



# SFWMD Governing Board OMC Capital Improvement Program

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Jeffrey R Kivett, P.E,  
Operations Engineering & Construction Division





# OMC Capital Improvement Program

## Topics:

- **History of the Capital Improvement Program**
- **Status on the condition of existing infrastructure**
- **Current Status Capital Plan**
- **Future Improvements to Capital Plan**



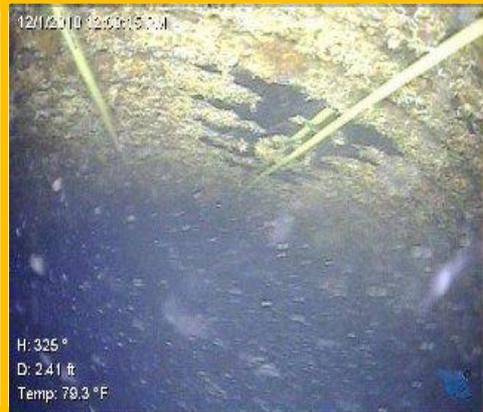
# OMC Capital Improvement Program History

## History:

- Projects based on Field Station input to a small group of Engineers to prioritize and design.
- Recognized that funding levels did not keep pace with degrading infrastructure
- Developed formalized inspection programs
- A recognized capital program developed
- What level of funding required?



# OMC Capital Improvement Program Projects - Deficiency Based





# OMC Capital Improvement Program Projects - Efficiency Based





# OMC Capital Improvement Program

## Original Funding Level Calculation

### Assumptions:

- Linear depreciation of assets and inflation considered
- Optimal preventive maintenance does not significantly extend useful life of asset
- Maintenance costs increase rapidly if replacement does not take place during the 60th – 70th year of the 100 year life cycle
- Backlog value based of capacity of individual assets (\$/CFS) and time in service.
  - \$25K/CFS for Pump Stations
  - \$1.5/CFS for Spillways
  - \$3K/CFS for Culverts



# OMC Capital Improvement Program Funding Level

## Results:

- **Cumulative backlog calculations for existing infrastructure used to determine requested annual Capital Program Budget amount**
- **Based on the methodology, \$60M annually**
  - **reduces cumulative backlog to approximately \$0 over 20 years (Does not consider new infrastructure being built)**
- **Canals/levees not considered**



# OMC Capital Improvement Program Inspection Programs

## **Current Capital Program is \$50 Million**

- **Based on existing data hold backlog flat**
- **Increase Inspection Program efforts**
  - **Structure Inspection Program**
  - **Microwave Tower Inspection Program**
  - **Roof Maintenance Inspection Program**

## **Inspection Programs Developed To:**

- **Ensure operational integrity of District infrastructure**
- **Gather data on the condition of assets, overall and component level**
- **Prioritizing repairs performed by Field Stations**
- **Prioritize projects within the Capital Plan**
- **Keep tabs on infrastructure identified with “critical” deficiencies**

