

Water Quality Monitoring

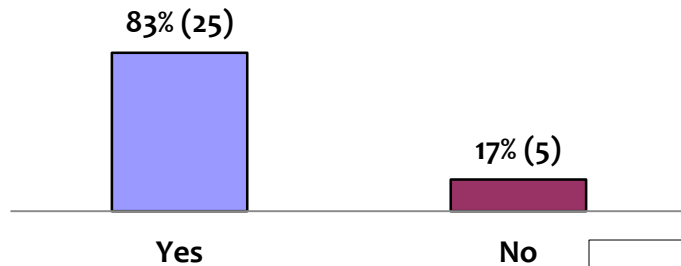
Vision Workshop

November 29, 2017

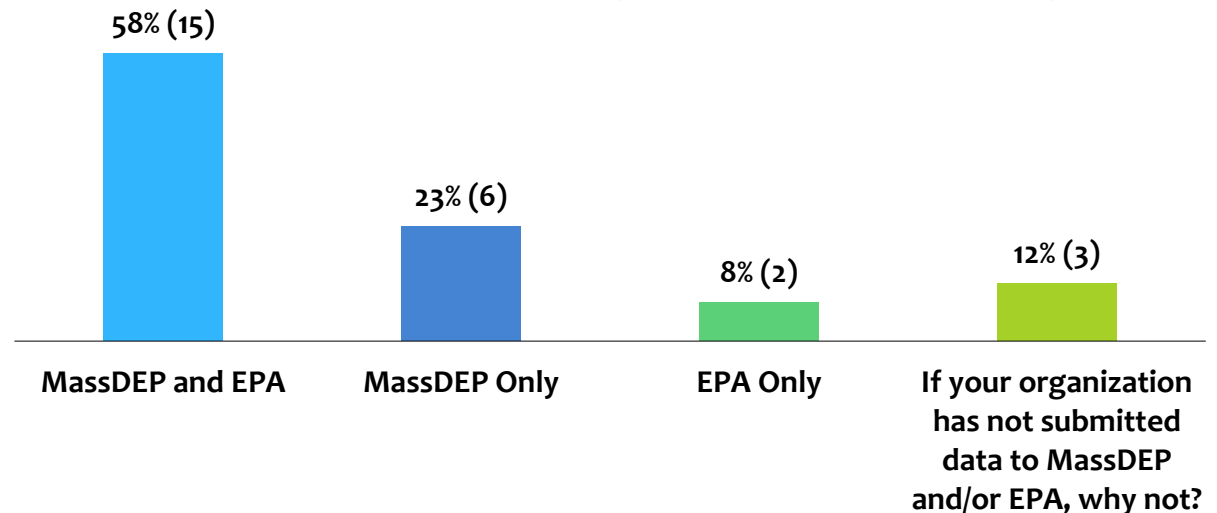
Watershed Planning Program

Pre-Workshop Survey: Monitoring

Does your organization manage a surface water monitoring program?

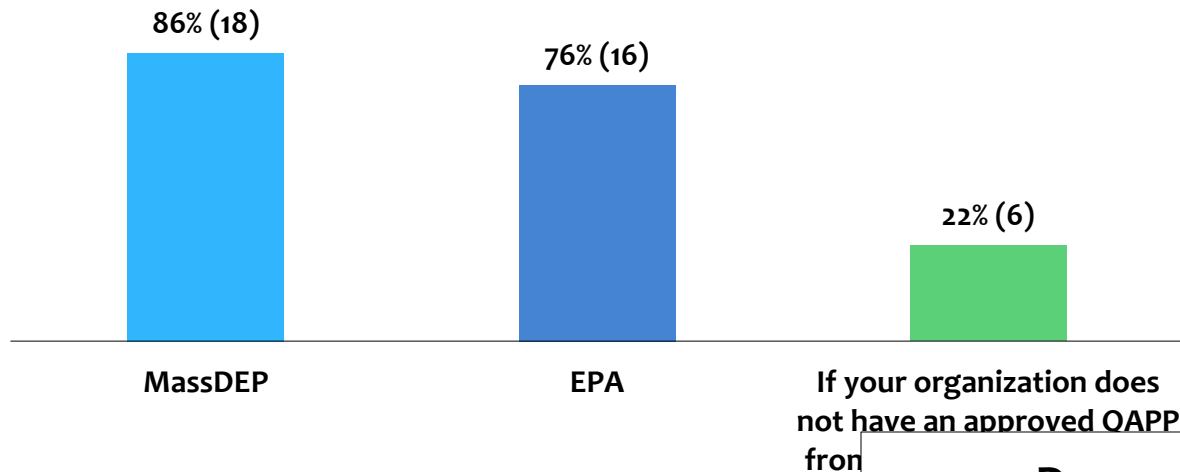


Has your organization ever submitted data to MassDEP and/or EPA? (choose all that apply)



