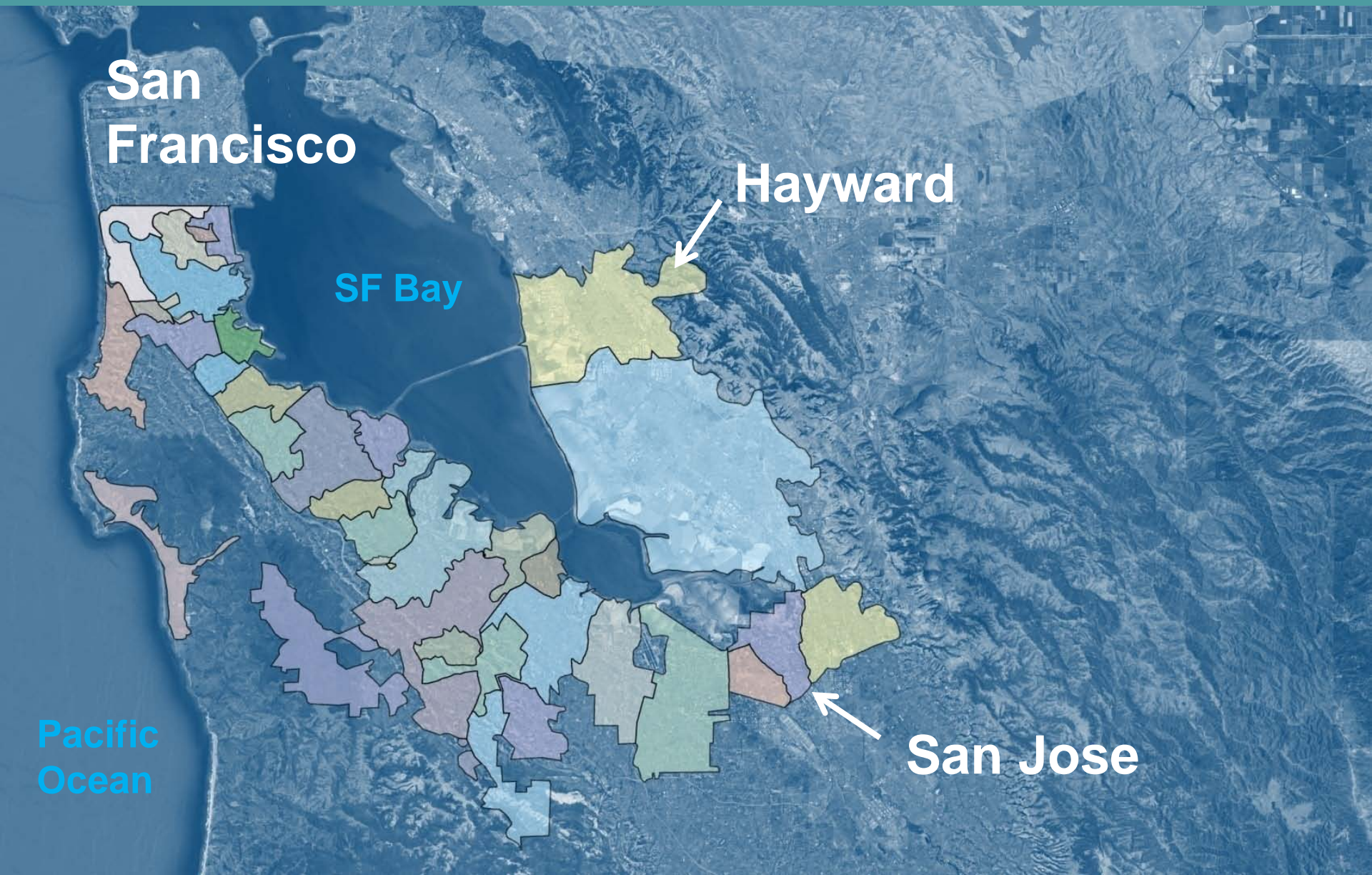
BAWSCA's Mission and Overview

- Bay Area Water Supply and Conservation Agency
- Special District Representing the Interests of
 - 26 cities, water districts and water companies in San Mateo, Santa Clara, and Alameda Counties
 - 1.7 million residents, 30,000 businesses, and countless community organizations