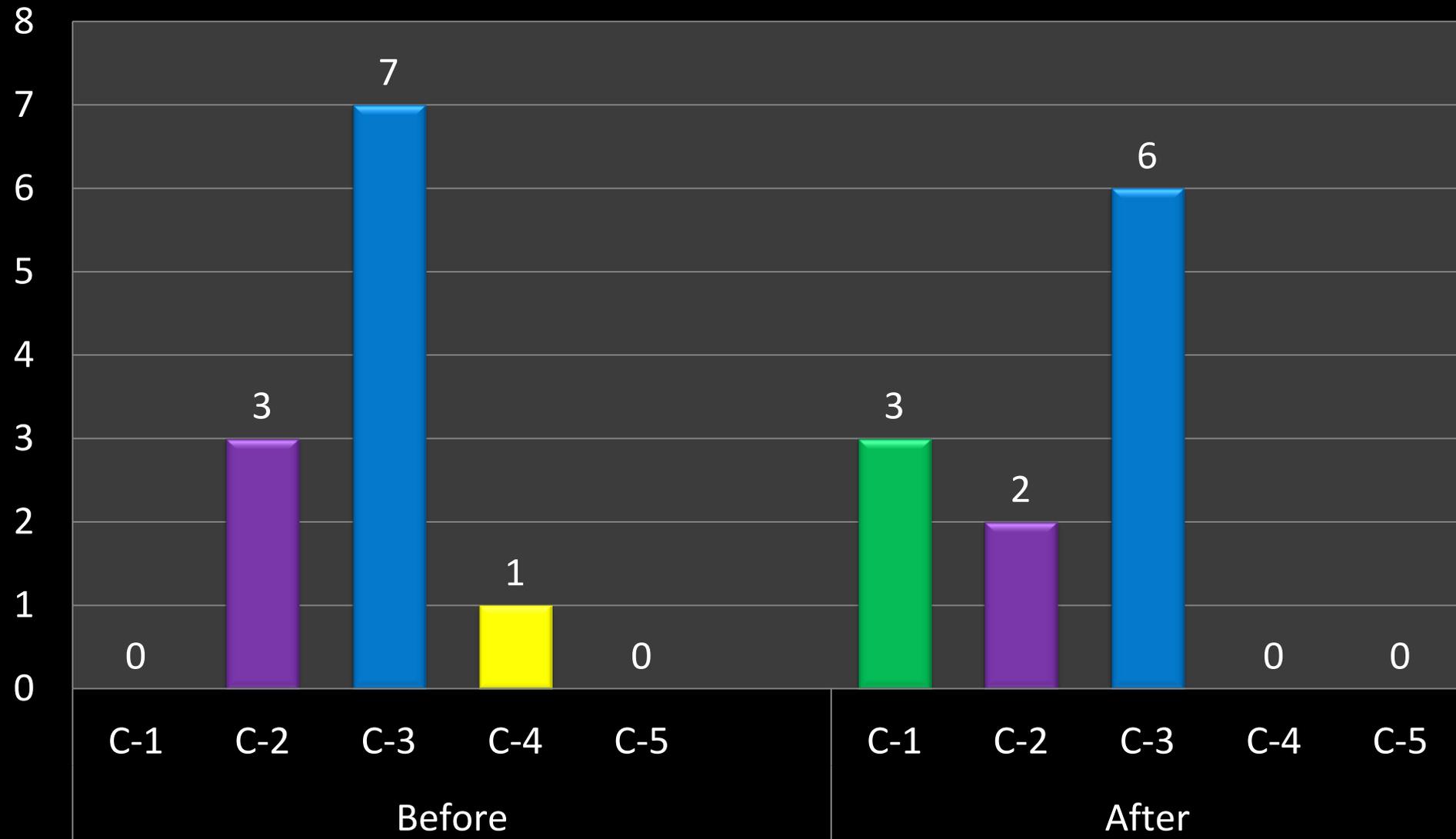


# OMC Capital Improvement Program Inspection Program Rating Definitions

Overall Rating	Description for Overall Structure	Application
C1	All old deficiencies noted from the previous inspection have been corrected.	Applied when no further action is recommended for the structure.
C2	Most old deficiencies noted from the previous inspection have been corrected.	Applied when the overall recommendation is to monitor minor deficiencies. Deficiencies will generally be re-evaluated at the next five-year inspection of the structure.
C3	Deficiencies have been identified and/or several old deficiencies noted in the last inspection have not been corrected.	Applied when the overall recommendation is to correct deficiencies.
C4	Serious deficiencies exist that if not immediately corrected may lead to or cause deterioration of the structure.	Applied when the overall recommendation is to correct serious deficiencies that if not corrected in a timely manner will impact the operation of the structure.
C5	Major deficiencies exist such that the structural integrity of the structure will not likely withstand a major flood event.	Applied when the overall recommendation is to correct major deficiencies as soon as possible to restore structural integrity.

