

Deferred Maintenance 101

Based on FY 2018 Year-end Data

July 2019



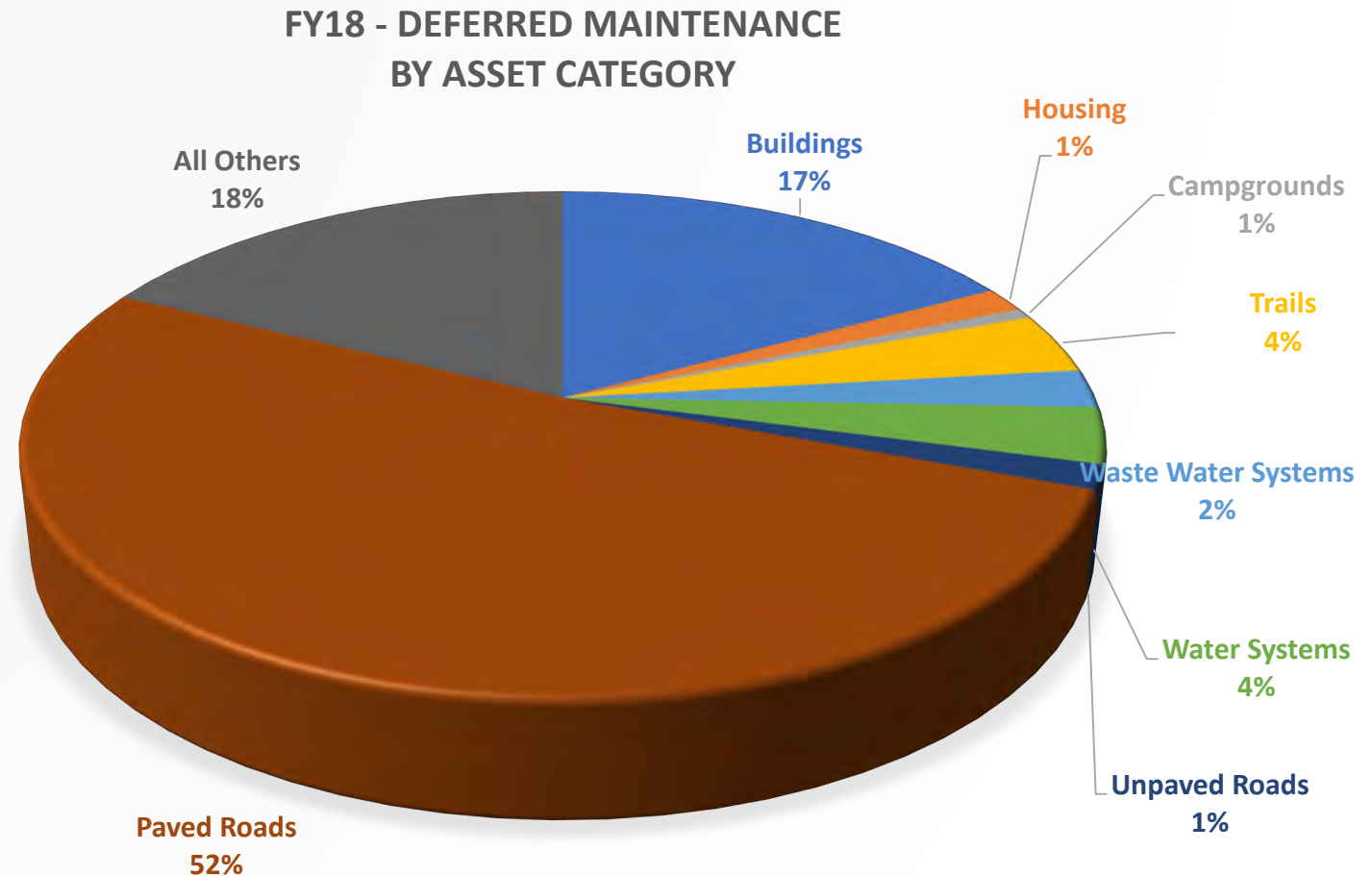


What makes up Deferred Maintenance (DM)?

DM is defined by the maintenance and repairs of assets that were not performed when they should have been and are delayed for a future period.

As of FY18, the NPS has \$11.9 Billion of DM, including:

Asset Category	FY 18 DM
Paved Roads	\$6,153,885,233
Buildings	\$2,034,223,653
Trails	\$461,244,829
Water Systems	\$426,419,357
Waste Water Systems	\$290,381,968
Housing	\$186,743,990
Unpaved Roads	\$185,430,769
Campgrounds	\$78,952,832





What does DM look like?



