ATTACHMENT 1

Sustainability Action Plan

Sweetwater Authority

October 2014

(Revised December 2014)

In consultation with:

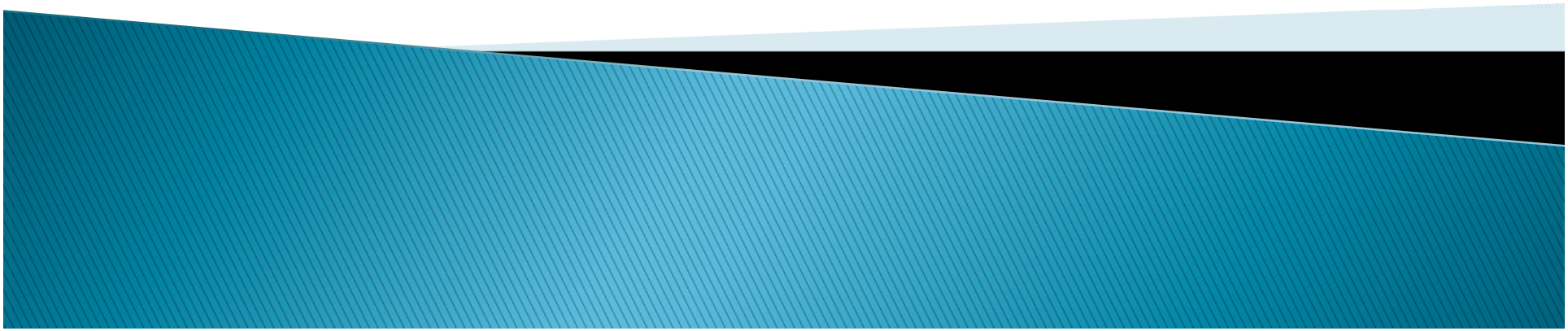
True Market Solutions

Sweetwater Authority

A publicly-owned water agency with policies and procedures established by a seven member Governing Board

135 employees provide safe, reliable water service to approximately 186,000 people across a 32-square mile area in the South Bay region of San Diego County

Revenues are obtained entirely from water sales, fees for service, and returns on investments



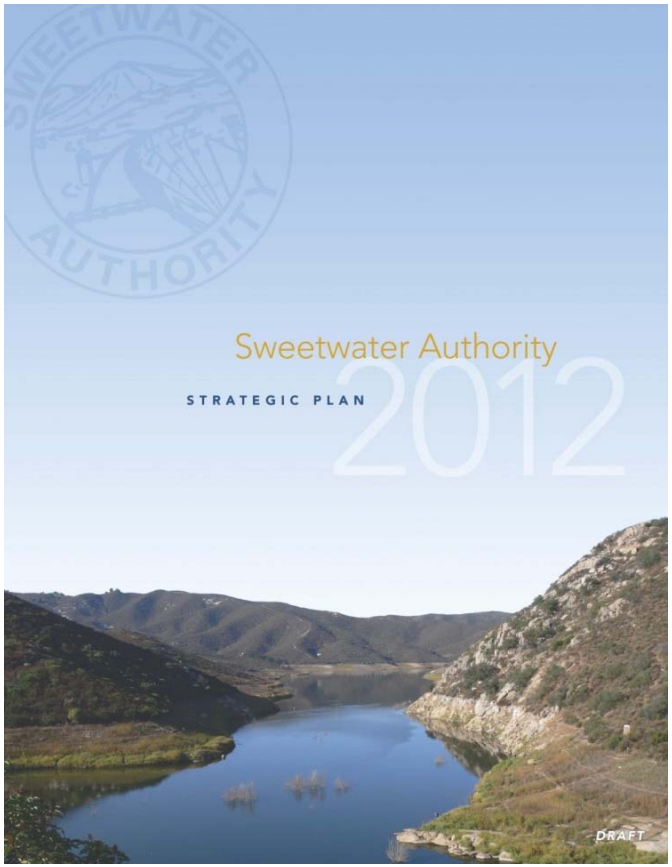
Our Team

Team Member	Department	Representing	Role
Jennifer Sabine	Administration	Management	Project Lead
Sue Mosburg	Administrative Services	Administrative Services	Project Lead
Jason Mettler	Engineering	Administration Building	Member
Mike Gravitt	Distribution	Operations Yard	Member
John Chavez	Water Quality	Treatment Plants & Pumping Facilities	Member
Luis Valdez	Engineering	Power Management	Member
Pete Famolaro	Water Quality	Environmental/Watershed	Member
Gwen Balcom	Finance & Accounting	Purchasing	Member

