

Key Considerations for the Conceptual Drinking Water Supply Plan

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3M PFC Settlement Work Group Meetings

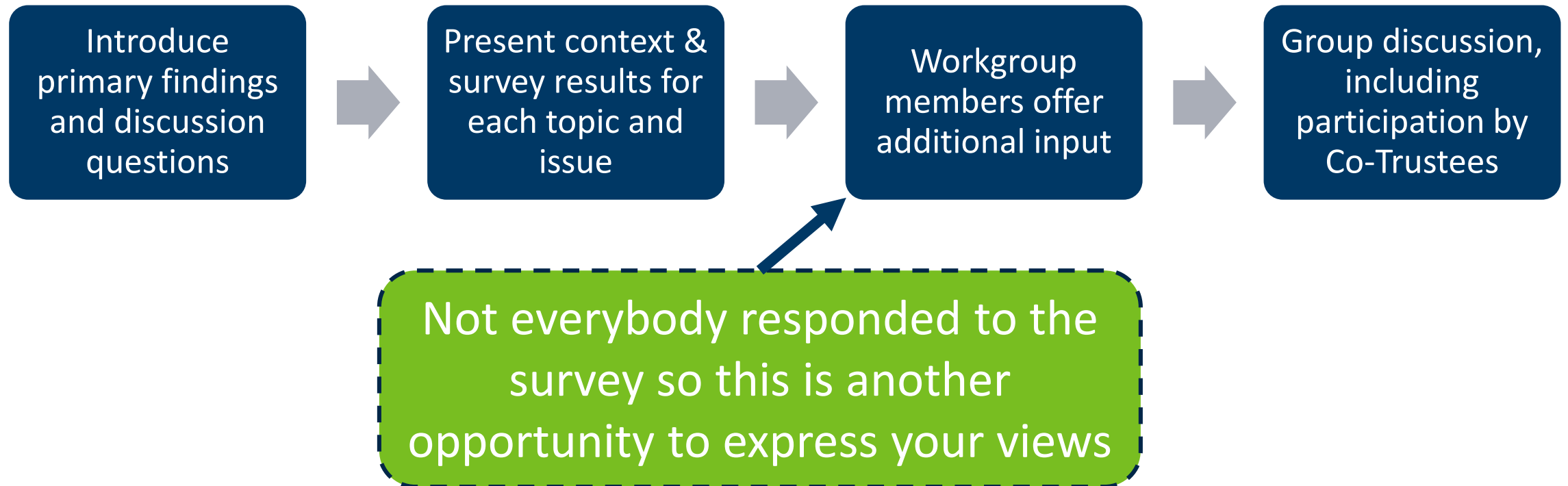
May 19-20, 2020

Purpose and goal

- Co-Trustees have several factors to consider in formulating good/better/best recommendation
- Review and discuss survey results and provide additional input to Co-Trustees as part of this meeting
- Input will inform Co-Trustee work to refine scenarios and select good/better/best

Format for the presentation and discussion

Ask questions or offer comments at any time
(via chat or verbally)