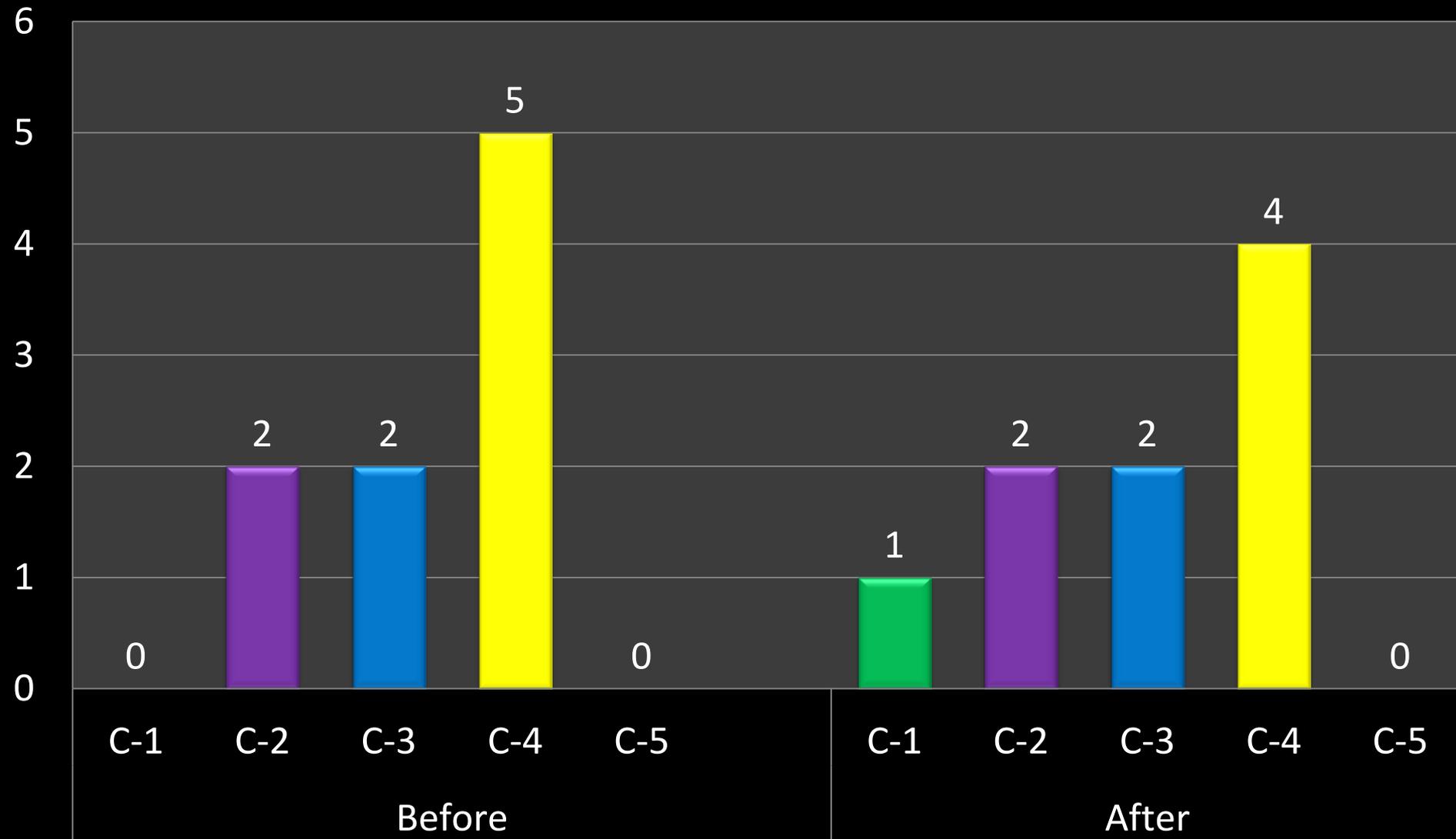


# Capital Program Plan Lock Inspection Ratings



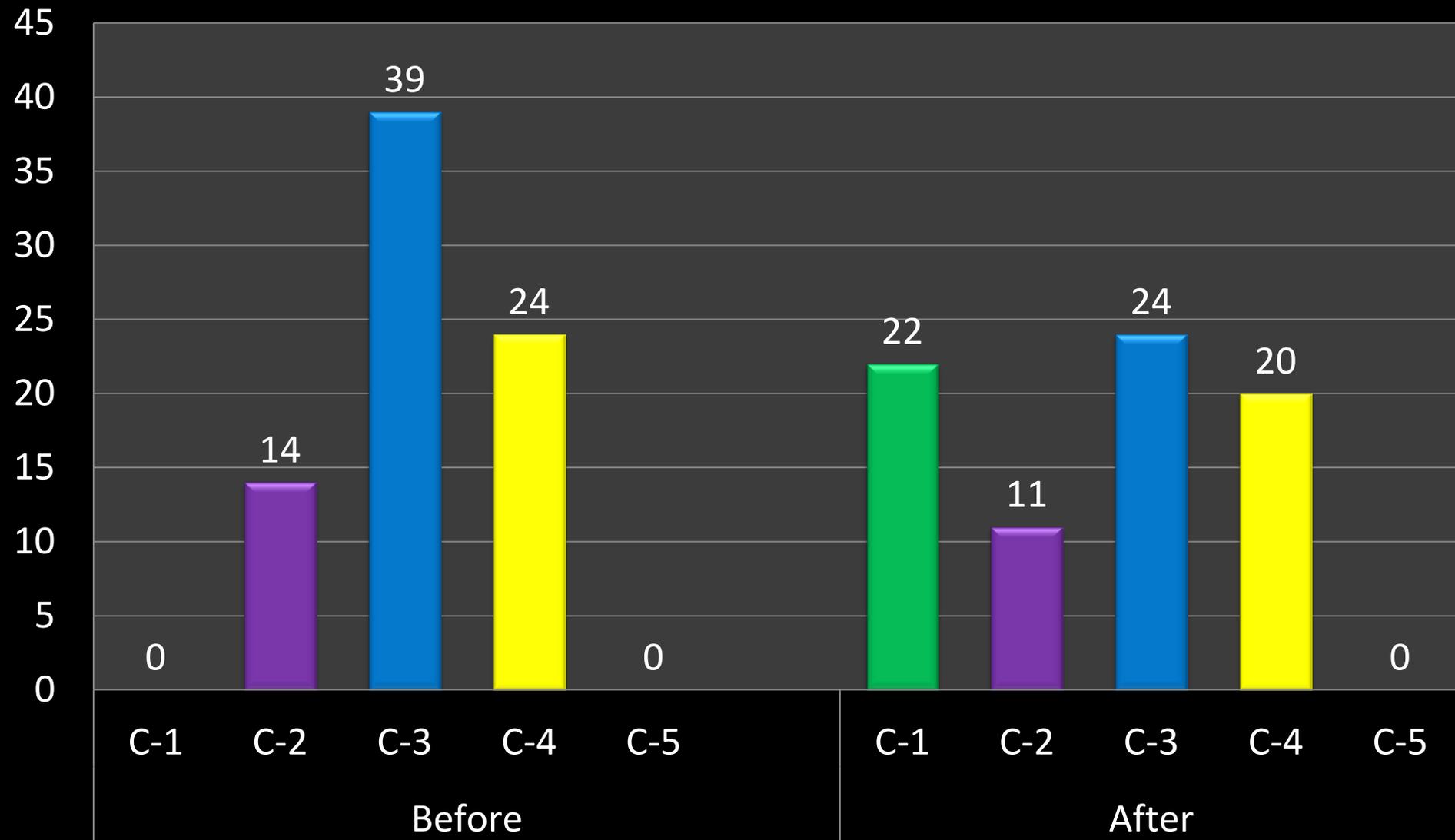