Pre-Workshop Survey: Monitoring

Does your organization have an approved Quality Assurance Project Plan (QAPP) from MassDEP and/or EPA? (choose all that apply)

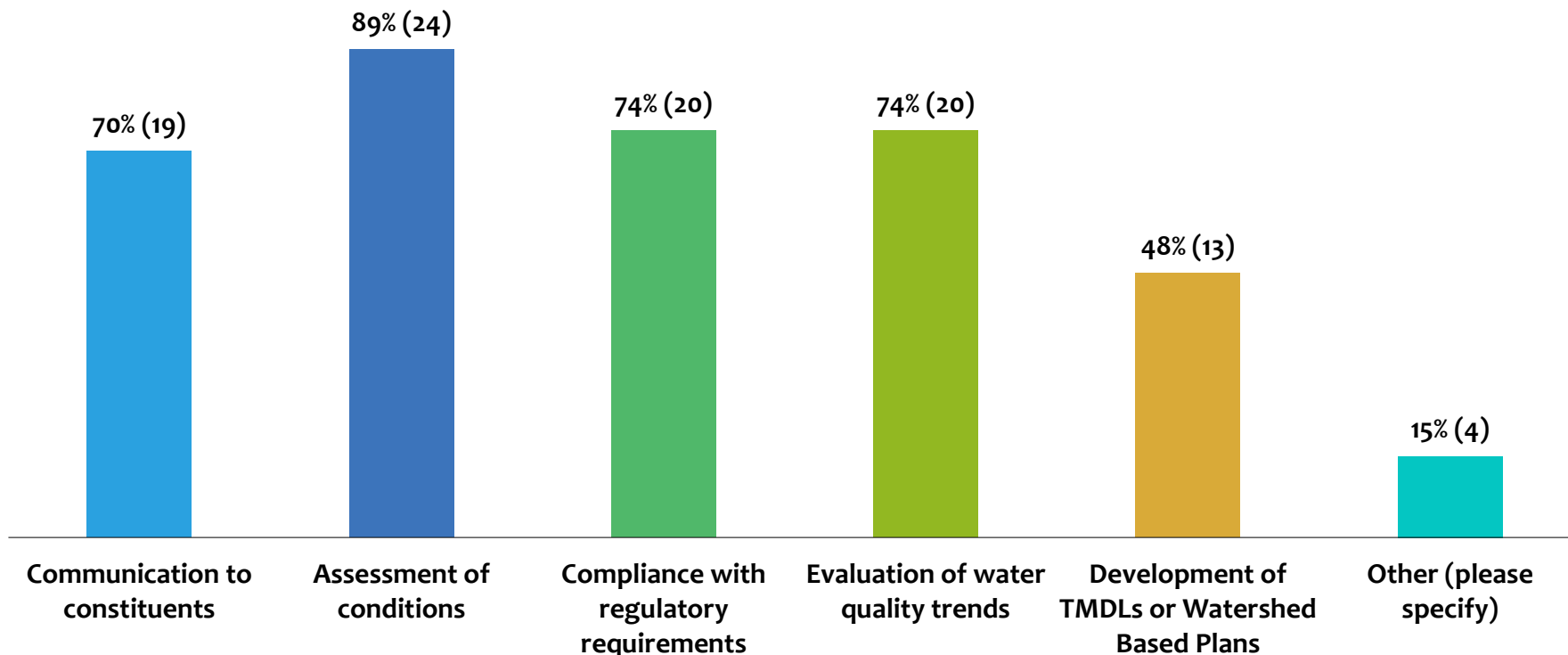


Does your organization analyze (interpret) collected data?



