

US EPA ARCHIVE DOCUMENT

**Santa Clara Valley
Water District**

SM



**Plan-Do-Check-Act Approach to an
Environmental Management System**

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Santa Clara Valley Water District SM



Our mission

The mission of the Santa Clara Valley Water District is a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and the comprehensive management of water resources in a practical, cost-effective, and environmentally sensitive manner.

Primary Services



Open Space/Trails/Recreation



Water Supply



Flood Protection



Ecosystem/Watershed Health

- 1,300 square miles
- Service area of 15 cities,
- ~1.8 million residents,
- Over 800 miles of creeks
- 10 Reservoirs
- 3 Water Treatment Plants

ISO Certification Timeline

2002

Capital Program
Services
Division
certified to ISO
9001

2004

Watershed
Operations
Division
certified to ISO
9001/14001

2007

Initiate expansion to
District-wide Quality
and Environmental
Management System
(QEMS) covering all
operations

2008

District-wide
certifications to
ISO
9001/14001

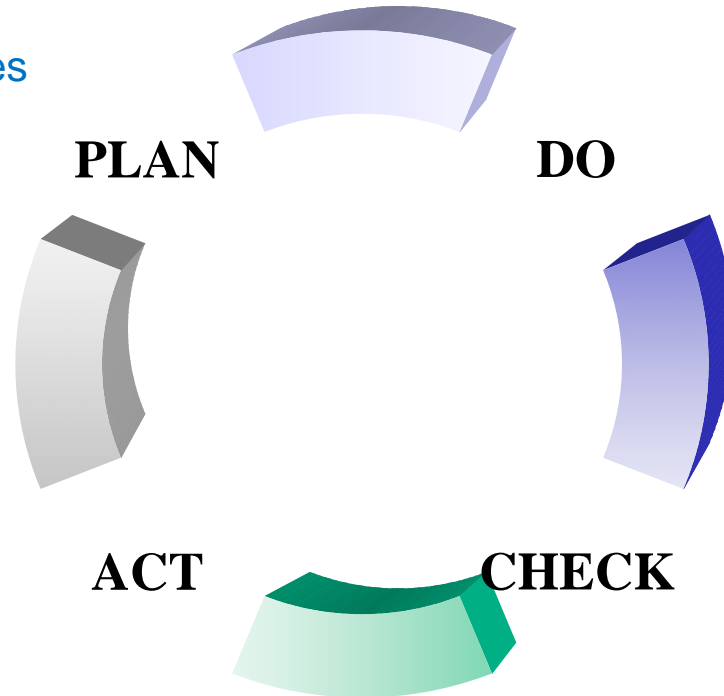
Plan – Do – Check – Act

PLAN

- Quality and Environmental Policy
- Strategic Planning
- Objectives and Targets
- Board Governance Policies

DO

- Delivery of Services
- Environmental Management
 - Permitting
 - Targets and Objectives
 - Environmental Regulatory Compliance



ACT

- Reporting on status of environmental objectives and targets
- Reporting on status of compliance with environmental regulatory requirements
- Management Review

CHECK

- Internal & External Audits
- Corrective and Preventive Action Request (CPAR) System
- Performance Reporting

Environmental Management System

PLAN

- In 2007, the District began a comprehensive analysis of all activities, products and services, to assess operational impact to the environment using EPA's Energy Management Guidebook for direction
- Independent assessments were performed by facility, including treatment plants, pipelines, reservoirs, dams, buildings and grounds
- Results were “rolled-up” into a comprehensive Environmental Aspect Registry
- The aspects were then ranked based on:
 - Environmental Liability
 - Frequency
 - Severity

Environmental Aspects

Excerpt from the District’s Environmental Aspects List
(Based on EPA’s Energy Management Guidebook)

| Environmental Aspects | | Environmental | Legal & Other Requirements | | | | Operational Control |
|---|--|---------------|----------------------------|--|----------------------|--------------------|--|
| Activities / Processes | Negative Impacts | Factor | CEQA/NEPA Coverage | Regulatory Requirement | General Requirement | Specific Reference | Method(s) |
| PIPELINE RELATED ACTIVITIES | | | | | | | |
| Draining (raw and treated water) | Species impacts due to attractant flows and scour, Chlorinated water | B | CEQA/NEPA | F&G, USFWS, USACOE, EPA, RWQCB | SDWA, ESA | | Water Utility Discharge Pollution Prevention Plan (WUDPPP) |
| | possible chlorine release | H | | Local Fire Department or County Health Dept. | Municipal Code | | BMP_Handbook_051205.doc, Admin |
| | Loss of the use of the facility | U | | DHS | Title 22 | | Draft 4 March 2007 Pipeline Maintenance EIR: PERMITS - NPDES Permit, Section 7/10 Permit - ESA |
| | Erosion, turbidity spike | WQ | | RWQCB | Porter Cologne, CWA, | | |

Environmental Management System

DO

- Based upon the ranking results and management input, three significant environmental aspects were indentified, including Climate Change and reduction of Greenhouse Gas Emissions
- An Environmental Management Program for each significant aspect was developed including:
 - Environmental targets and objectives
 - Action plans

Environmental Management System

CHECK

- Progress of action plan implementation continually assessed through internal and external audits
- Corrective and preventive actions are implemented as necessary through CPAR System

ACT

- Status of action plan implementation and progress towards achieving targets and objectives are reported to executive management quarterly
- Management may direct revision of action plans

Climate Change & Water Resources

What we're doing

One of the District's significant environmental aspects is Climate Change and reduction of Greenhouse Gas Emissions.

Efforts to improve include:

- Board adopted resolution on climate change and resource management
- Green Business Certification
- Membership in the California Climate Action Registry
- Partnership with agencies ie. Sustainable Silicon Valley's CO₂ Initiative
- Certification to ISO 14001 (Environmental Management System)

Climate Change & Water Resources

What we're doing (cont....)

- Changing the way we manage energy usage and optimizing our operations so that they are energy efficient
- Water conservation programs have resulted in some of the biggest energy savings of any programs in the County.
- Long term water supply planning processes incorporated the uncertainties associated with a changing climate almost a decade ago. As more information becomes known, we refine our projections and update our analyses
- Climate change is also being addressed in our watershed and flood control planning processes and as part of preparation of environmental documentation for projects



Energy and Cost Savings

- Solar energy provides 20% of campus' needs
- Helps cut California's atmospheric pollution by reducing carbon dioxide levels by an estimated 412,699 pounds per year
- Save taxpayers about \$70,000 per year in energy costs and reduce the District's dependence on public utilities.



Rooftop solar array on Administration building



Solar carport in Headquarters parking lot

Plan-Do-Check-Act

Lessons Learned and Benefits

- Reduction of negative impact to environment through systematic evaluation
- Increased adherence to environmental regulatory regulations
- Phased approach of implementation allows for utilization of organizational experience and knowledge
- Transparency in processes across organizational boundaries
- Various areas and disciplines throughout the District working together
- Management review provides valuable input and promotes accountability

Questions?

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