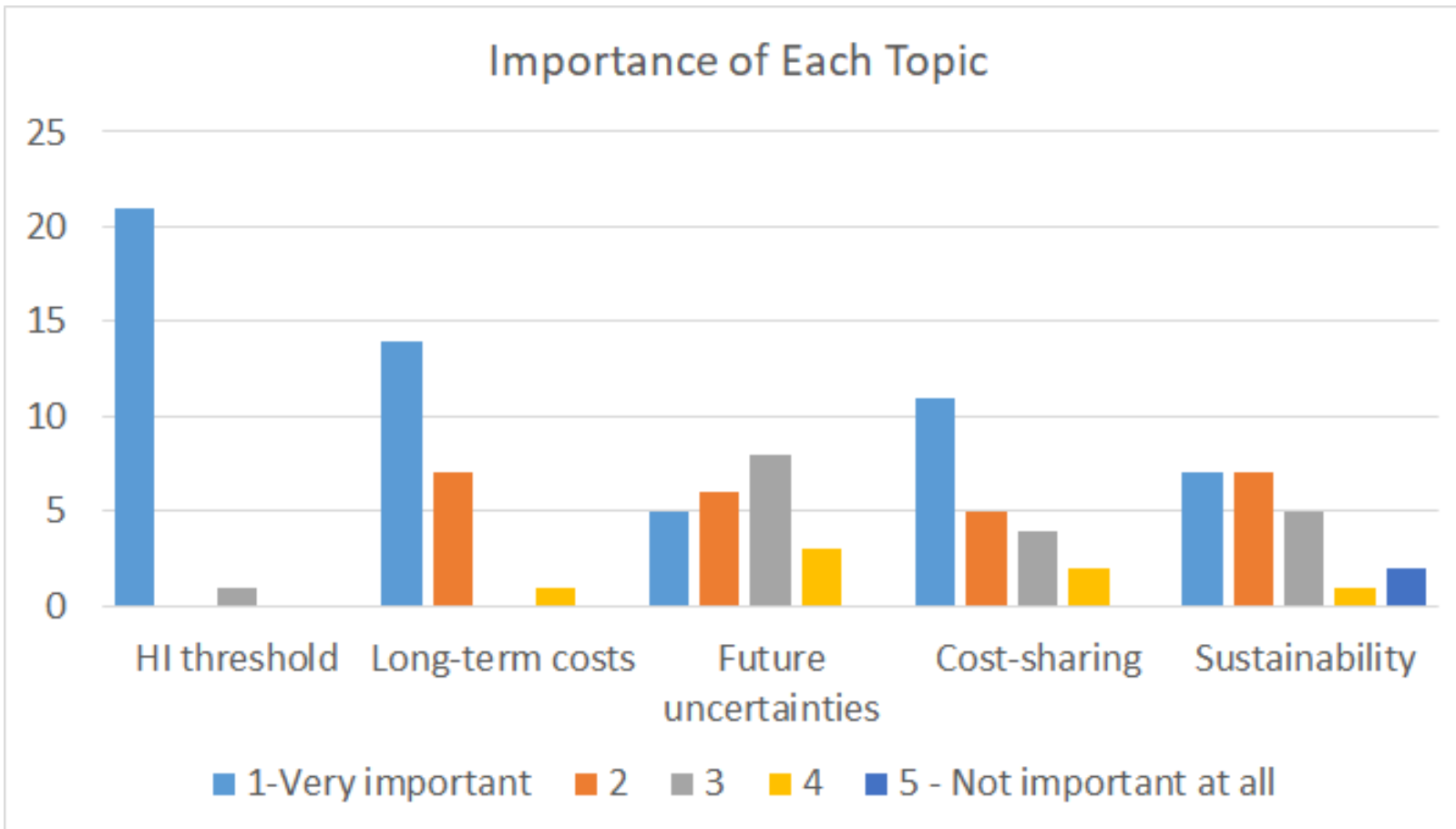
Caveats about the survey

- A formal way for Co-Trustees to gather structured input from you but it is not a scientific survey
- Summary of survey results is presented; all details are available if you want them
- The summary today does not touch on every answer (especially the text answers) but input provided to the Co-Trustees includes all the answers

List of considerations for good/better/best

1. Health Index (HI) threshold for treatment
2. Long-term costs
3. Setting aside funds to address future uncertainties
4. Addressing sustainability and resilience
5. Cost-sharing

Major survey result #1: Relative priorities



Note – the questions were each a little different so this is not a perfect apples-to-apples comparison

Conclusion:

- HI threshold is the top priority among these issues
- Long-term costs is 2nd
- Future uncertainties, cost-sharing and sustainability are lower priority

Question: How should Co-Trustees use these results when refining scenarios and determining good/better/best?

Major survey result #2: Priorities and costs

- Survey result: Workgroups prioritize a Health Index threshold for treatment that is less than 1 and support for long-term costs of implemented projects
- The available funding may limit the Co-Trustees' ability to fully meet both of these priorities
- How should the Co-Trustees balance among these priorities and the financial limits of the Grant?
- The survey showed a moderate amount of support for cost-sharing. How can Co-Trustees best consider cost-sharing as part of the scenario implementation?