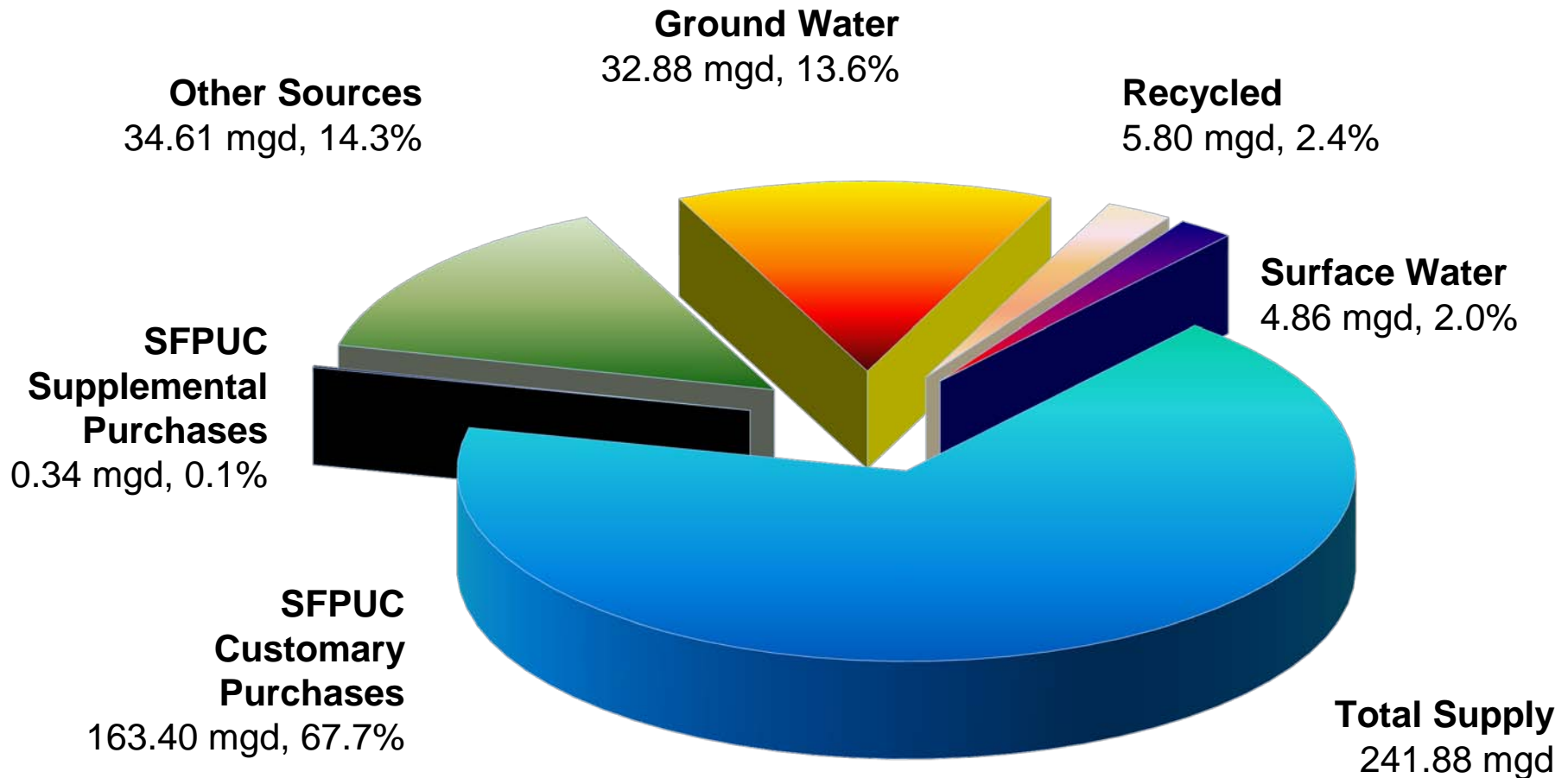
- BAWSCA's Goal:

Reliable supply of high quality water at a fair price

BAWSCA Service Area



BAWSCA Agencies Reliant on SFPUC

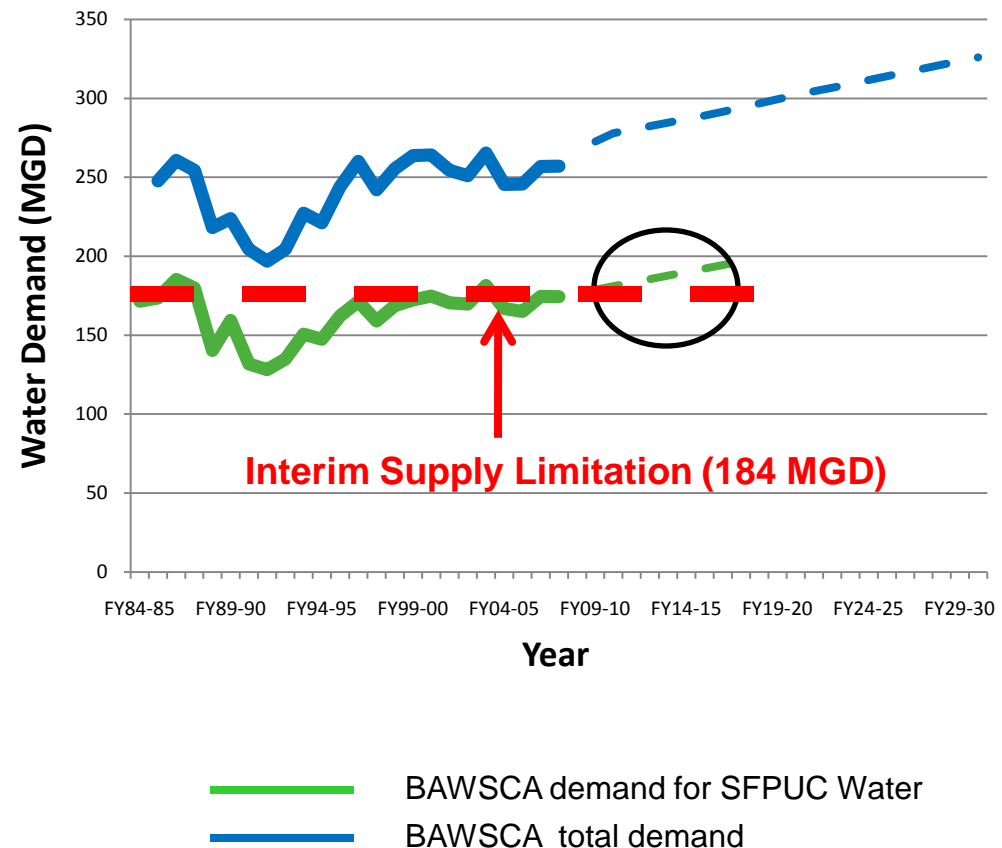


SFPUC Regional Water System



BAWSCA Water Supply Challenges

- Water demand in the BAWSCA area is projected to increase
- SFPUC imposed a supply limitation of 184 MGD on BAWSCA
- Projected demands exceed supplies
 - 10 MGD shortfall by 2018
 - 25 MGD shortfall by 2035
 - Drought impacts are even more severe



BAWSCA Initiatives

BAWSCA Has Launched a Two-Pronged Approach to Address Water Supply Issues:

- Water Conservation Implementation Plan
 - Multi-pronged water conservation program
 - Meeting needs to 2018
- Long-Term Reliable Water Supply Strategy
 - Identifying water supply management projects
 - Meet water needs to 2035
 - Increase drought reliability

BAWSCA Water Conservation Plan

- **Objective:** Develop an implementation plan for BAWSCA and its member agencies to
 - Attain the water efficiency goals that agencies committed to in WSIP PEIR; and
 - Provide reliable water supplies through 2018 given the 184 MGD supply limitation.
- **Product:** Who must do what, and by when?
- **Result:** A comprehensive conservation program implemented at regional, sub-regional, and local level

BAWSCA's Role

- Conduct public information and outreach
- Secure grant funding
- Administer water conservation programs
 - Regional level (all member agencies)
 - Sub-regional level (subset of member agencies)
- Coordinate 26 member agencies:
 - Water conservation planning
 - Data collection and reporting

BAWSCA Regional Programs

- Public Information
- School Education
- Indoor Conservation
 - High Efficiency Toilet Rebates
 - Washing Machine Rebates
 - Bulk Purchase Programs
 - Indoor Efficiency Ordinance
- Outdoor Conservation
 - Landscape Classes
 - Large Landscape Water Audits
 - Lawn Replacement Rebate
 - Outdoor Efficiency Ordinance



BAWSCA Water Conservation Database

Develop a Water Conservation Database (WCDB) to:

1. **Facilitate data collection and data management** to support the following activities:
 - Internal agency reporting and budgeting
 - Consistent electronic data collection and monitoring across region
 - BAWSCA Annual Survey Report
 - Pending: CUWCC Best Management Practice (BMP) reporting
 - Pending: DWR Urban Water Management Plan (UWMP) and annual Public Water Supervision System (PWSS) reporting requirements
2. **Gather the data necessary to quantify water savings** and to interface with the demand projection model
3. **Consider compatibility with member agencies' existing database systems**