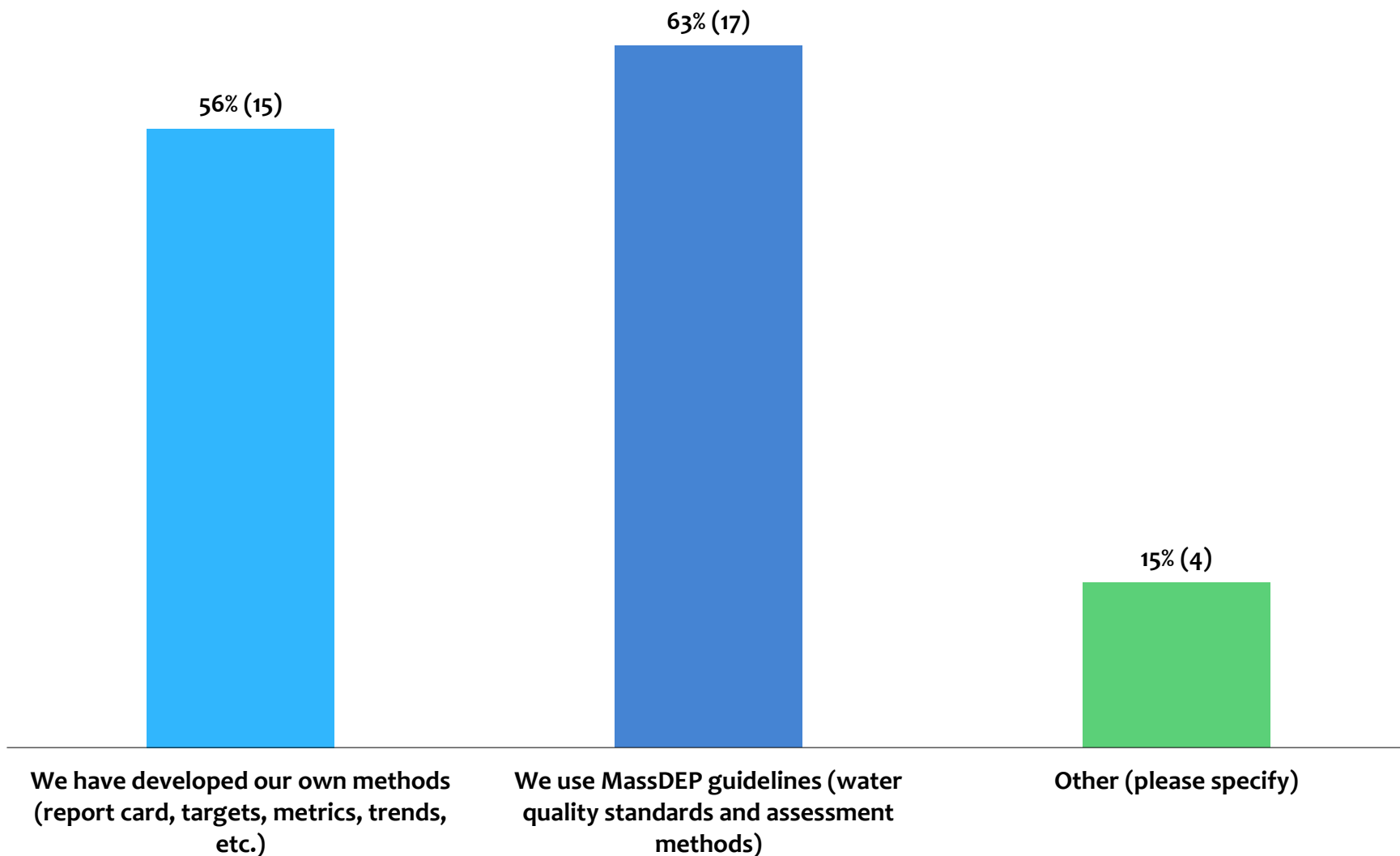
Pre-Workshop Survey: Monitoring

If your organization analyzes (interprets) collected data, what is the goal of the analysis? (choose all that apply)



Pre-Workshop Survey: Monitoring

How does your organization analyze (interpret) collected data?