Major survey result #3: Sustainability

- Survey results:
 - Sustainability not as a high a priority as other topics
 - A focus on equitable access to clean water and equitable costs (and this was suggested elsewhere in the survey too), as well as sustainability of water source
- Co-Trustees may include sustainability as factor in the implementation stage and may need further input from work groups to determine how best to do this

Health Index threshold for treatment

Context:

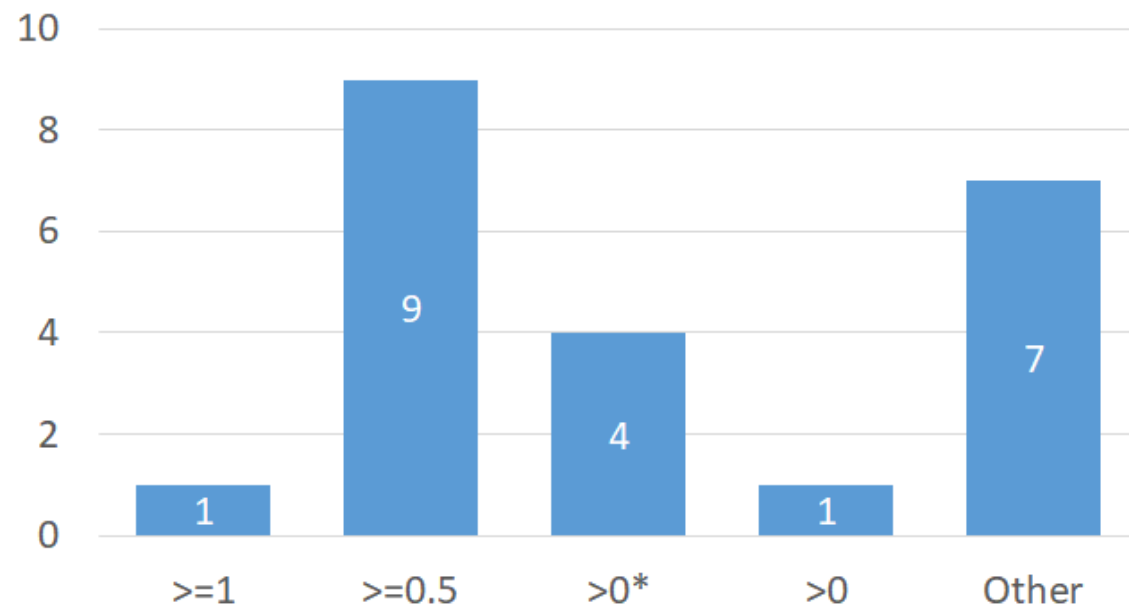
- The Health Index (HI) combines Health-based Values and Health Risk Limits into one indicator of combined health risk for all 5 PFAS chemicals
- Consent Order covers well advisories (i.e., only if $HI \geq 1$)
- Drinking water HBVs/HRLs could change based on new research, which could change the Health Index
- Consistency with PFAS issues elsewhere in MN
- Treating for any detection of PFAS may exhaust or exceed the Settlement (more detail on slides 10-11)

Survey results: Health Index threshold

- Overwhelming support for single threshold across all wells (21 of 22 respondents). Reasons given for supporting a single threshold include:
 - Consistency, equity, and fairness
 - It is science-based
- Disagreement with a single threshold was driven by the potential for new areas to be affected by PFAS in the future and the possibility that those areas would not receive treatment now under the Settlement
- Overwhelming majority (21 of 22) indicate this issue is very important to resolve before finalizing the CDWSP

Survey results: Health Index threshold

What do you think is the most appropriate HI threshold?



$> 0^*$ is for any detection of PFOA, PFOS, PFHxS

Most common reasons provided for selected HI threshold:

- Create a margin of safety for the future compared to $HI \geq 1$
- $HI \geq 0.5$ is more cost-effective than $HI > 0$ or $HI > 0^*$

Suggestions for “Other” include:

- Lowest detection than can be equally applied
- Budget for 0.5, but implement for 1 now

Does the group have any additional input on the topic of Health Index threshold for treatment?