Before and After: Front 3 Comprehensive stabilization of upper and lower embrasures; removal of existing iron Totten shutter assemblies; infill arch reconstruction, replicated shutter component installation; scarp repointing as well as parapet brick replacement and repointing.



Fort Jefferson, Dry Tortugas



What does DM look like?



Before and After: Front 3 Lower Level Bastion Embrasure Reconstruction including removal of existing corroded iron Totten shutter assembly components and installation of replicated shutter components along with brick replacement and repointing.



Fort Jefferson, Dry Tortugas



What does DM look like?

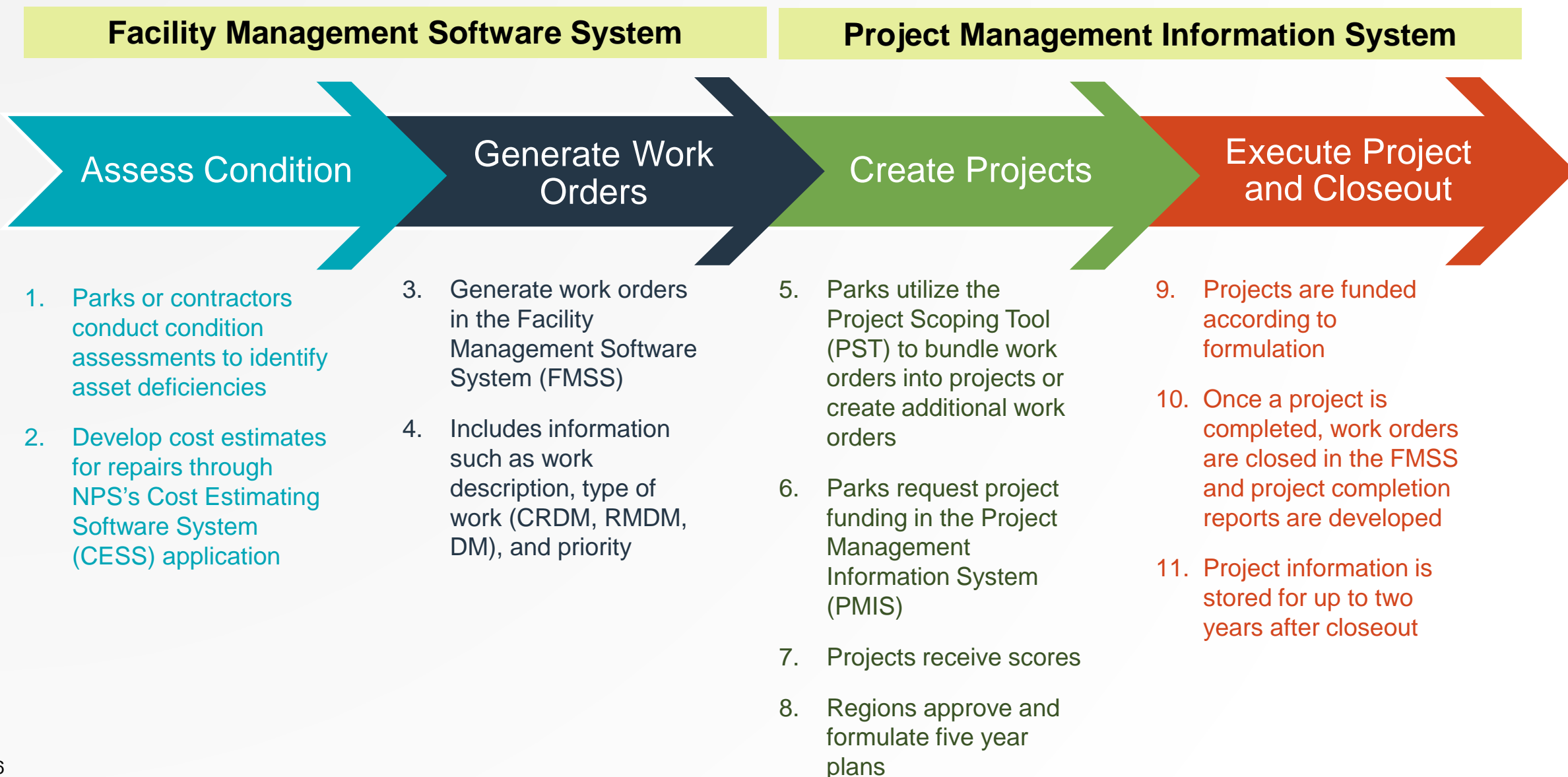


Arlington Memorial Bridge



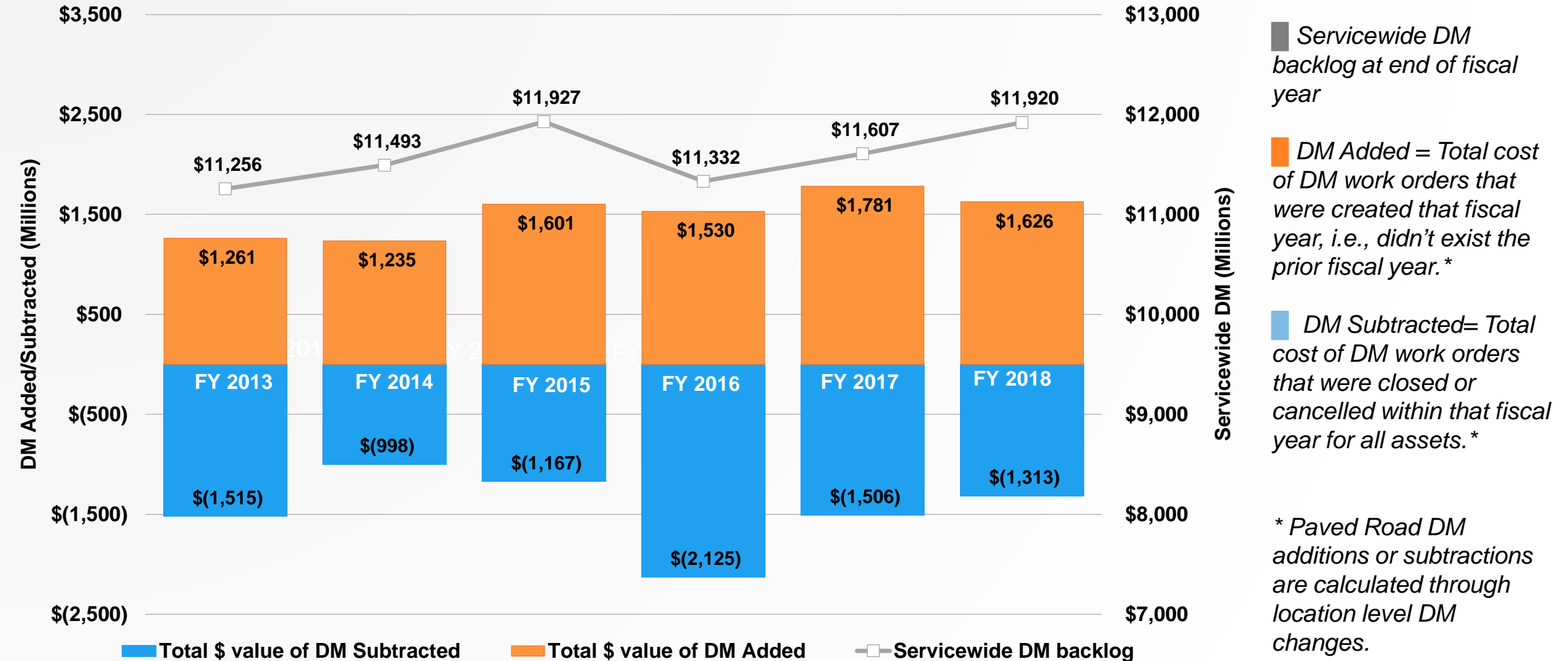


How is DM Created, Tracked, and Addressed?





How has DM changed over the past 5 years?





How much of available project dollars are spent on DM?