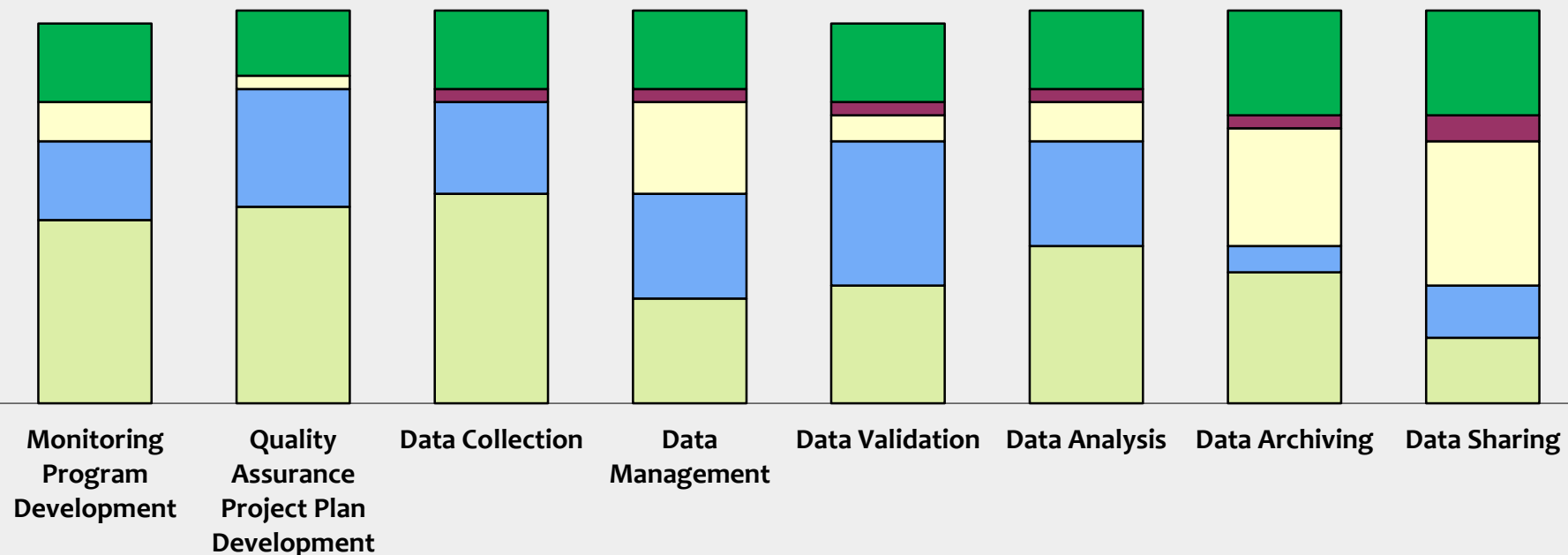


Pre-Workshop Survey: Monitoring

What is your organization's capacity to complete the following tasks?

Very Capable and Effective
Could Benefit from Development
I do not know

Capable and Effective
Needs Significant Improvement



Workshop Questions: Monitoring

- * What parameters do you monitor?*
- * What questions are you trying to answer through your monitoring program?*
- * Do you share your data? With whom? How do you share data?*
- * What have you found that works in your programs? What hasn't worked?*

Workshop Input: Monitoring

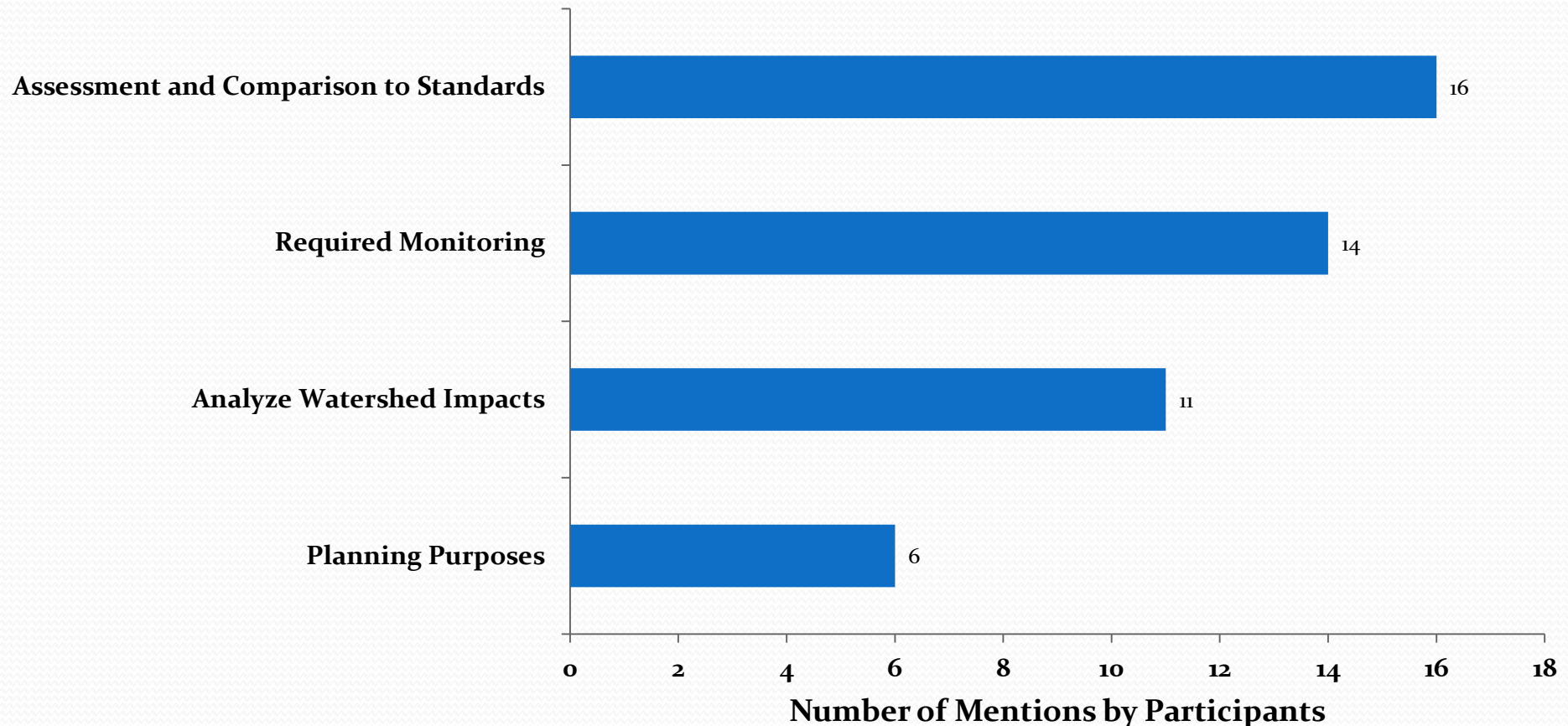
What parameters do you monitor?