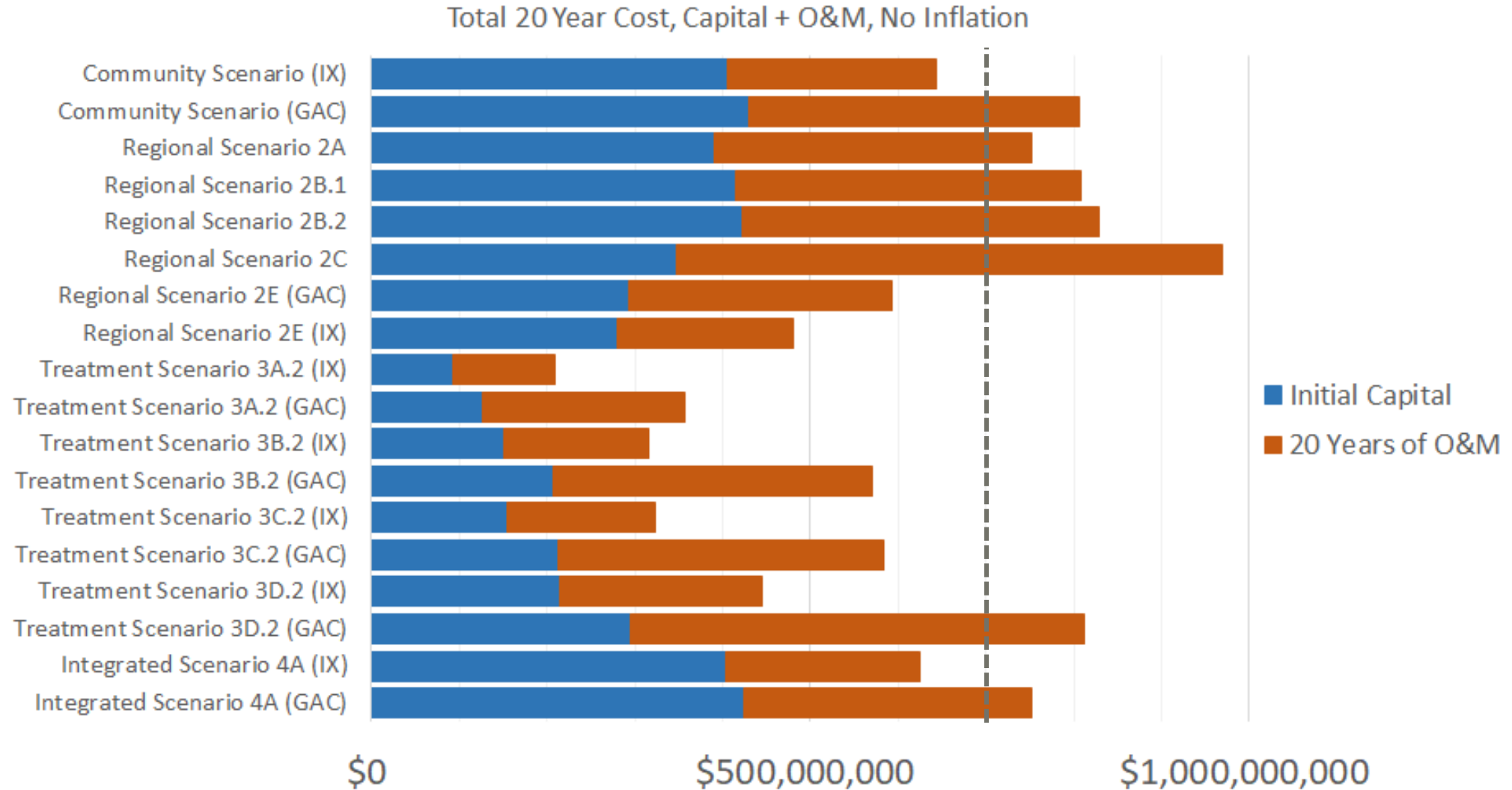
Discussion about Health Index threshold for treatment

- There is widespread support for HI threshold less than 1 and near unanimous agreement that this issue is very important to resolve
- *Implications of this may include:*
 - *Consistency issues over time or across the state*
 - *Cost relative to total funding available*
 - *Costs that will eventually be borne by communities and homeowners since the consent order covers only well advisories (i.e., $HI \geq 1$)*
- Reactions and discussion

Context

- Settlement funds are limited and many scenarios approach or exceed total amount available
- Consent Order covers capital and O&M for any well that has a well advisory
- Treatment for wells that don't have a well advisory will increase community, ratepayer, and homeowner costs eventually (the Consent Order won't cover those costs)