# Capital Program Plan Weir Inspection Ratings



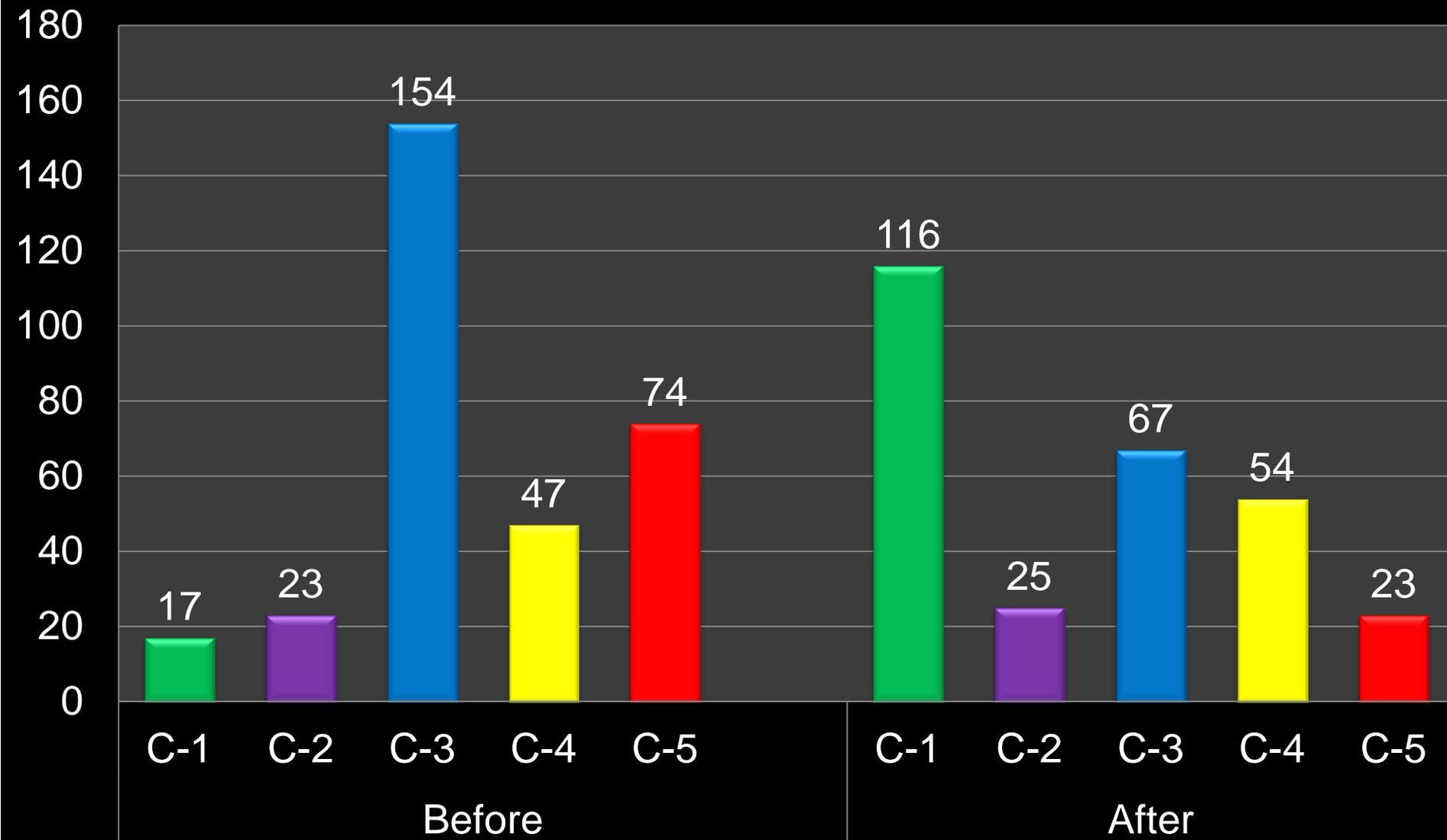


# Capital Program Plan