Benefits of a Common Database

- Ability to track
 - progress related to implemented water conservation measures
 - activities associated with water savings
- Consistency in reporting
- Ability to more easily monitor, track and report progress to:
 - SFPUC (Wholesaler)
 - BAWSCA Board
 - Member agencies
 - Other state and local agencies

BAWSCA WCDB Priorities

- **Facilitate** data collection and long-term data management for producing the BAWSCA Annual Survey Report
- **Streamline** collecting data to support tracking of water conservation activities in the region
- **Reduce** difficulty for agencies to provide data to support regional program planning and progress
- **Monitor** quantifiable water savings in the region using the Demand Side Management Least Cost Planning Decision Support System (demand projection model used)

WCDB Development Framework

- Phase 1 (FY 2010)
 - Collaboratively develop database inputs, outputs & functionality
 - Utilize Working Group to represent agencies' needs
 - Perform Needs Analysis to develop user requirements list (Roadmap)
 - Build several iterations (versions):
 - Prototype (verify functionality)
 - Alpha (conduct member agency walkthrough)
 - Beta (conduct user acceptance testing)
 - Production (complete development of WCDB)
- Phase 2 (FY 2011)
 - Configure agency users, measures, etc.
 - Perform system training
 - Launch system



BAWSCA WCDB Features

- Ability to collect data for 22 water conservation measures
- Web access to WCDB by 26 member agencies
- Ability to export data to Excel to support reporting
 - BAWSCA Annual Report, Urban Water Management Plans, other State reports, etc.
- “Intervention”/activity tracking
 - Does not directly calculate “quantifiable” water savings
 - Provides data used in water demand projection model for each water purveyor
- Dashboards/charts to display activity progress

Measures in BAWSCA WCDB

- High efficiency toilets
- High efficiency clothes washers
- School education program
- Public information program
- Landscape classes
- Large landscape survey
- Landscape water budget
- Water budget incentive
- Irrigation upgrade incentive
- ET controller rebate
- Residential survey
- Residential retrofit
- Commercial survey
- Hotel survey
- Pre-rinse spray nozzle
- Coin-op laundry rebate
- Efficiency equipment upgrade
- “Other measures” (x5)

BAWSCA WCDB Development

Working Group:

- Representatives from 6 member agencies
- Provided input and feedback on WCDB's functionality and design
- Independent testing of WCDB

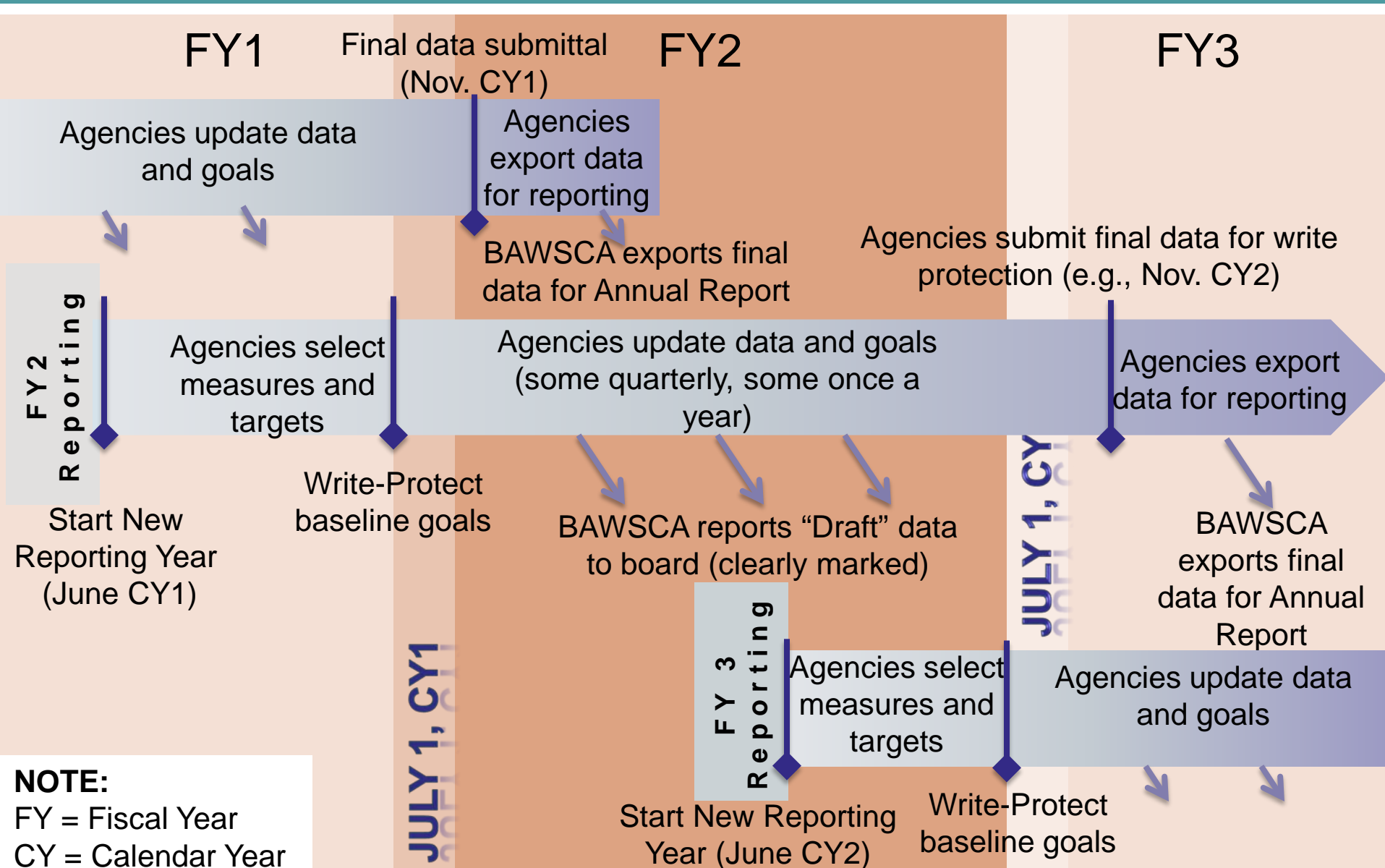
Technical approach:

- Microsoft SharePoint platform

Added benefits to BAWSCA include:

- Reduced manual data management and coordination with 26 member agencies
- Increased efficiency in communicating using WCDB's calendar and email tools

WCDB Reporting Sequence



BAWSCA WCDB - Home Screen

The screenshot shows the BAWSCA WCDB Home Screen. Red arrows and circles highlight specific features:

- Links to Sites in Database:** Points to the "Home" tab and the "Sites" link in the left sidebar.
- Announcements with Date/Time Stamp:** Points to the "Announcements" section and a specific announcement timestamp.
- Links to Site Content:** Points to the "Documents", "Lists", "Discussions", and "Sites" links in the left sidebar.

WCDB TEST

Home BAWSCA Alameda CWD Brisbane/GVMID Burlingame CalWater-BG CalWater-MP CalWater-SSF Coastside CWD Daly City East Palo Alto Estero MID Hayward

View All Site Content

Documents

- Shared Documents
- WCDB Wiki

Lists

- Calendar

Discussions

- BAWSCA Database Discussion Forum

Sites

- BAWSCA
- Alameda CWD
- Brisbane/GVMID
- Burlingame
- CalWater-BG
- CalWater-MP
- CalWater-SSF
- Coastside CWD
- Daly City
- East Palo Alto

Announcements

Key Annual Survey Reporting Dates
by Jenny Gain

Annual Survey Reporting

Sep - Oct 2010: Agency sets up new reporting year for FY10-11

By Nov 1, 2010: Full entry of data for Agency Profile, Water Use, and Billing Rates for FY 09-10; Initiation of FY10-11 Agency Profile, Water...

Key Conservation Reporting Dates
by Jenny Gain

Conservation Reporting:

Sep to Oct 2010: Agency enters Measure Implementation for FY09-10 and sets up new reporting year for FY10-11.

By Nov 1, 2010: Full entry of FY09-10 Measure Implementation; Initiation of FY10-11 (Measure Selection &...

See calendar for deadlines for applications to participate in the BAWSCA Regional Water Conservation Programs
by RWCBA\WSCA\administrator

Testing
by RWCBA\WSCA\administrator
I'm announcing that I'm doing testing today....