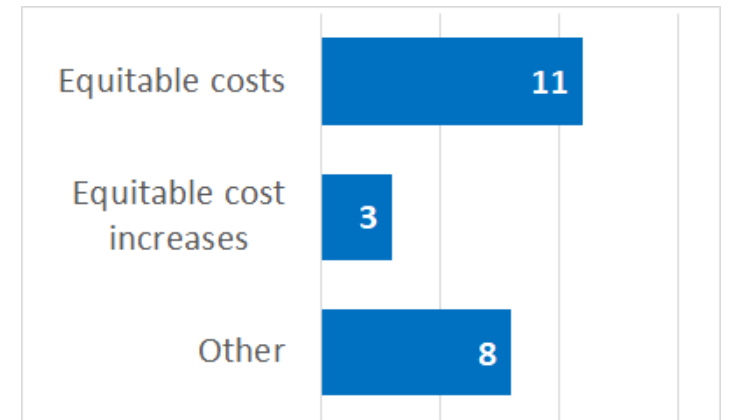
Long-term costs



Survey results: Long-term costs

- Some diversity of views about priority for long-term costs
- Ideas provided when “Other” was selected include:
 - Settlement should cover all costs
 - Prioritize safe, clean water above costs
 - Recognize that there are already cost differences between communities

If the Settlement is used to treat wells that do not have a well advisory, what should the Co-Trustees prioritize regarding long-term costs?



Survey results: Long-term costs

- Majority (15 of 22) say disproportionate costs should be a concern
- Recommendations from those who agreed this is a concern include:
 - Consider less costly alternatives
 - Prioritize interconnections
 - Cost-sharing
- Recommendations from those who do not see this as a concern include:
 - Address each community's need regardless of the proportion of the fund it will require
 - The priority should be safe, healthy drinking water

Survey results: Long-term costs

- Overwhelming agreement that Co-Trustees should use the same approach for long-term costs for POETs and public water systems
- Most think it is *important* or *very important* to resolve issues related to long-term costs before finalizing the CDWSP

Does the group have any additional input on the topic of addressing long-term costs for implemented projects?

Addressing future uncertainties

Context

- We do not know exactly how PFAS plumes will move in the future and we do not have predictions of future HI values
- New science about health effects of PFAS could change HBVs/HRLs
- Cost estimates of the scenarios are uncertain: +100% / -50%
- We cannot perfectly predict where or how fast community growth will occur

Survey results: Addressing future uncertainties

Majority (15 of 22) agreed that Co-Trustees should set aside funding for future uncertainties

- Reasons given for supporting a set-aside include:

- New science/research about PFAS and health effects
- Uncertainty over future contamination
- Cost over-runs

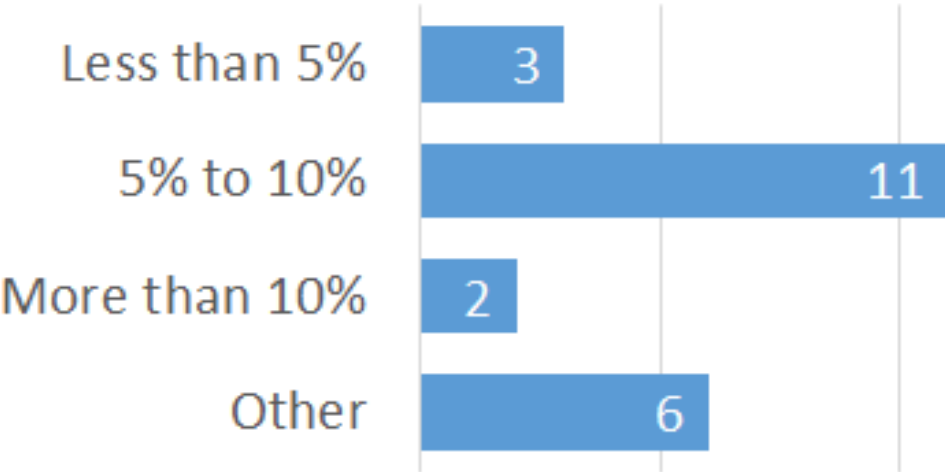
- Reasons for not supporting a set-aside include:

- Co-Trustees should prioritize meeting current needs
- If funds remain, then consider setting aside for future needs