Spillway Inspection Ratings





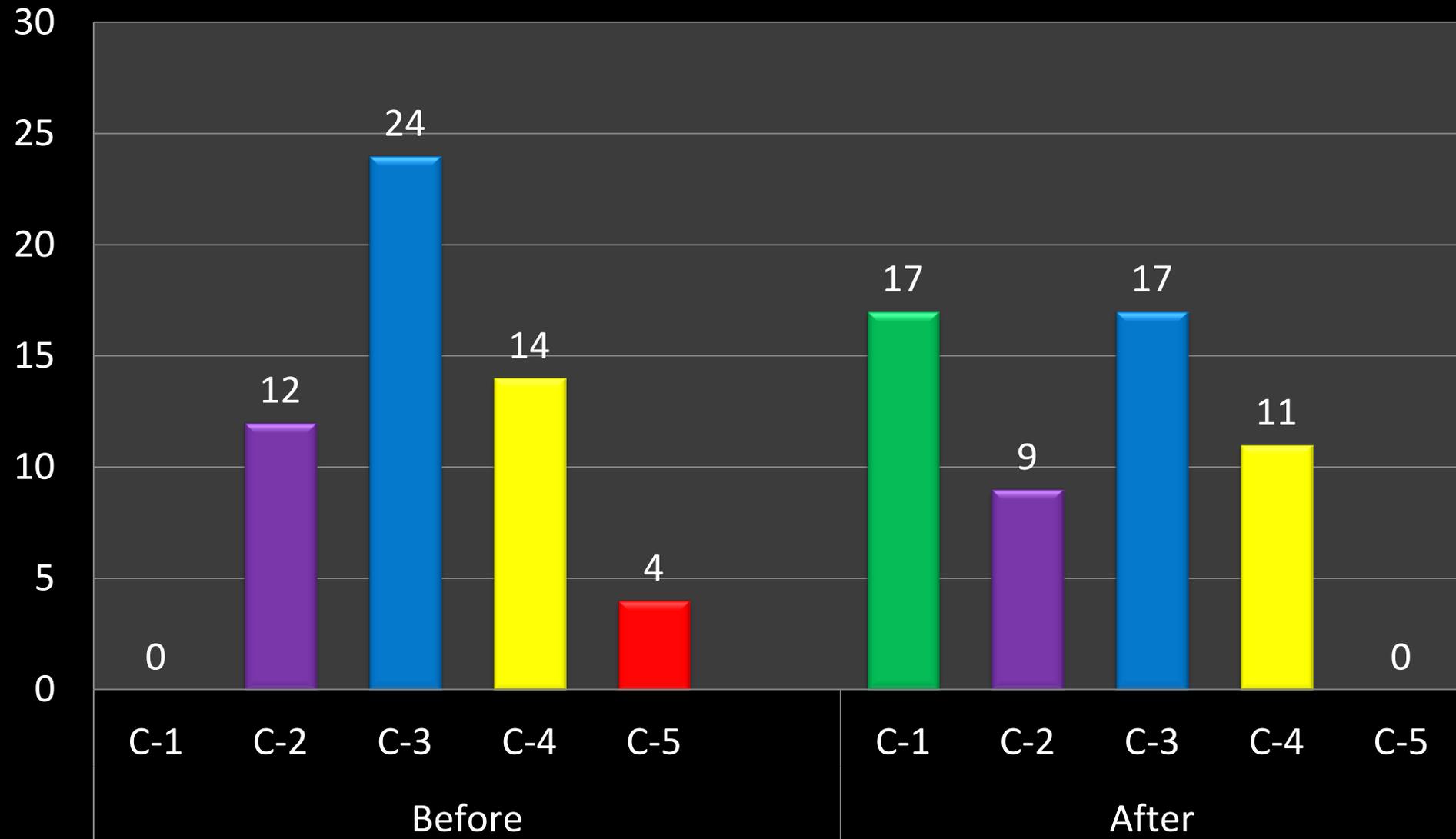
# Capital Program Plan Culvert Inspection Ratings