Past 4 Years / Next 5 Years*

(\$, millions) / % of Project in DM

FY Program	2014	2015	2016	2017	2018	2019	2020	2021	2022
Repair Rehab	<u>71.0</u> 49%	<u>82.0</u> 82%	<u>99.5</u> 83%	<u>124.5</u> 65%	<u>99.3</u> 74%	<u>100.0</u> 76%	<u>100.0</u> 73%	<u>100.0</u> 66%	<u>100.0</u> 71%
LIC	<u>60.6</u> 67%	<u>61.7</u> 79%	<u>116.3</u> 87%	<u>132.0</u> 78%	<u>129.0</u> 82%	<u>129.0</u> 76%	<u>133.8</u> 86%	<u>149.0</u> 90%	<u>149.0</u> 81%
Rec Fees	<u>142.2</u> 35%	<u>186.9</u> 46%	<u>218.6</u> 46%	<u>238.6</u> 45%	<u>226.7</u> 67%	<u>259.9</u> 64%	<u>259.9</u> 55%	<u>259.9</u> 55%	<u>259.9</u> 55%
Cyclic Maintenance	<u>95.4</u> 68%	<u>95.4</u> 67%	<u>112.9</u> 66%	<u>126.6</u> 69%	<u>127.0</u> 73%	<u>113.0</u> 74%	<u>113.0</u> 66%	<u>113.0</u> 61%	<u>113.0</u> 50%
FLTP	<u>228.8</u> 80%	<u>198.3</u> 81%	<u>281.8</u> 92%	<u>221.8</u> 80%	<u>265.6</u> 66%	<u>274.2</u> 81%	<u>281.1</u> 67%	<u>302.7</u> 67%	<u>302.7</u> 67%
Servicewide Total	<u>775.7</u> 53%	<u>827.9</u> 58%	<u>972.6</u> 69%	<u>975.0</u> 62%	<u>1,006.0</u> 65%	<u>923.5</u> 72%	<u>901.9</u> 66%	<u>927.1</u> 66%	<u>930.2</u> 64%

- The table shows the formulated or available dollar amounts verified by the program fund managers and five year plans.
- The DM percentages are verified by program fund managers, Budget Office calculations, and PMIS-FMSS analysis

Source details are captured in the slide notes. Servicewide total includes other program fund sources not reflected in the table above.



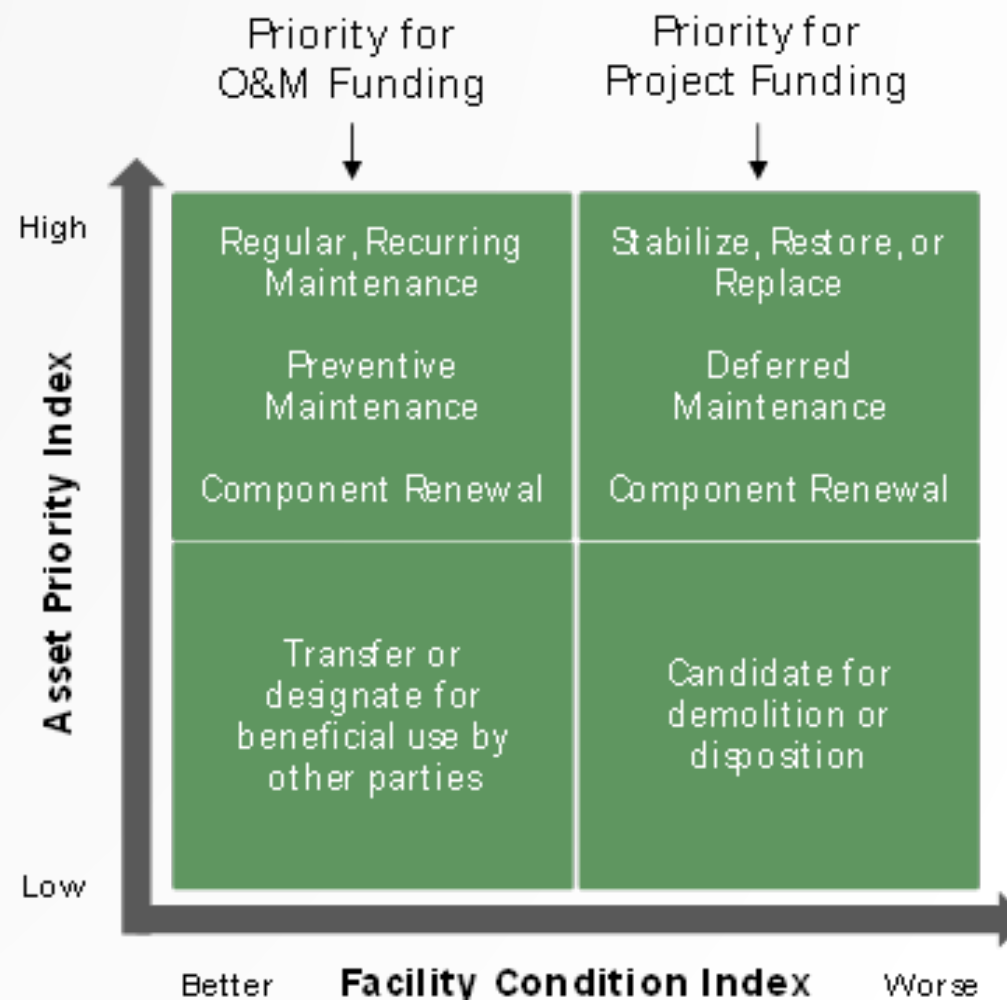
What Are NPS priorities?