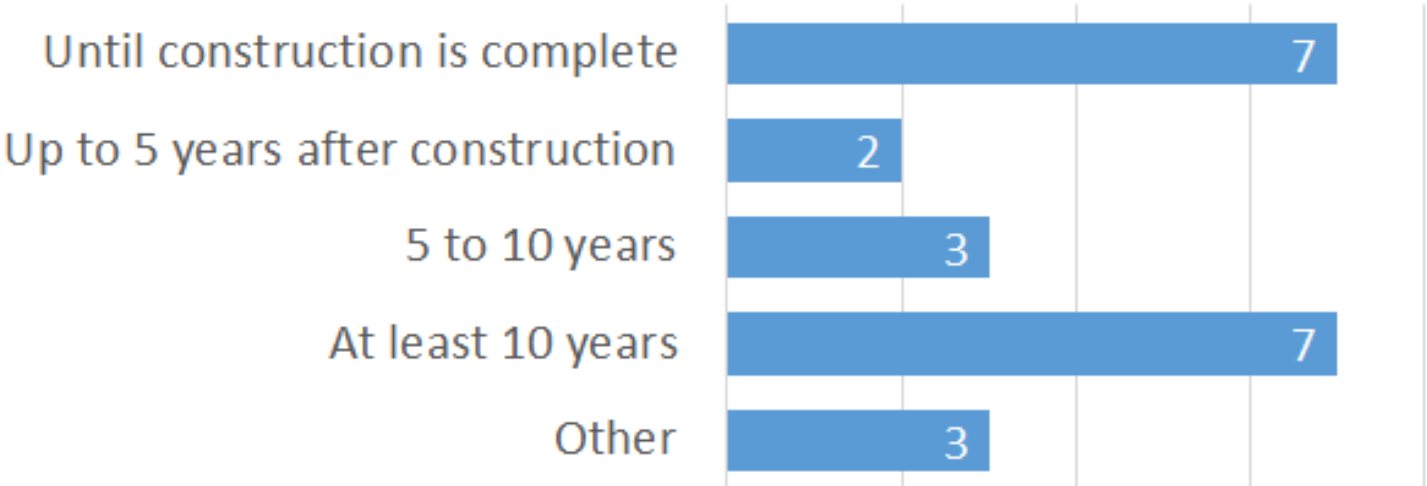
Survey results: Addressing future uncertainties

A range of responses for the most appropriate percentage and duration for a potential set-aside of funding