Sustainability Definition

At the highest level, sustainability is defined as the Authority's ability to ***provide core services while maintaining a balanced approach to human and environmental needs.***

The Authority's Strategic Plan provides decision-making guidance and the over-arching organizational structure for the Authority. The plan includes an Environmental Stewardship goal which identifies several sustainability initiatives.



Sustainability Vision and Mission

The mission of Sweetwater Authority is to provide its current and future customers with a safe and reliable water supply through the use of the best available technology, sound management practices, public participation and a balanced approach to human and environmental needs

The Authority's vision includes providing a reliable and sustainable source of water.

Our Big Goals

- Sustainability Inventory
  - Create a comprehensive master project tracking framework
- Energy Use and Renewables
  - Reduce non-production energy use by 2% by 2020
  - Meet 20% of energy demands from renewable projects by 2020
- Water Use
  - 20% water use reduction throughout service area by 2020 (aligned with the Water Conservation Act of 2009, SBX7.7)
  - Reduce onsite potable water use by an additional 5% through water conservation, efficiency and plant material modifications by 2020
- Green Purchasing
  - 25% of all purchased office paper and custodial supplies annually are categorized as “green” by 2020
- Waste Reduction
  - 50% recycling rate for Authority facilities by 2020
- Transportation
  - Transition 50% of small to mid-sized fleet to hybrid or other alternative fuel technology by 2020
  - Convert 100% of diesel fleet to cleaner engine models by 2025

Sustainability Inventory

It's important to understand and document what is currently planned in order to prioritize projects, and see opportunities for additional action. Create a comprehensive master project tracking framework to capture sustainability activities and achievement towards goals

Financial Costs/Benefits

- Staff resources to synthesize data
- Allows Management/Board to vet projects and initiatives through budgeting process

Intangible/Other Benefits

- Leading by example within the community
- Improved ability to communicate environmental stewardship priorities and accomplishments to stakeholders

Goals/Metrics: Master list created, annually updated

Energy Use and Renewables

The Authority uses approximately 9,000,000 KWh of energy annually. Reduce non-production energy use by 2% by 2020, and meet at least 20% of energy demands from renewable projects by 2020

Financial Costs/Benefits

- Reduced & more stable utility costs
- Capital outlay for lighting retrofits, energy efficient products and renewable projects

Intangible/Other Benefits

- Cleaner air
- More comfortable, healthier facilities
- Lower green house gas emissions
- Leading by example within the community

Goals/Metrics: Annual kWh & therm usage, energy use intensity (MMBTU/square foot), % onsite renewable energy used/produced

Water Use

The current statewide drought requires everyone to use water efficiently. Achieve a 20% water use reduction throughout service area by 2020 (aligned with SBX7.7 requirements), and reduce onsite potable water use by an additional 5% through water conservation, efficiency and plant material modifications

Financial Costs/Benefits

- Lower maintenance costs
- Decreased energy costs
- Decreased chemical and water purchase costs
- Increased marketing material expenses

Intangible/Other Benefits

- Decreased demand on local, regional and state water supplies
- Decreased demand on sewer
- Lower green house gas emissions
- Leading by example

Goals/Metrics: % reduction monthly water production/distribution, % reduction annual potable water use at facilities

Green Purchasing

Green products are readily available in the marketplace. 25% of all purchased office paper and custodial supplies annually are categorized as "green" by 2020

Financial Costs/Benefits

- Save money on office products

Intangible/Other Benefits

- Healthier work environment through the use of less toxic products
- Provides jobs in the "green economy" to make new products from recovered resources
- Leading by example within the community

Goals/Metrics: % green products purchased, average recycled content of paper products

Waste Reduction

Limiting discards which become waste through efficient purchasing, and achieving a 50% recycling rate for Authority facilities by 2020

Financial Costs/Benefits

- Reduced disposal impacts
- Possible revenue from the sale of some commodities
- Reuse within Authority operations reduces cost for purchasing like materials (dirt, rock, chipped organic material).