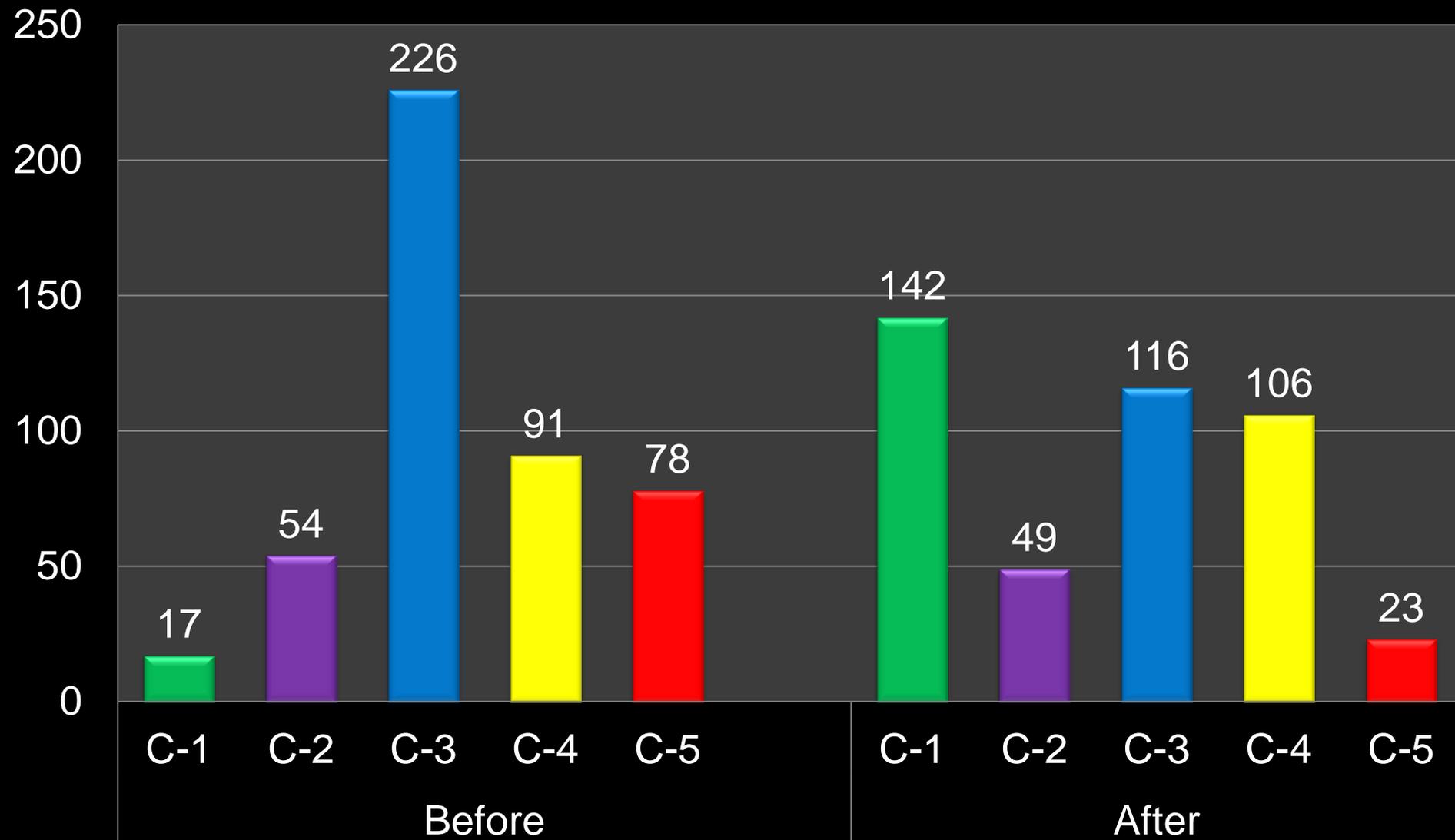
# Capital Program Plan

## Pump Station Inspection Ratings





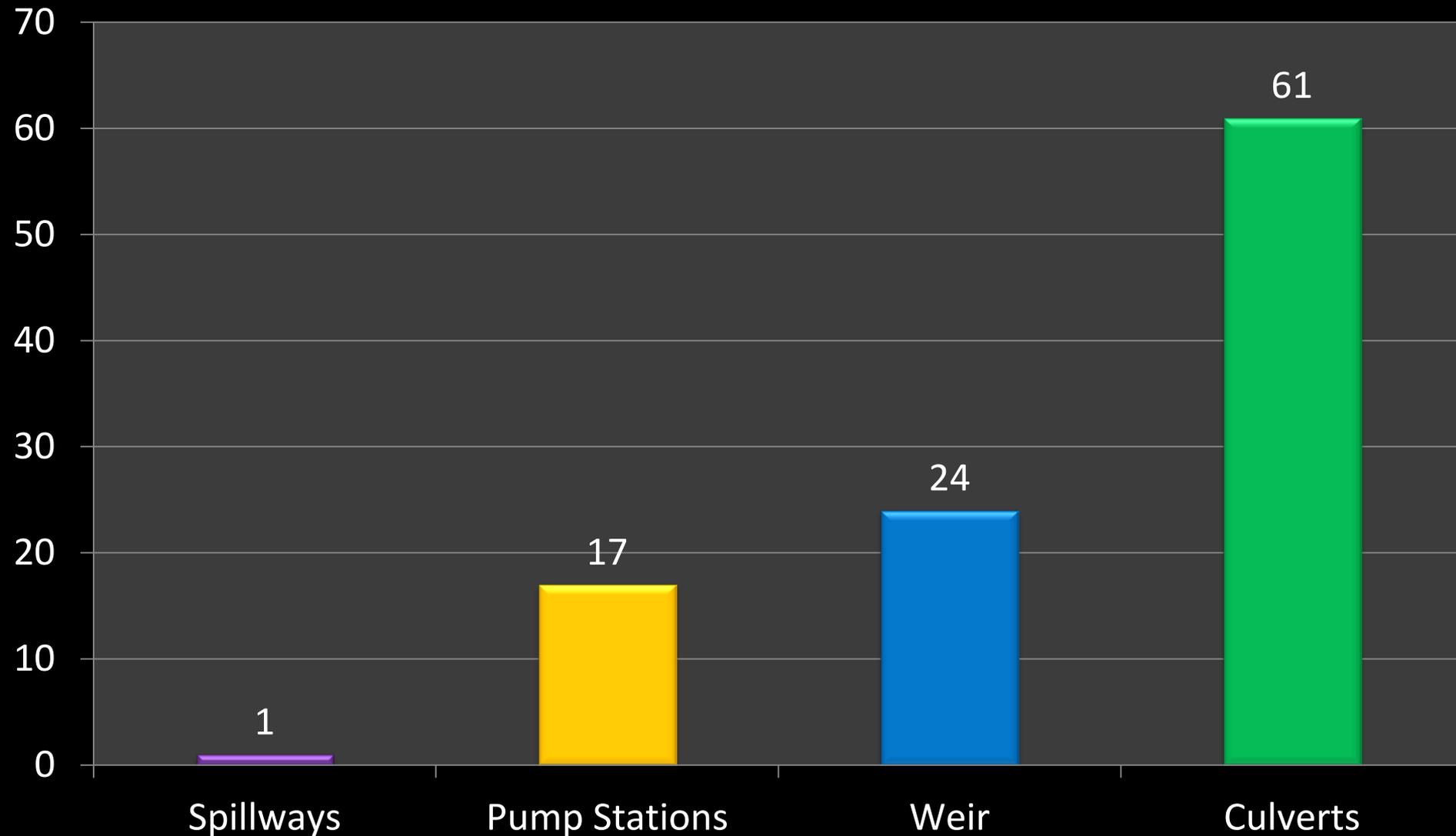
# Capital Program Plan Infrastructure Inspection Ratings





# OMC Capital Improvement Program

## New Infrastructure Added to Inventory





# OMC Capital Improvement Program Current & Future Prioritized Projects

## Legend:

In-house Design Underway
External Design Underway
Currently in Construction
Pre-Design Project Management

- "X" indicates project construction phase by fiscal year
- Working prioritized list has over 100 projects