9/27/2010 10:25 AM

9/9/2010 4:40 PM

9/9/2010 4:40 PM

BAWSCA WCDB - Home Screen

User

Welcome Jenny Gain ▾ |

This Site ▾

City

San Bruno

San Jose

Santa Clara

Stanford University

Sunnyvale

Westborough WD

Training


Site Actions ▾



Links

- Microsoft Office 2003 Compatability Pack
- WCDB Users Guide
- Add new link

Contacts for questions and issues


- Water Conservation Database Contact:
Anona Dutton, BAWSCA
 (650) 349-3000  of adutton@bawasca.org
- Annual Survey Contact:
John Ummel, BAWSCA
 (650) 349-3000  or jummel@bawasca.org

Links to
Files
Stored in
Database

Contacts
for
Technical
Questions

BAWSCA WCDB - Measure Data Input Screen

WCDB TEST

 Brisbane/GVMID

Home BAWSCA Alameda CWD **Brisbane/GVMID** Burlingame CalWater-BG CalWater-MP CalWater-SSF Coastside CWD Daly City East Palo Alto Estero MID Hayward Hillsborough Menlo Park Mid-Peninsula

2010 Measure Selection and Goals


Save As Draft Submit Cancel

DSS Annual Water Savings Goal (mgd): 0.5

Selected	Measure Name and DSS Goal Definition	DSS Goal	Agency Target	Units	Estimated DSS Water Savings (mgd)	Agency Target Water Savings (mgd)	Comments
<input checked="" type="checkbox"/>	01. HE Toilet Replacement	200	150	Number of Toilets (Rebates and Direct Install)	0.2	0.15	
<input type="checkbox"/>	02. RES HE Washer Rebate			Number of Clothes Washer Rebates			
<input checked="" type="checkbox"/>	03. School Education Program	300	150	Total K-12 Students Targets	0.3	0.15	
<input checked="" type="checkbox"/>	04. Public Information Program	500	1000	Annual Budget (\$)	20,000	40,000	

BAWSCA WCDB - Measure Data Input Screen

WCDB TEST

 **Brisbane/GVMID**

[Home](#) [BAWSCA](#) [Alameda CWD](#) [Brisbane/GVMID](#) [Burlingame](#) [CalWater-BG](#) [CalWater-MP](#) [CalWater-SSF](#) [Coastside CWD](#) [Daly City](#) [East Palo Alto](#) [Estero MID](#) [Hayward](#) [Hillsborough](#) [Menlo Park](#) [Mid-Peninsula](#)

2010 Measure Selection and Goals

[Save As Draft](#) [Submit](#) [Cancel](#)

DSS Annual Water Savings Goal (mgd):

Selected	Measure Name and DSS Goal Definition	DSS Goal	Agency Target	Units	Estimated DSS Water Savings (mgd)	Agency Target Water Savings (mgd)	Comments
<input checked="" type="checkbox"/>	01. HE Toilet Replacement	<input type="text" value="200"/>	<input type="text" value="150"/>	Number of Toilets (Rebates and Direct Install)	<input type="text" value="0.2"/>	<input type="text" value="0.15"/>	
<input type="checkbox"/>	02. RES HE Washer Rebate						
<input checked="" type="checkbox"/>	03. School Education Program						
<input checked="" type="checkbox"/>	04. Public Information Program						

