

Below are a summary and key takeaways from the subject presentation given at the 2017 Large Facilities Workshop.

Facility Operations & Maintenance Roundtable

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Description:

LLO presented some aspects of operation and maintenance of a gravity wave observatory then others shared challenges and best practices that are commonly faced by large facility operators.

Best Practices:

- Have an environmental threat plan and fit in with what the community does.
- Include foreseeable preventive maintenance costs and upgrade requirements when planning budgets and communicate these to your Program Officer. Tactics include:
 - Develop an Asset Condition Report evaluating the remaining life of civil infrastructure and estimating the cost of significant replacement or refurbishment to be scheduled.
 - Develop a Facility Condition Index (FCI), a standard used to indicate the condition of an asset or assets, use the ratio of the cost of requirements divided by the current replacement value (CRV) of the asset.
 - Develop a Property Life Cycle Maintenance Plan peer reviewed and vetted by maintenance professionals from a similar large science facility annually.
 - Include Lifecycle Maintenance as a dedicated Work Breakdown Structure element in you annual work plan.
 - Utilize Computer Maintenance Management Systems preventive and corrective maintenance.
 - If possible, group specific activities into discrete fiscal years so they can be accomplished in the same year funding cycle.
- Important to provide detailed basis of estimates when making a supplemental request for additional funding to address large unexpected repairs and maintenance.
- Keep uptime and downtime metrics (% of time facility is operating/observing) and track causes of downtime to identify and prioritize issues that could be addressed to maximize science.
- Initiatives established during construction project management can provide a firm foundation for operations and maintenance, e.g., change control, documentation, issue tracking, etc.
- Use advisory committees for effective communications with user community and to build community consensus.
- Develop and use a communications plan to identify which stakeholder community (project staff, facility management, funding agencies, external user community, etc.) needs to be informed for different types of communications. For example, new discovery press releases would probably go to all stakeholder communities whereas disruption to science operations would probably only go to project staff, facility management, and funding agency liaisons.
- Hold regular meetings with facility scientific staff, operations staff, and IT staff to exchange issues, concerns, ideas, and problems so solutions are not developed in a vacuum.