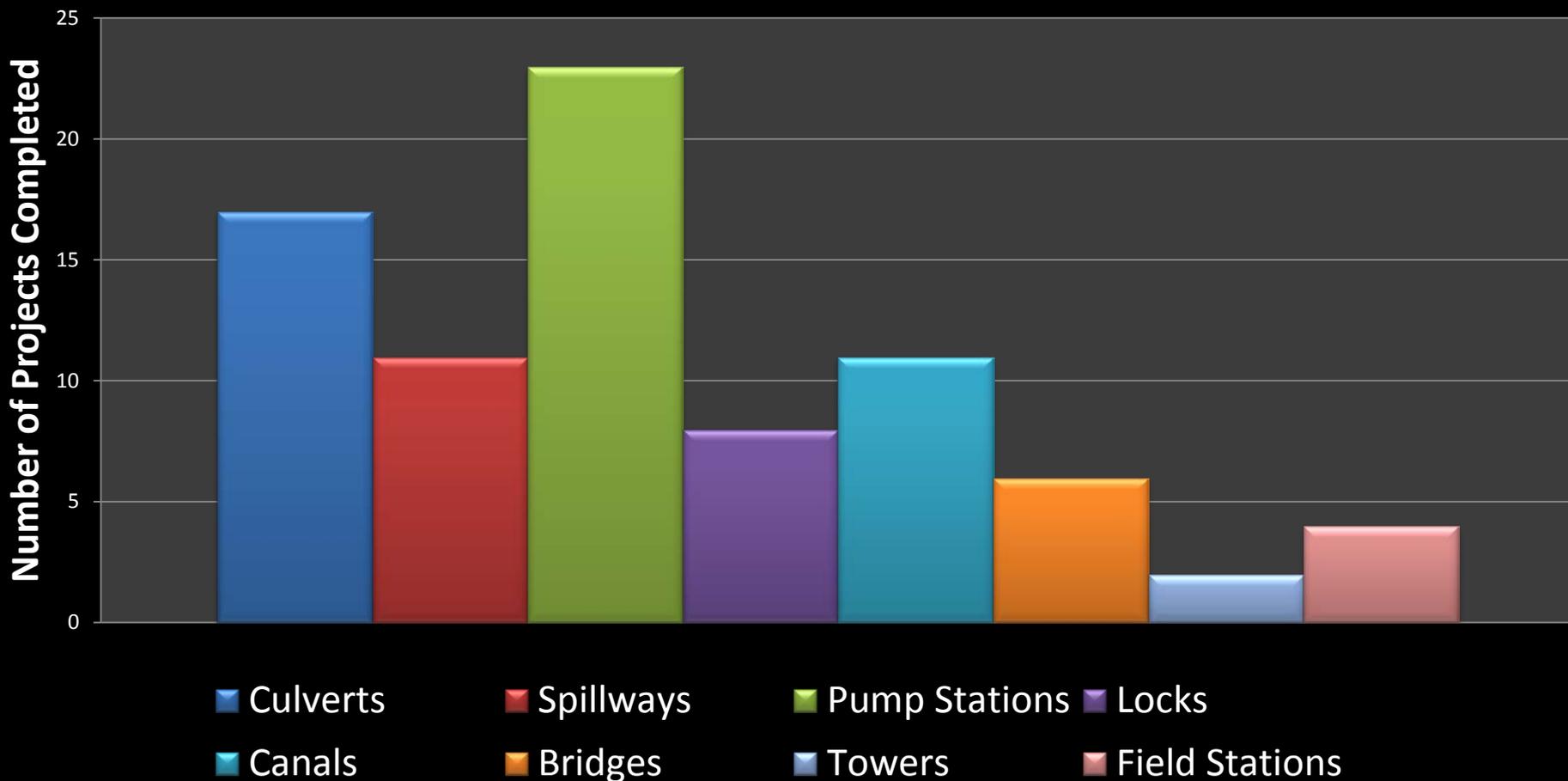
Priority	Project Name	FY14	FY15	FY16	FY17	FY18	FY19	FY20
1	C-4 Gravity Wall	X	X	X				
2	S5A Refurb(Hardening & Serv Bridge Repairs FY14)	X	X	X	X	X	X	
3	North Shore Trash Rakes	X	X					
5	G-123 Refurbishment plus S34 Gate Repl & Struct	X	X	X				
6	L40 Certification	X						
7	G-94 ABCD	X	X					
9	G-103 Replacement			X				
10	S125 Culvert Replacement			X				
12	S9A Roof Repair			X				
13	Hillsboro Canal Bank Stabilization	X	X	X				
14	S150 Replacement And Automation	X	X					
15	WPBFS PC Culverts			X				
17	G119 Gate Replacement				X			
18	Homestead FS B230 Replacement	X	X					
19	North Shore Path Command Control		X	X	X			
20	North Shore Path Automation		X	X	X			
21	Generator Replacements		X	X	X	X	X	X
22	Project Culvert FS Replacements	X	X	X	X	X	X	X
23	Spillway Refurbishments S72/S75/S82							
23	S68, S83, S84 Structure Repairs			X				
23	S70, S71 Structure Repairs				X			
24	S2/3/4 Service Bridge Refurb			X				
25	S13 Repower and Automation	X	X	X				
26	S140 Trash Rake/Fuel Tank/Gate Replacement				X	X		
27	Fall Protection		X	X	X	X	X	
28	STA Fuel Tank Platforms			X				
29	G151 Gate & Platform Deck Repla & Wing Walls	X	X					
30	S46 Project Design		X	X				
31	G93 New Control Building	X	X	X				
32	C23 - C25 Bank Stabilization				X	X		
33	B66 Tower (140' tower, 10,000 sq ft bldg + elec)	X		X				
34	S169 Relocation			X				
35	L14 Bridge Replacement			X				
36	S6 Tower Replacement	X	X					
37	S235 Automation and Gate Operator Replacement	X						
39	IT Shelters		X	X				
40	FAES Tower Replacement				X			
41	G16 Dredging and Bank Stabilization				X			
42	S9XS							
43	C-100A Bank Repairs and Dredging	X	X	X	X	X	X	X
44	NAVD88	X	X	X				