Intangible/Other Benefits

- Improved efficiency of resources
- Saving landfill space
- Provides jobs in the "green economy" to make new products from recovered resources
- Leading by example within the community

Goals/Metrics: Annual waste and recycling volumes

Transportation

Alternative transportation helps improve local air quality, traffic congestion and stress. Transition 50% of small to mid-size fleet to hybrid or other alternative fuel technology by 2020, and convert 100% of diesel fleet to cleaner engine models by 2025

Financial Costs/Benefits

- Reduced fuel costs
- Reduced maintenance costs
- Fines avoidance

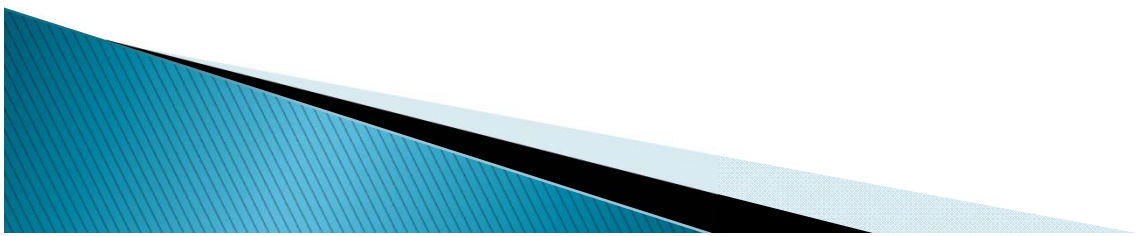
Intangible/Other Benefits

- Cleaner air
- Leading by example within the community

Goals/Metrics: % of alternative fuel/hybrid vehicles in fleet, and % of diesel fleet compliant with Air Resources Control Board requirements

Business Case

- Lower utility costs
- Lower fuel costs
- Lower operation and maintenance costs
- Water rate stability for customers
- Leadership position in the region and industry
- Culture of efficiency – walking the talk
- Healthier, more comfortable workspaces
- Happier, more productive employees



Accomplishments and Recognition

- Recent accomplishments include:
  - Forming a Green Team
  - Retrofit the Operations Yard with energy efficient lighting
  - Installation of “cool roof” at Administration Building
  - HVAC load balance at the Administrative Building
  - City of Chula Vista Climate Change Work Group and Chula Vista Green/Clean Team participant
  - City of National City Green Business Program sponsor
  - Metering water use of all Authority facilities
  - Water Conservation Rebates and customer incentives
  - Vehicle replacement program
  - Developing Habitat Management and Endangered Species Protection
- Recognition or awards
  - City of Chula Vista Green Business

Portfolio of Initiatives

Short-term, mid-term, and long-term

Portfolio of Initiatives

Short-term: 0 – 6 months

Business model and strategy

- Create Green Team
- Link Sustainability Circle initiatives to the Authority's Strategic Plan.
- Inform and educate customers about water efficiency

Behavior and culture change

- Engage staff through education & training
- Ensure offices have recycle bins
- Add battery disposal bin at the Administration Building
- Create 'recycle reminder tips' flyer and distribute to all employees
- Educate janitorial service to separate waste streams

Business policies/practices

- Participate in local city (Chula Vista and National City) Green community initiatives and workgroups
- Update and initiate Drought Response Plan

Energy/resource management

- Install window film
- Enroll all accounts in the online SDG&E program
- Install vending machine controllers
- Adjust weekend set points for HVAC
- Install water meters at all facilities

Install Window Film

- Installation of 654 Sq. feet of SunTek window film SYLRDS10 Low Reflective to prevent solar heat from entering the building and reduce HVAC load.