03. School Education Program

CUWCC BMP REFERENCES: Best Management Practice 2 - Educational Programs

DSS MODEL REFERENCE: Not Applicable

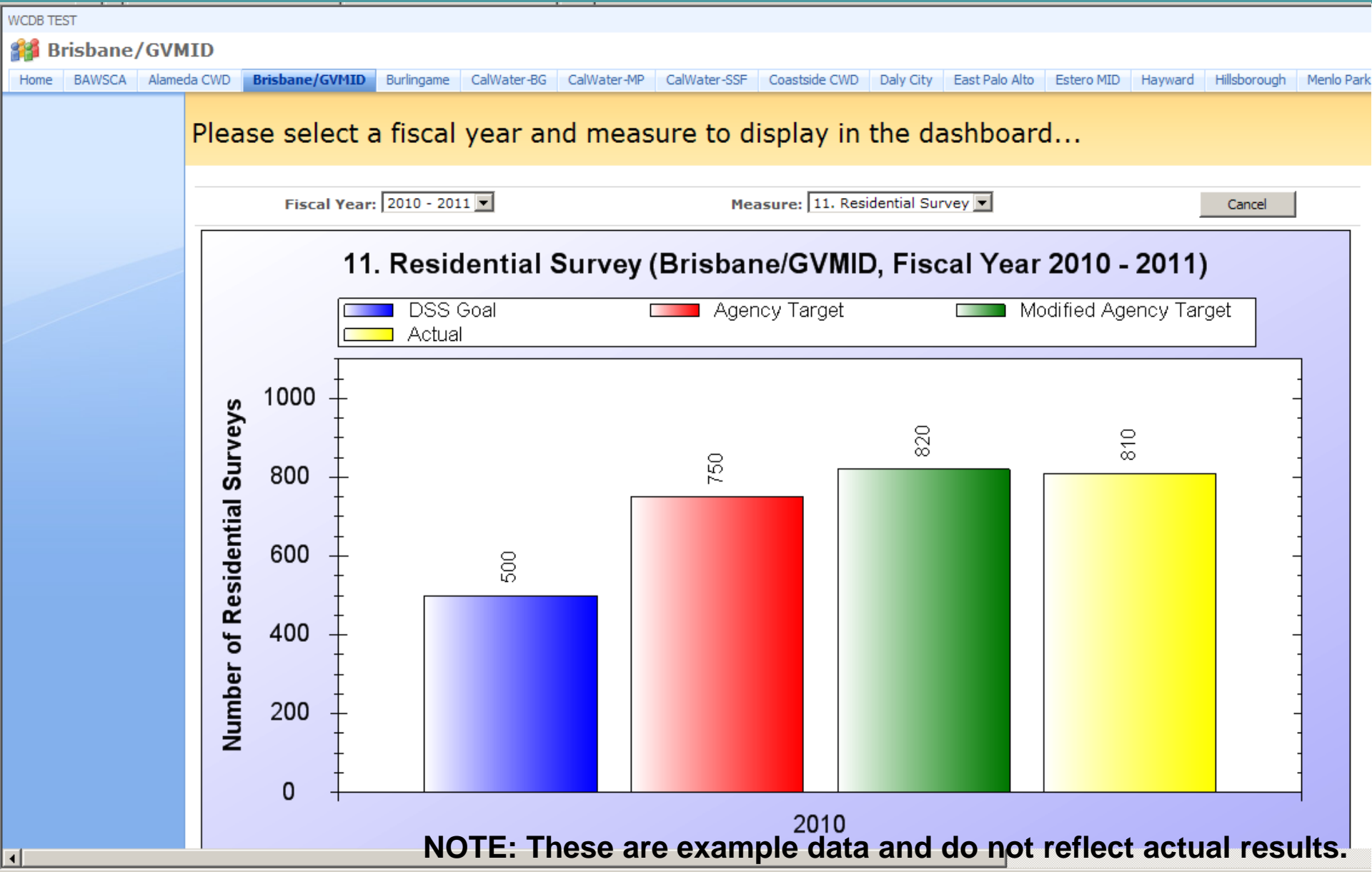
MEASURE DESCRIPTION: Provide school education to raise awareness of water conservation. Unit: Total number of K-12 students targeted annually.

DSS GOAL ASSUMPTIONS: Not Applicable.

DSS WATER SAVINGS ASSUMPTIONS: Not Applicable.

ESTIMATED WATER SAVINGS GOAL EQUATION: Not Applicable.

BAWSCA WCDB - Measure Dashboard for Reporting Progress



BAWSCA WCDB - Measure Data Export Screen

Step 1

WDCB > Agency 1

Measures

Fiscal Year: 2010 [Measure Selection] [Profile] [Billing Rates]

Measure	Status	Selection
01. HE Toilet Replacement	Open	Selected
03. School Education Program	Open	Selected
04. Public Information Program	Open	Selected
06. Large Landscape Survey	Open	Selected
11. Residential Survey	Open	In Progress

Water Use

Fiscal Year: 2010

Data Entry Progress

Agency 1	Fiscal Year: 2010
Profile	In Progress
Billing Rates	In Progress
0% Complete	
Measures In Progress (0 of 5 Submitted)	

Additional Tools

- Measure Dashboards
- Export Measure Data

Agency Management Tools

- Finalize Reporting Year
- Unfinalize Reporting Year
- Unsubmit Forms

Debug/Testing Tools

- Reset Reporting Year

File Download

Do you want to open or save this file?

Name: wcdb.Agency_1.xlsx
Type: Microsoft Office Excel Worksheet
From: wcdb.bawasca.org

Open Save Cancel

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. [What's the risk?](#)

Step 2

NOTE: These are example data and do not reflect actual results.