# OMC Capital Improvement Program

## Completed Projects 2009-2013

**\$231,748,691 of Capital Improvements Over Past 5 Years**

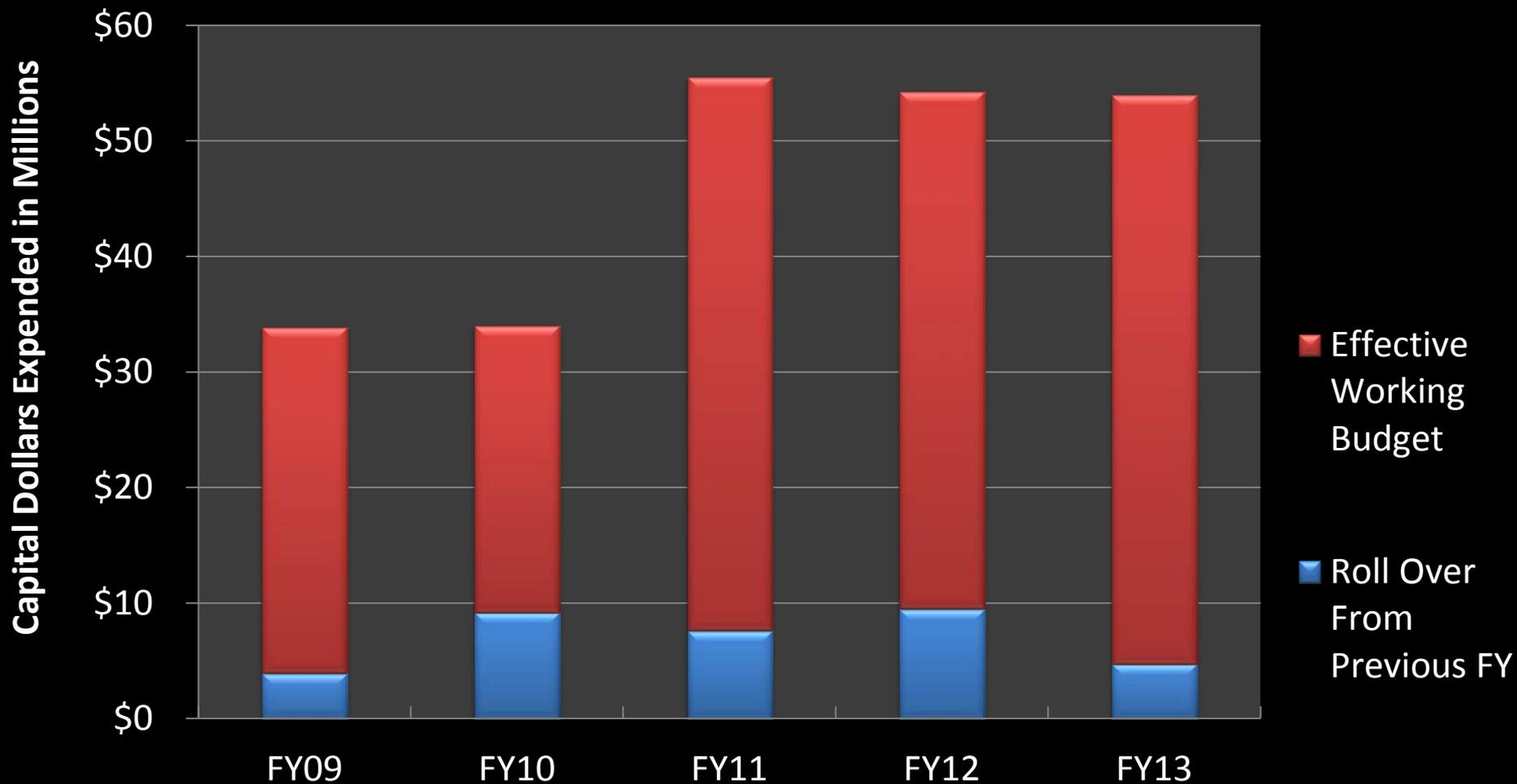




# OMC Capital Improvement Program

## Cash Flow History 2009 - 2013

**Roll Over Effectively Increases Each FYs Budgeted Amount**





# OMC Capital Improvement Program

## Focus Change from Structures to Canal/Levee





# OMC Capital Improvement Program

## Next Steps

### Future of the Capital Improvement Program

- **Align Capital Improvement Program development with industry best practices**
- **Incorporate risk based prioritization into program**
- **Develop financial model for long term capital cash flow projections**
  - **Develop management options for spikes in cash flow**
  - **If necessary establish reserve in low expenditure years to dampen spikes in high expenditure years**
- **Secure consultant resources to assist in analyzing compiled data from inspection programs**



# OMC Capital Improvement Program

- **Summary:**
  - **Current capital expenditure levels have refurbished a significant number of existing flood control facilities identified with critical deficiencies**
  - **Remaining flood control facilities with critical deficiencies are scheduled for refurbishment in the next **5** years with current funding level**
  - **Funding is rolled over to next year projects, not used for other purposes**
  - **Focus is shifting from pump stations and water control structures to canal/levee.**
  - **Develop next generation OMC Capital Improvement Program based on industry best practices and sound financial models**



# QUESTIONS?