- Aesthetics
- Bacteria
- Biomass
- Biota
- DO, T
- Habitat
- Hydric soils
- Metals
- Nutrients
- Shellfish

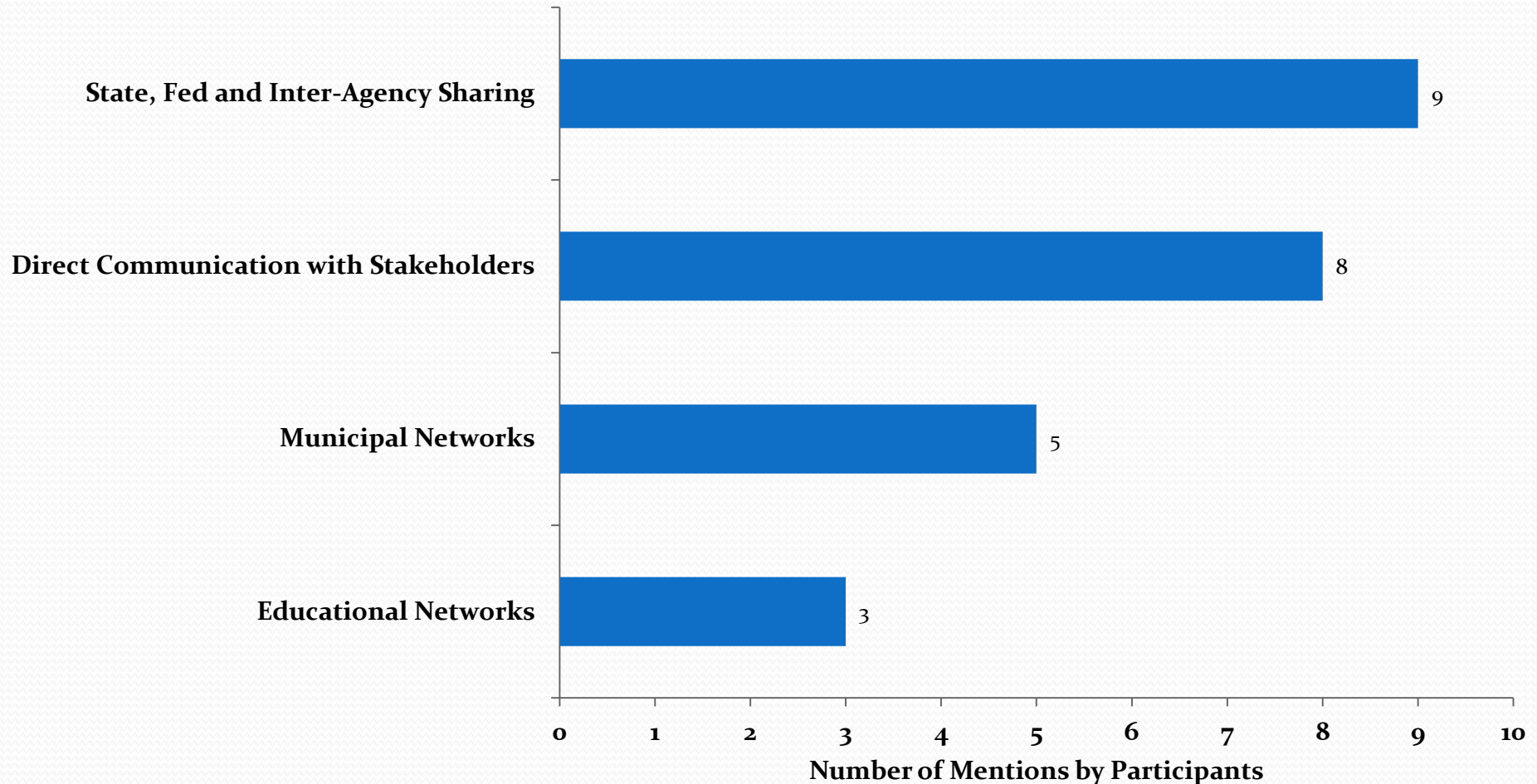
Workshop Input: Monitoring

What questions are you trying to answer through your monitoring program?