Lessons Learned

- Form a diverse and involved Working Group
 - Involve through entire process
 - Allow adequate review and testing time for Working Group
 - Implement a process (e.g., “issues log”) for collecting and screening feedback
- Involve all foreseeable users at key points to promote acceptance and buy-in
- Develop a team of IT and water conservation staff that work collaboratively
- Select an architecture that can be easily maintained and enhanced

Lessons Learned (Continued)

- Follow a formal IT development process to mitigate risk and to resolve scope issues
- Define specific user requirements that need to be achieved
- Prioritize defects and updates to ensure that key changes are made
- Allow for adaptive management
- Provide the ability to enhance database in future

Questions and Discussion



CONTACT INFORMATION:

Nicole Sandkulla: NSandkulla@bawsca.org

Anona Dutton: ADutton@bawsca.org

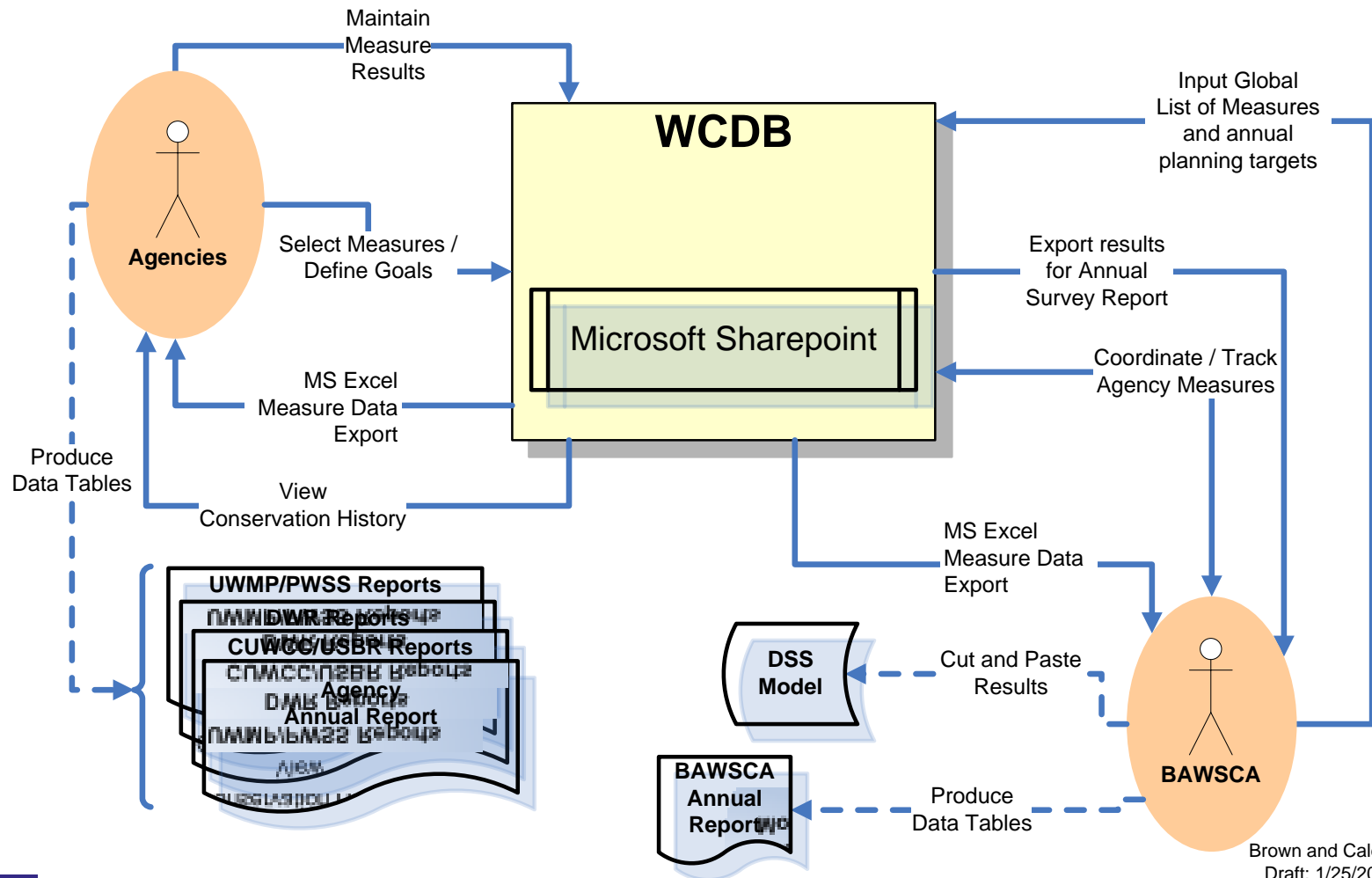
Jenny Gain: JGain@brwncald.com

Lisa Maddaus: LMaddaus@brwncald.com

BAWSCA WCDB Operational Overview

KEY

- Built In Feature
- - - External Step



Brown and Caldwell
Draft: 1/25/2010

BAWSCA WCDB Site Diagram