Percentage to set aside

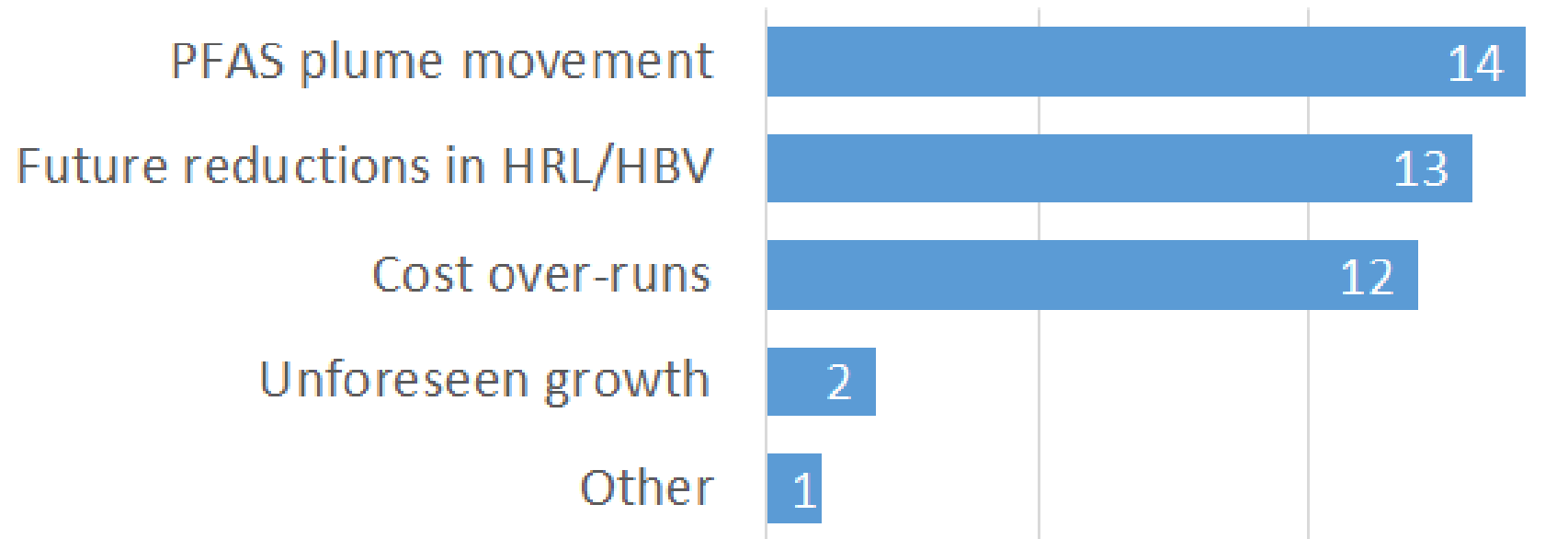


Duration for set aside



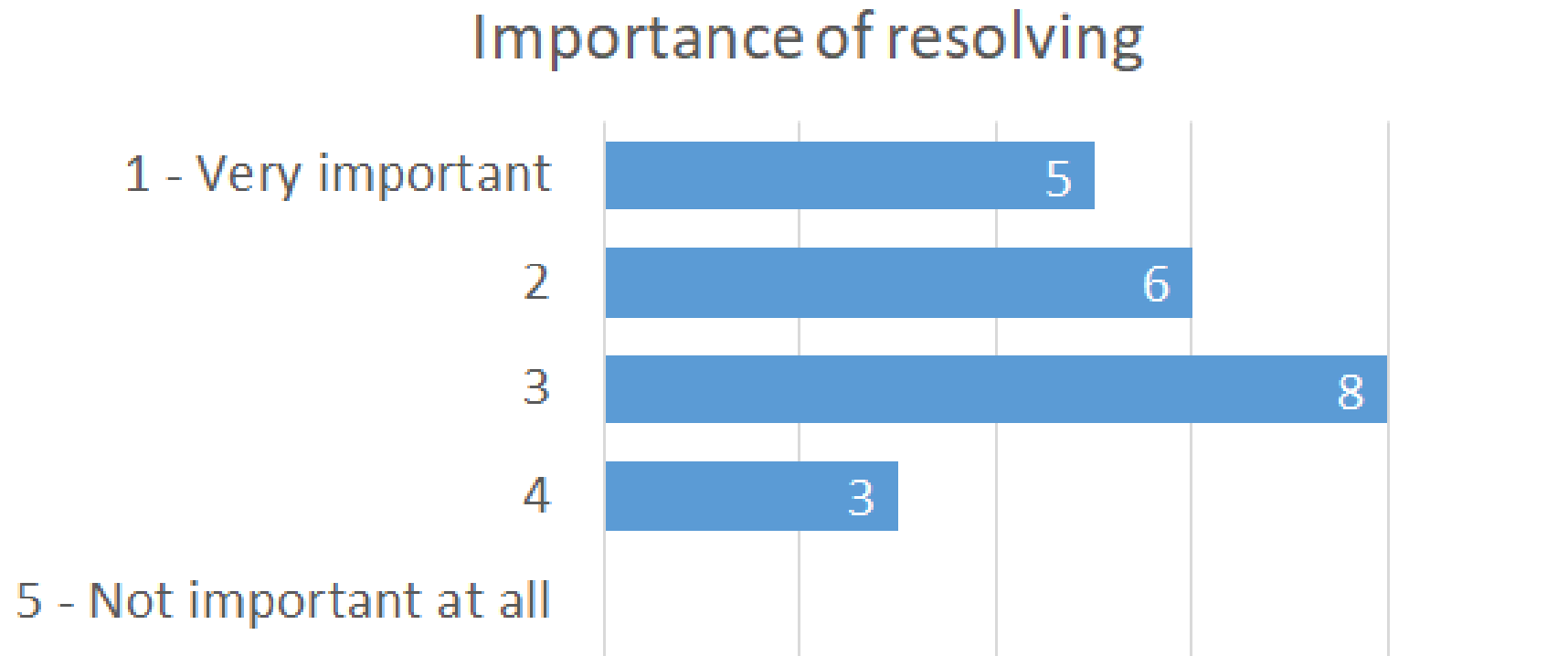
Survey results: Addressing future uncertainties

Most appropriate uses for set aside



Survey results: Addressing future uncertainties

More diversity of responses about the importance of this issue compared to HI threshold and long-term costs



Does the group have any additional input on the topic of future uncertainties?