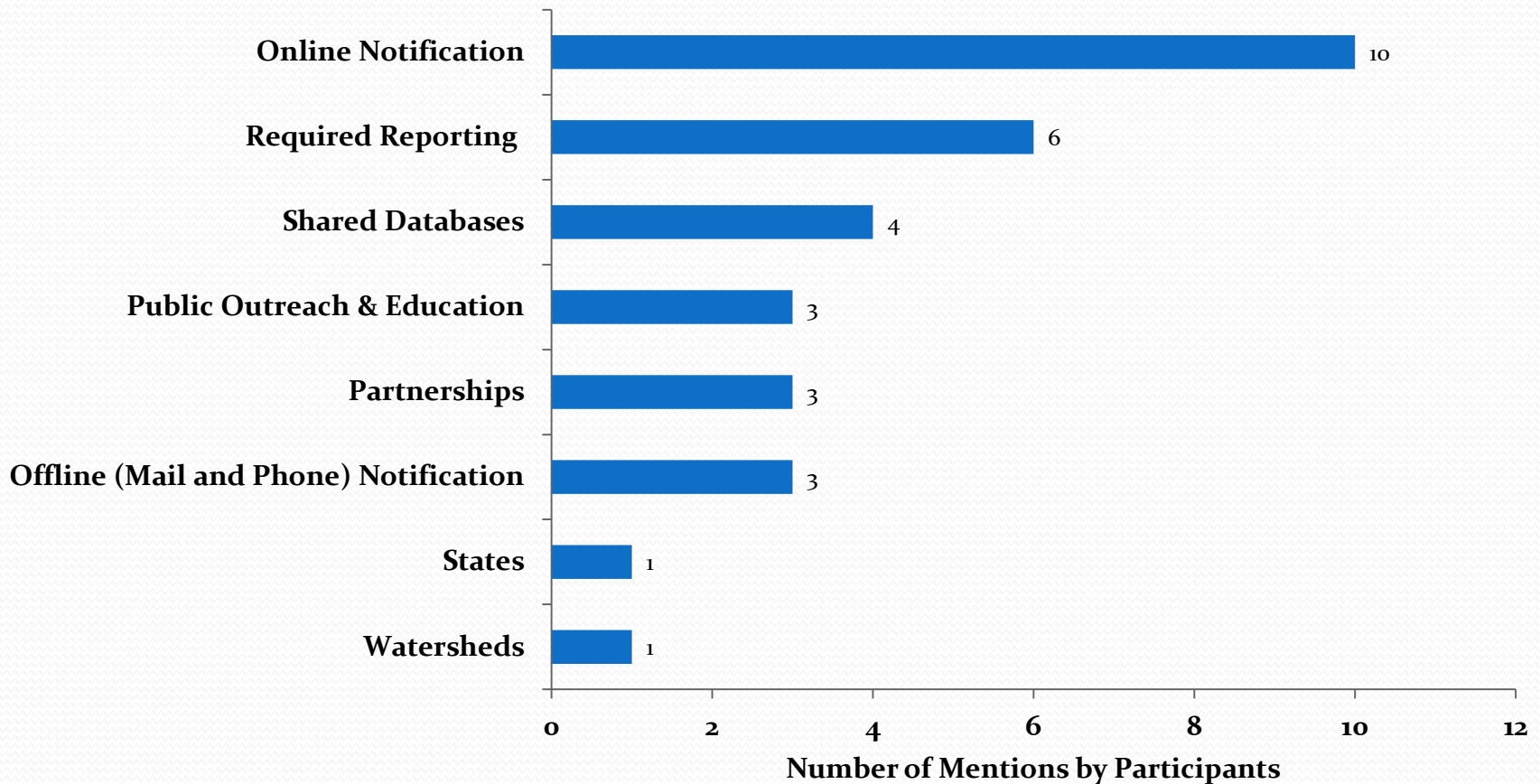
Workshop Input: Monitoring

With whom do you share your data?