Element	Strategic Goal	Activities Captured
FINANCIAL SUSTAINABILITY	<ul style="list-style-type: none"> • build only what can be maintained • right-size the portfolio • reduce liabilities • eliminate non-essential development in parks in order to emphasize the parks natural and cultural significance 	<ul style="list-style-type: none"> • disposition of non-essential facilities • reduction of O&M requirements and liabilities • energy reduction • fiscal stewardship • sharpened focus core resources
VISITOR USE	<ul style="list-style-type: none"> • invest in facilities that primarily serve visitors, are primary points of recreation, and encourage all users to spend more time outdoors 	<ul style="list-style-type: none"> • investment in facilities that directly enable outdoor recreation • investment in facilities that are primary touch points for visitors to the park
RESOURCE PROTECTION	<ul style="list-style-type: none"> • preserve and protect valuable and unique natural and cultural resources 	<ul style="list-style-type: none"> • preservation and repair of historic and LCS assets, cultural landscapes, and natural resources • environmental and cultural restoration
HEALTH AND SAFETY	<ul style="list-style-type: none"> • Correct facility or site-related deficiencies and hazards that may cause injury or harm to the public, staff, or the environment 	<ul style="list-style-type: none"> • correction of existing and identified unsafe and hazardous conditions at NPS facilities



How does NPS prioritize?

- By sustain, we mean operate, maintain, repair, recapitalize over its useful life to both maximize / optimize its useful life and the value of the service the infrastructure provides
- Investment Planning Processes
 - Asset Prioritization and Capital Investment Strategy (CIS)
 - Fund sources





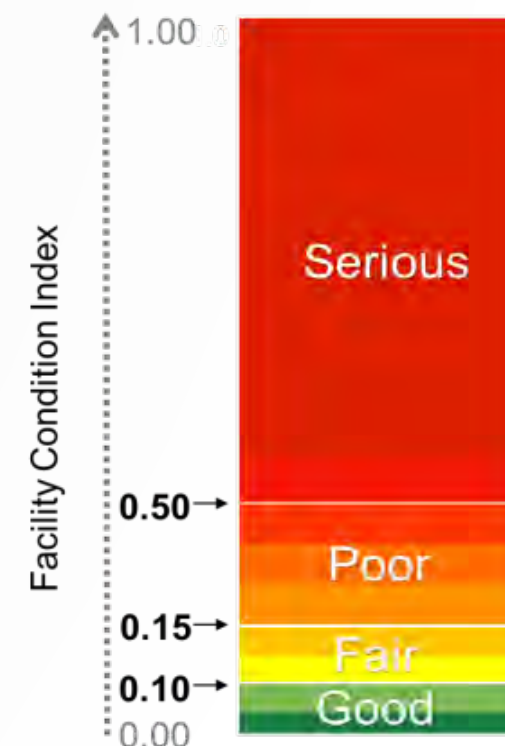
How does NPS measure condition?

Facility Condition Index - *the approach and challenge the metric presents.*

$$\text{FCI} = \frac{\text{Deferred Maintenance}}{\text{Current Replacement Value}}$$

The cost of maintenance and repairs that were not performed when they should have been and are delayed into the future. (Entered by park staff or contractors)