Summary of Initiatives: 0 – 6 months

Category: Business model and strategy

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Create Green Team	$0	–	–	Improve company culture & employee involvement
Link SAP Initiatives to Strategic Plan	$0	–	–	Improve company culture & Board support
Inform and educate customers about water efficiency	$14,000 annually	Varies based on savings achieved	Varies based on savings achieved	Imported water pumping; power & chemical costs for treated water; Improved water ethic in community served

Summary of Initiatives: 0 – 6 months

Category: Behavior and culture change

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Engage staff through education & training	$500	–	–	Improve company culture & employee involvement
Ensure offices have recycle bins	$500	–	–	1000+ pounds per year paper waste redirected from landfill
Add battery disposal bin at Administration	$100	–	–	100+ batteries recycled per year
Create 'Recycle reminder tips' flyer	$25	–	–	Improve company culture
Educate janitorial service to separate waste streams	$0	–	–	Redirect waste from landfill

Summary of Initiatives: 0 – 6 months

Category: Business policies and practices

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Participate in local Green community initiatives and workgroups	(salaries)	–	–	Leading by example
Update and initiate Drought Response Plan	–	Varies based on savings achieved	Varies based on savings achieved	Reduced water use by customers; Regional and state drought response participation/partnership

Summary of Initiatives: 0 – 6 months

Category: Energy and resource management programs

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Install window film	$2,300 (less $882.90 Rebate)	$1557	8,240	Employee comfort
Enroll all accounts in the online SDG&E program	–	–	–	Ability to monitor energy use & adjust during peak periods
Install vending machine controllers (2)	$400	$261	1383	
Adjust weekend set points for HVAC	$0	Pending	Pending	
Install water meters at all facilities	Pending	–	–	

Portfolio of Initiatives

Mid-term: 6 months – 2 years

Business model and strategy

•Green Team prioritized list of initiatives for action

Behavior and culture change

• Perform waste stream audit

Business policies/practices

• Implement Target Water Allocations for customers
•Update internal policies and procedures to support green purchasing and other SAP Initiatives

Energy/resource management

• Lighting retrofit at Desalination Facility
•Lighting retrofit at Admin Building parking lot
• Hydroelectric Turbine at Water Treatment Plant

HYDROELECTRIC POWER

Installation of Hydroelectric Turbine at Perdue Water Treatment Plant on Treated Water Aqueduct Pipeline

Summary of Initiatives: 6 months – 2 years

Category: Business model and strategy

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Green Team prioritized list of initiatives for action	–	–	–	Employee engagement in sustainability initiatives

Summary of Initiatives: 6 months – 2 years

Category: Behavior and culture change

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Perform waste stream audit	–	–	–	Employee engagement in SAP

Summary of Initiatives: 6 months – 2 years

Category: Business policies and practices

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Implement Target Water Allocations for customers	$5,000 (customer outreach & education)	–	–	Projected 5–15% reduction in water use by customers
Update internal policies & procedures to support green purchasing and other SAP Initiatives	–	–	–	Sustainable purchasing practices. Employee involvement

Summary of Initiatives: 6 months – 2 years

Category: Energy and resource management programs

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Lighting retrofit at Desalination	$15,000	$2,000	Pending	
Lighting retrofit at Admin Bldg. Parking Lot	$15,000	$2,000	Pending	
Hydroelectric Turbine at Perdue Water Treatment Plant	$2,500,000	$298,700	1.23 M	Potential renewable energy credit- $0.01 kWh/yr. 929 MT CO_2 annual offset

Portfolio of Initiatives

Long-Term: 2-5 Years

Business model and strategy

- Recognize achievements and continue to build upon Sustainable Inventory

Behavior and culture change

Business policies/practices

- Transition to alternative fuel vehicle
- Replace high emission diesel fuel equipment

Energy/resource management

- Net energy metering solar project
- Pilot Program for Automated Meter Reading

SOLAR POWER

Installation of photovoltaic panels at
Richard A. Reynolds Desalination Facility

REPLACE FLEET WITH CLEANER-ENGINE EQUIPMENT

- ✓ Small and Mid-Size Vehicles – Alternative Fuel
- ✓ Large Equipment – Replacement Program with Cleaner-Engine Equipment