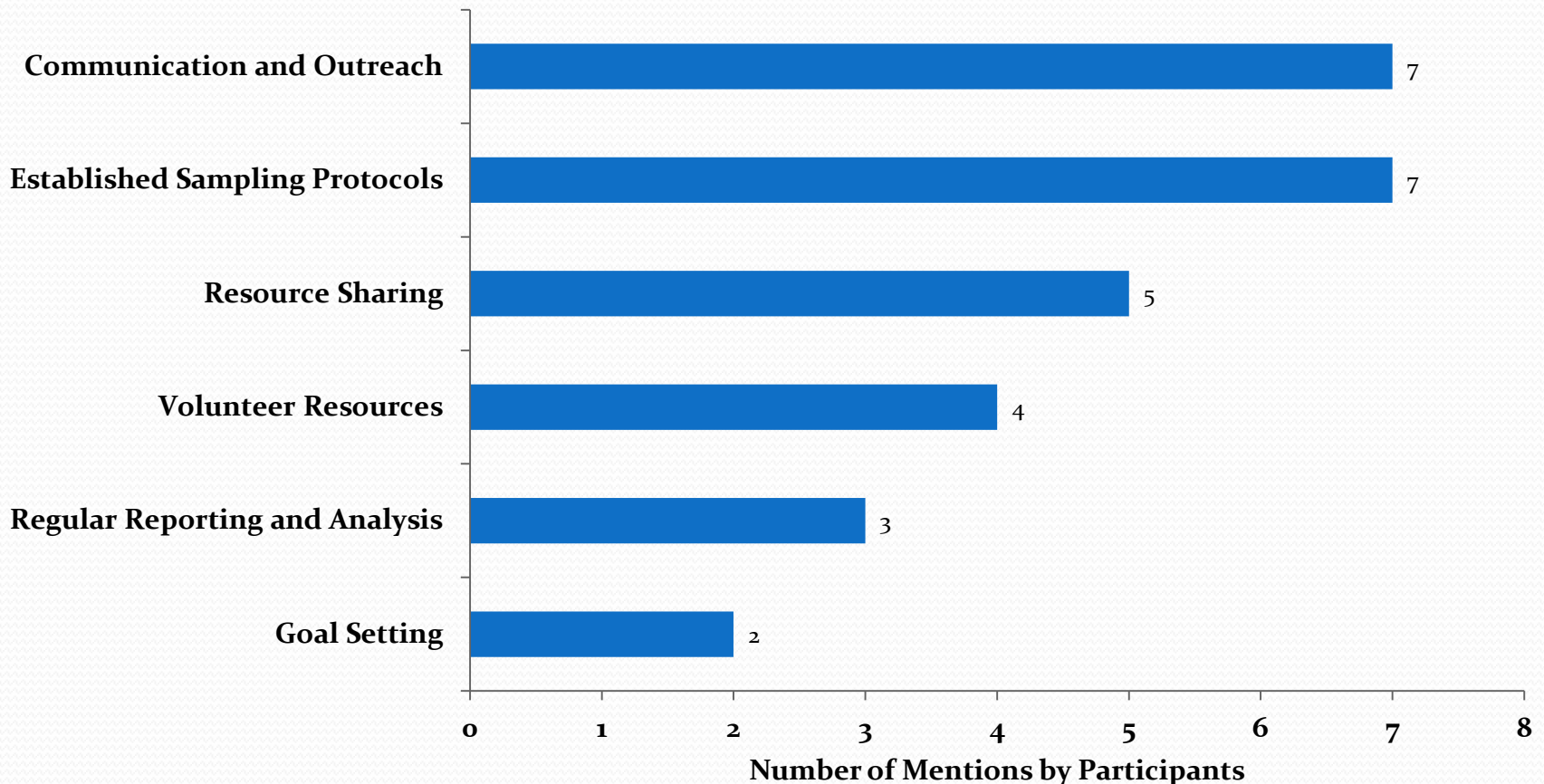
Workshop Input: Monitoring

How do you share your data?