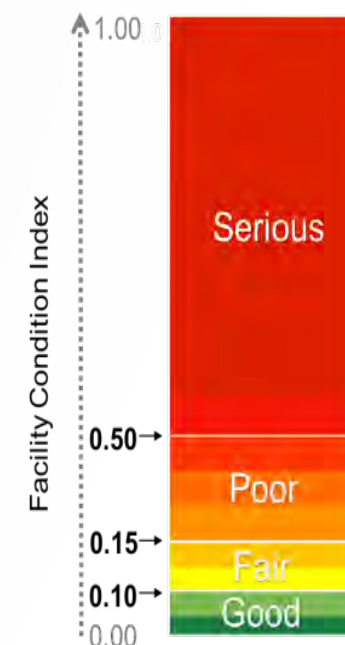
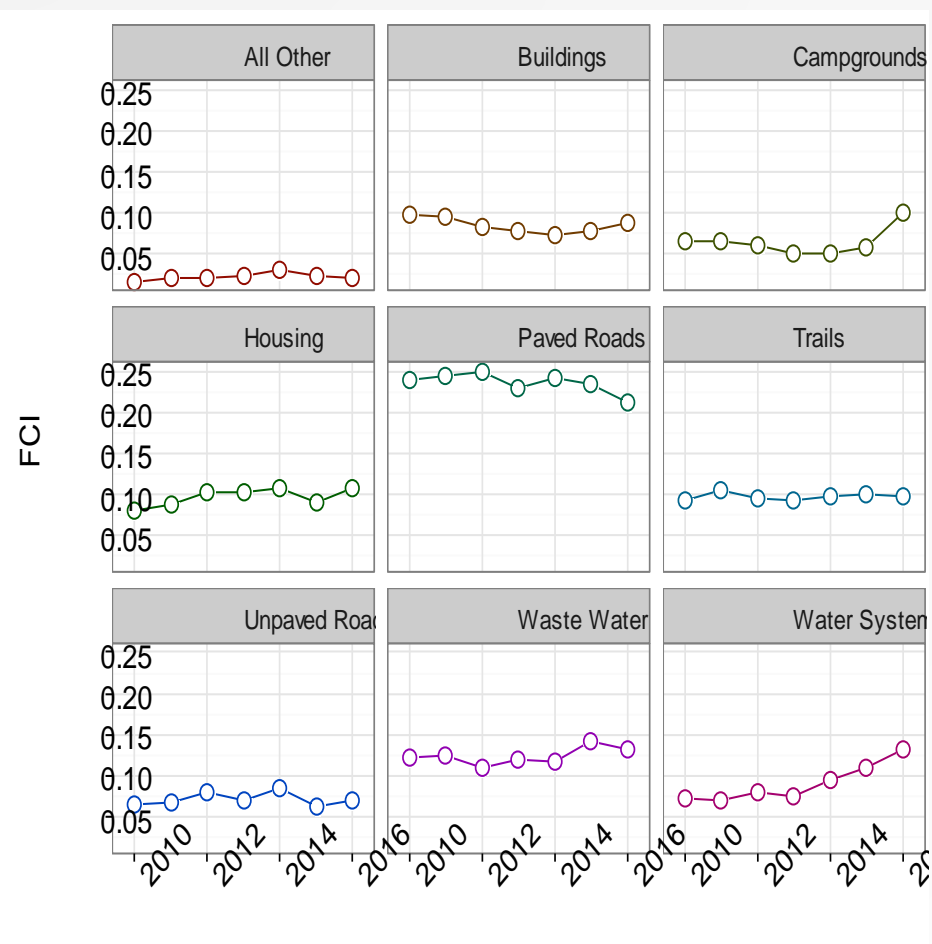
The standard industry costs and engineering estimates of materials, supplies and labor required to replace a facility at its existing size and functional capability. (Entered by park or network staff and approved by Regions)





How does NPS measure condition?

Facility Condition Index – *the approach and the challenge the metric presents.*





What's next?

revAMP: Next Evolution of Asset Management

revAMP is the coordinated effort to improve NPS's facility management by evaluating the current business processes, identifying gaps and moving toward an improved future state. revAMP consists of two sub-projects:

AMP Evaluation

These lifecycle asset management improvements will feed the Facility Investment Strategy (FIS) process for NPS investments. Applying these changes will:

- Significantly improve the field's workload
- Allow parks to focus efforts on making sound life-cycle asset management decisions

Facility Investment Strategy

A holistic investment strategy supported by the improvements to the AMP through the AMP Evaluation.

- Provide strategic direction on funding the NPS' high priority infrastructure needs
- Implement an investment review board (IRB) to own and enforce the FIS
- Improve upon the existing NPS CIS





Implementing the Secretarial Priority For Infrastructure

Item	Purpose	Status
Re-Engineer / Downsize Facility Mgmt. Software System (FMSS)	To reduce the burden on field and concentrate on improving the highest valued data.	Launched: January 2018 Target Completion: Fall 2019
Develop a more comprehensive investment strategy	To assure the highest priority needs of the Bureau are being addressed.	Launched: January 2018 Target Completion: Fall 2019
Build organizational capacity	To facilitate project execution	On-going
Streamline business processes	To facilitate project execution	On-going
Communications plan & toolbox resources	To appropriately message around the Sec's priority and create expectations for Leadership at all levels of the organization.	Completed: Spring 2019
Sponsor study to explore additional impact investing and P3 opportunities	To better leverage federal investments. NPF sponsored.	Completed: Spring 2019

National Park Service

Park Planning, Facilities and Lands

