Knowledge Capture
Metropolitan Water District

- Wholesale provider of imported water for Southern California
- Serves about 50% of the supply for 19 million people
- Average of 1.7 billion gallons of water per day
- Special district comprised of 26 cities and water agencies
- in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties
- 5,200 square mile service area
- $16.6 billion infrastructure replacement value
- $2.0 billion annual budget
- 242 mile CRA, 770 miles of conveyance and distribution pipelines, five treatment plants (323MGD-750MGD), 16 hydroelectric plants; 14 dams and reservoirs
- 967 Water System Operations employees; average age of 50
Knowledge Capture Overview

Knowledge Capture Videos
- Capture Key Operations and Maintenance Activities
- Narrated by Subject Matter Experts (SME)
- Prioritize Subject Area (Retirements, Criticality, Uniqueness)

Transfer Knowledge
- Sequence & Transcribe Video
- Attach Supporting Documentation
- Make Available Online

Collaboration & Information Sharing
- Lessons Learned
- Ask and Expert
- SCADA Wiki
Knowledge Capture

Information Captured

- Processes & Procedures
- Unique or one time operations
- Key expertise from experienced staff
- Lessons learned
- Safety & Regulatory information

- Maintenance Techniques & Sequences
- Key Rigging Operations
- Operational parameters and techniques
- Engineering & contractor training on new facilities
Knowledge Capture
Capture Experience
Knowledge Capture

Transfer Knowledge

Jensen Ozone

Knowledge Pool

Skinner Ozone

Transferred Knowledge & Experience

Information
- Training Videos
- Maintenance Techniques
- Operational Techniques

METROPOLITAN WATER DISTRICT
Knowledge Capture

Status & Costs

Status

- Finished 2\textsuperscript{nd} year of effort
- 245 Active Users, 40 SME’s in the system
- Captured four key SME’s prior to retirement – 120+ yrs of experience
- 94 finished videos online, 15 in progress
- 112 key documents, 145 FAQ

Costs

- One full time employee
- Outside consultant - $75,000 per year
- Website hosting & maintenance - $25,000 per year
Knowledge Capture

Challenges

Building technology infrastructure
Availability of SME’s
  • Narrating videos
  • Providing information
  • Reviewing and approving information

Reluctance to go on camera
Slow to build momentum and acceptance
Handling discovered issues
Knowledge Capture
Process Improvement

Operational
• Ozone – Used knowledge capture to review operation parameter with outside expertise resulting in a streamlined operation

Sharing Information & Collaboration
• SCADA Wiki – used knowledge capture share information on documenting MWD automatic process control’s

Maintenance
• Ozone Effluent Analyzer -