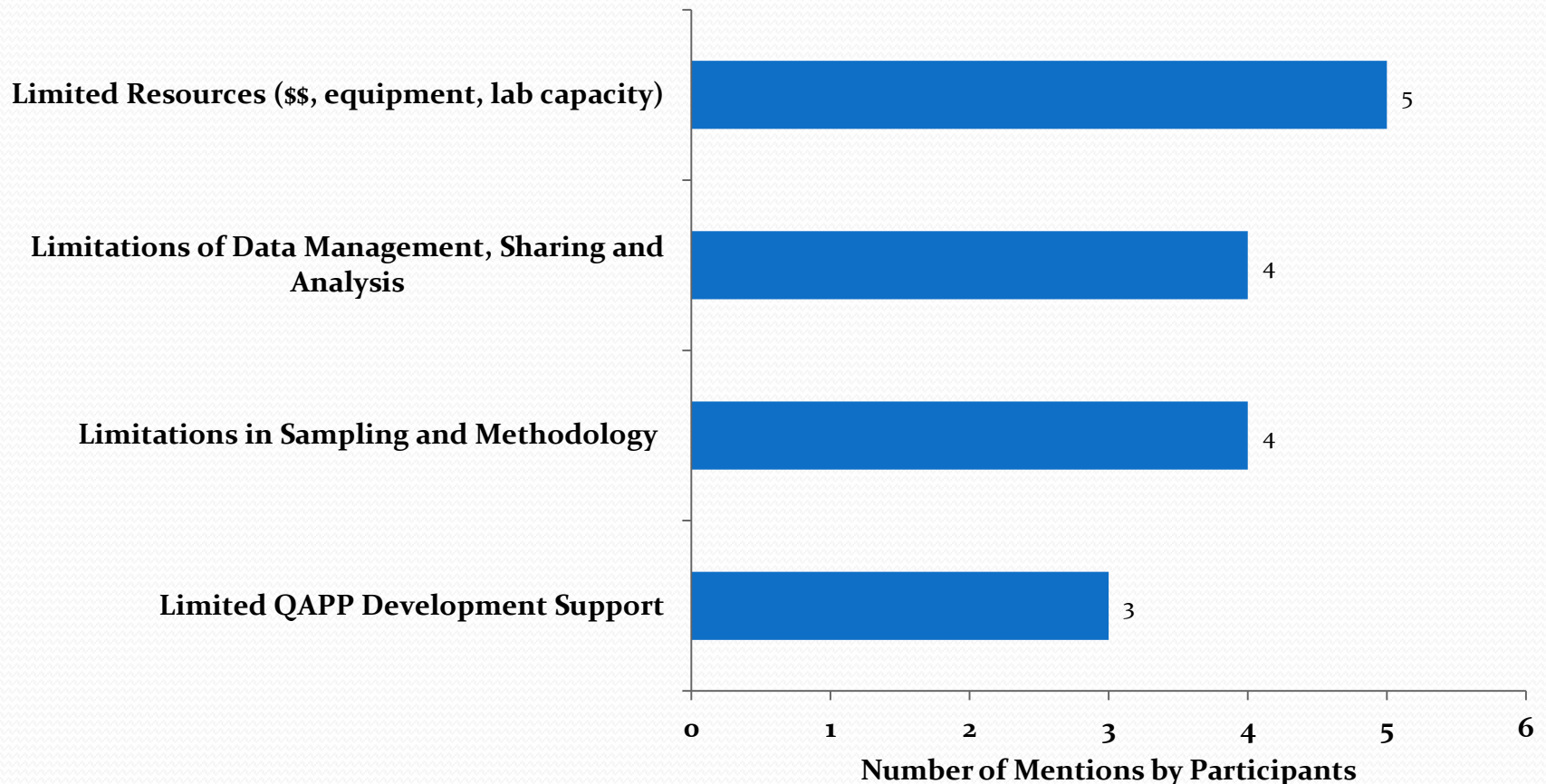
Workshop Input: Monitoring

What have you found that works in your program?



Workshop Input: Monitoring

What have you found that does not work in your program?



Workshop Input: Summary

What key things were identified from the Monitoring session?

- The most common reasons for monitoring were to determine WQ status, meet regulatory requirements (e.g., permitting) and inform stakeholders (stewardship).
- A wide variety of parameters are monitored in both short- and long-term programs.
- Anything regarding data was the weakest element across programs, particularly data sharing.

Workshop Input: Summary

What key things were identified from the Monitoring session?

- Communication/outreach and established sampling protocols were the two things that worked best.
- The Limiting Factor: We all need more resources!



Programs and Monitoring

Monitoring Goals Grouped by Space and Time Scales			
Time Scale/ Space Scale	Statewide (Superbasin)	Basin	Local (Municipal scale or smaller)
Long Term (> 20 years)	Contaminant Loadings Program Success Emerging Issues (atmospheric deposition) Reference Sites Water Quality Standards (Statewide Criteria and Policies)	Multiple Project/ Program Success	
Intermediate Term (5-20 years)		Restoration Program - Point Source - Nonpoint Source (major urban areas) Project Success Emerging Issues (PPCPs, Estrogen Imitators) Water Quality Standards (Site Specific Criteria)	Restoration Program - Nonpoint Source (319, 604(b), 104(b)(3)grants)
Short Term (≤ 5 Years)		Assessment NPDES Permits	Restoration Program - Nonpoint Source (Hot Spots, BST, DOT, Invasive Species, NRCS (WHIP, EQUIP), Riparian Areas)

Opportunities for Partnering

Programs and Partnerships

Program	Goal	Partner	Strategy
Statewide Strategic Monitoring	Loading Sites	USGS NEIWPCC	USGS 8 primary sites WPP 15 secondary sites
	Reference sites	US EPA Academia	NEON Climate Change Programs
Restoration Program	TMDL Program	Consultants Municipalities NGOs	CRWA for Charles
Assessment Program	305b	US Army Corps Engineers NGO	ACOE- project sampling NGO-5 sub basins/ basin (OARS/NRWA/BC)
	Permitting	Municipalities	5 upstream/ downstream sites/basin Model California Program
Nonpoint Source Program	Grants performance	Consultants	Contracts for services
	Local Issues	US NRCS MassDOT MassDER Phase II Permittees NGOs	California Trash TMDL CT DEEP Riffle Bioassessment by Volunteers City of Fitchburg/NRWA BST SMART Summits DER RIFLS

Workshop Input: Monitoring

Questions for you:

- Did we capture all the highlights?
- Do you wish to add anything?

