

Operation and Maintenance Manual Program



National Park Service
Denver Service Center
Central Team
Branch of Program Coordination



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As a part of the **Denver Service Center**
Post Construction Program:

"We will stay

with our customer

beyond construction."

— Kenneth Raithel, Jr.
Manager, Central Team
April, 1993

Our aim is to deliver:

- the highest quality products
- the highest quality services

for the park facilities designed and constructed by the Denver Service Center, leading to

- fewer operational problems
- reduced operational costs
- more satisfied customers !



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Program Coordination Branch
National Park Service
U.S. Department of the Interior

Operations and Maintenance (O&M) manuals are but one aspect of the DSC Post Construction Program. Others include:

- as-built drawings
- completion reports
- post construction review by designers
- warranty period review
- post occupancy evaluation



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O&M manuals prepared for the facilities designed and constructed by the Denver Service Center include:

- landscape maintenance
- water/wastewater treatment systems
- fire alarm systems
- security alarm/suppression systems
- electrical systems
- HVAC systems
- Building systems (i.e., special finishes, roofing, general maintenance of the facility)
- Harpers Ferry Center (HFC) media equipment exhibit maintenance
- Specialty items



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Intent

- revise and expand concept of the O&M manual
- increase technology application
- provide documentation of technical systems so the park staff can easily understand and use
- encourage use
- provide technical assistance
 - term maintenance contracts
 - training sessions
- integrate O&M manual with MMS/ICAP



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Several operation and maintenance manuals are offered to customers:

- **General Operation Guide (GOG)**
- **Operation and Maintenance Summary (OMS)**
- **Interactive Audio/Visual (IAV)**
- **Full technical O&M Manual**

all tailored to FIT the needs of the park.



Process

- initial scoping trip to park
- meet with superintendent/chief of maintenance/chief ranger/chief interpreter/park staff
- prepare task directive
 - determine park needs
 - roles of "players"
 - establish schedule
- prepare product(s)
- "Stay with the Customer"
 - 6-12 months follow-up review
 - usage ?
 - maintenance difficulties ?
 - improvement ?



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GOG

(General Operation Guide)

- Prepared for the nontechnical employee working at the information desk/in the facility
- A 1-2 page summary of basic and emergency maintenance procedures typically includes:
 - location of fire extinguishers and pull boxes
 - evacuation of the building
 - who to call in event of an emergency
 - turning off the water to overflowing plumbing fixtures
 - resetting tripped breakers
 - turning on/off HVAC systems
 - adjusting thermostats.
 - a simple floor plan of the facility.



OMS

(Operation and Maintenance Summary)

- more technical than GOG but less than full O&M manual
- overview of the technical systems of the facility
- brief summary of basic operation procedures
- required preventative maintenance for the facility
- applied higher technology to include interactive computer technology



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IAV

(Interactive Audio/Visual O&M Manual)

- eventual replacement of written manuals
- user friendly
- select from menus on a monitor
 - select area of interest
 - select function to be maintained
- use of audio/visual segments
- use of still pictures
- ability to return to the beginning for another selection or
- ability to stop the program
- equipment to operate IAV O&M manual provided to park
- supplemental materials for IAV
 - written manufacturers' material
 - test and balancing reports
 - valve schedules
 - flow diagrams/system schematics
 - floor plans
 - frequency charts
 - maintenance task descriptions



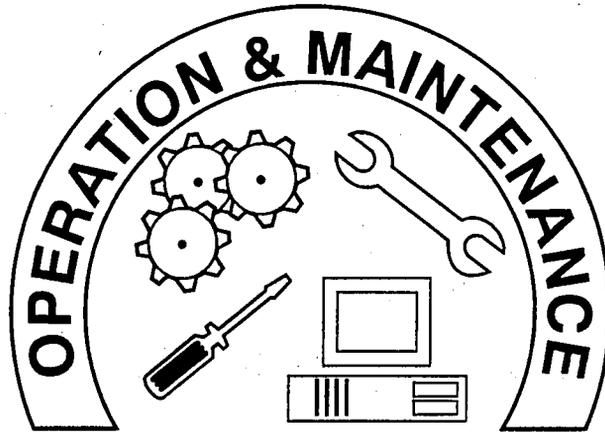
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Full Technical O&M Manual

- custom-designed for the facility
- all-encompassing information
- written in "plain English"
- presents how system operates
- how to "trouble-shoot"
- how and when to conduct preventative maintenance



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