Summary of Initiatives: 2-5 Years

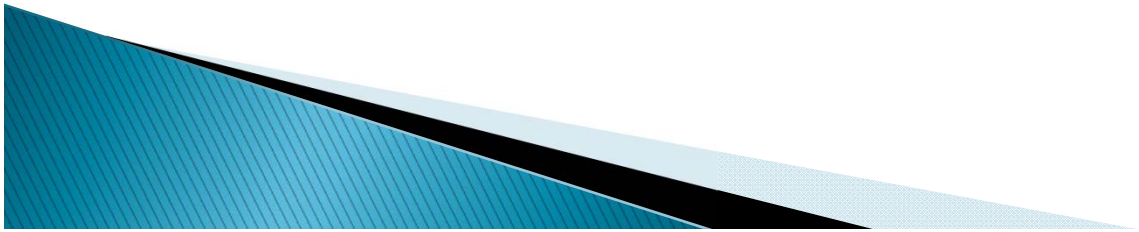
Category: Business model and strategy

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Recognize achievements and continue to build upon sustainability inventory	–	–	–	Continued improvement

Summary of Initiatives: 2-5 Years

Category: Business policies and practices

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Transition to alternative fuel vehicles	$160,000 /year	–	–	Cost savings in fuel and emissions
Replace high emission diesel fuel equipment	$150,000 each	–	–	Lower, cleaner emissions



Summary of Initiatives: 2-5 Years

Category: Energy and resource management programs

Description	Projected Investment	Annual Cost Saving	Annual kWh Saving	Other Benefits/Savings (MT CO_2, gallons, lbs., tons, intangible benefits)
Solar Panel at Reynolds Desal Facility	$250,000	$214,000	1.625M	1,200 MT CO_2 annual offset
Pilot Program for Automated Customer Meter Reading	$1,000,000 +	-	-	Improved customer awareness and water conservation

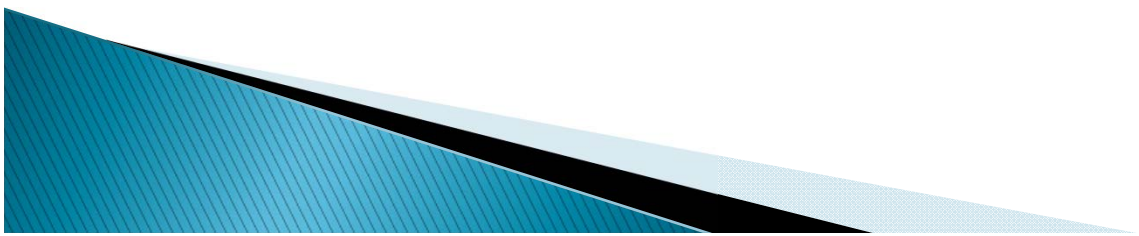
Metrics and Evaluation

Metrics and Evaluation

- Evaluation strategy
  - Regular progress monitoring on each initiative will occur
- Evaluation plan
  - Sustainability initiatives will be regularly evaluated against goals by the green team. Green team will make recommendations to Management for modifications to the plan as necessary.
- Analysis of results vs. projection
  - Quarterly and annual reports to the Board

Metrics and Evaluation

- Reporting
  - The Green Team will keep meeting minutes which may be posted to the Intranet
  - Actions, and achievements towards goals quantified and reported to Management in monthly reports.
  - Initiatives tied to the strategic work plan will be reported both quarterly and annually to the Sweetwater Authority Governing Board



Financial Plan

Financial Plan

- SDG&E Rebates
- Power Purchase Agreement
- Bonds
- Grants
- Operating Revenues

Resource Requirements

- List requirements for the following resources:
  - Personnel – commitment from all staff
  - Technology – solar panels, online energy management, hydroelectric turbine, automated meters
  - Marketing and Promotion – regional partnerships

Conclusion

Since being formed, a foundational value for Sweetwater Authority has been effective and efficient stewardship of our most precious resource, water. Over the years, the Authority has invested in numerous sustainable practices. The goal of this Sustainability Action Plan is to consolidate, quantify and continue build upon the Authority's sustainability efforts.