- Context

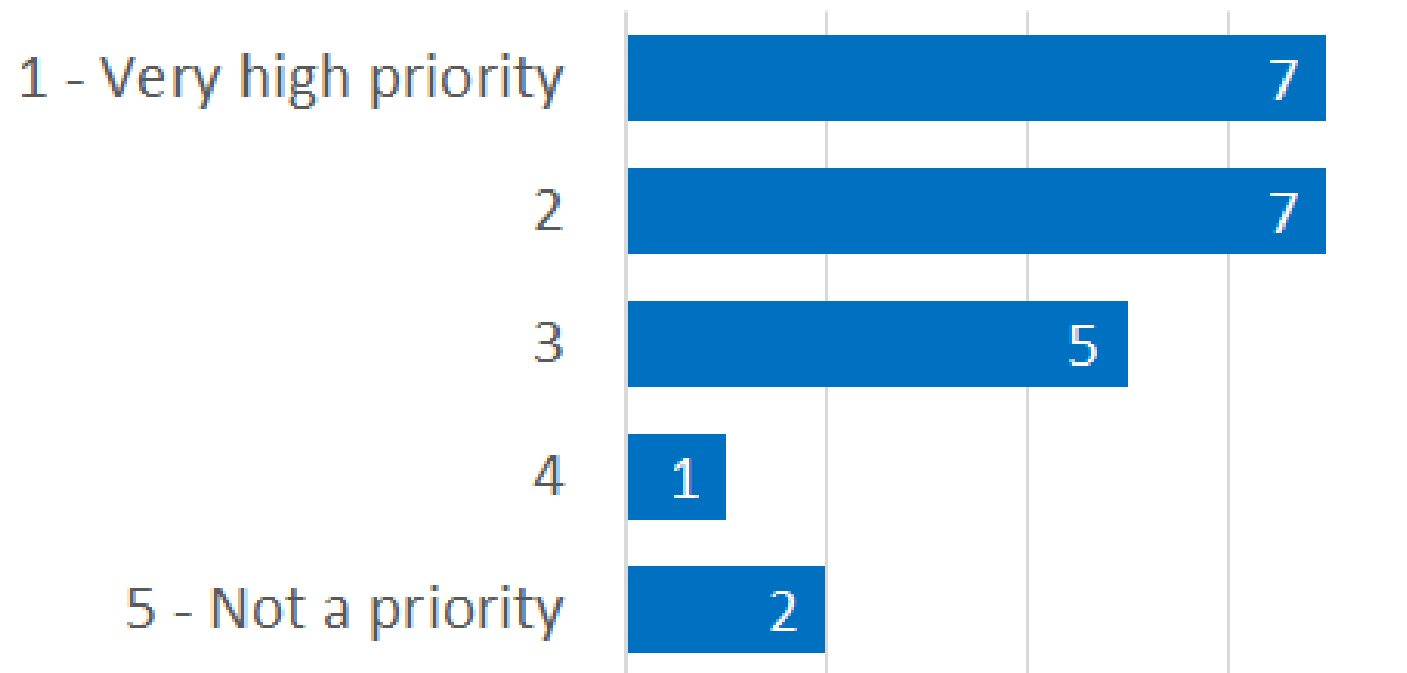
- The Settlement agreement specifically mentions sustainability of drinking water, water conservation and efficiency, and groundwater recharge
- Sustainability – meeting the current economic, social and environmental needs without compromising the ability of future generations to meet the same needs
- Resilience – the ability to withstand and recover from adverse events
 - E.g., deliver reliable water throughout a drought or contamination emergency
 - Sometimes included as part of sustainability, but increasingly treated as a stand-alone goal

- Context (continued)
 - Sufficient groundwater through 2040 for existing scenarios
 - Might be different with increased demands and beyond 2040
 - Groundwater use may impact surface water such as Valley Creek and White Bear Lake (depending on well locations)
 - Mississippi and St. Croix Rivers are likely sustainable beyond 2040, despite continued growth and climate change impacts
 - Cities already implementing water conservation practices
 - Reliance on a single source of water can leave region vulnerable to future shortages or other contamination events

Survey results: Sustainability

Diversity of responses about whether sustainability should be a priority for Settlement implementation

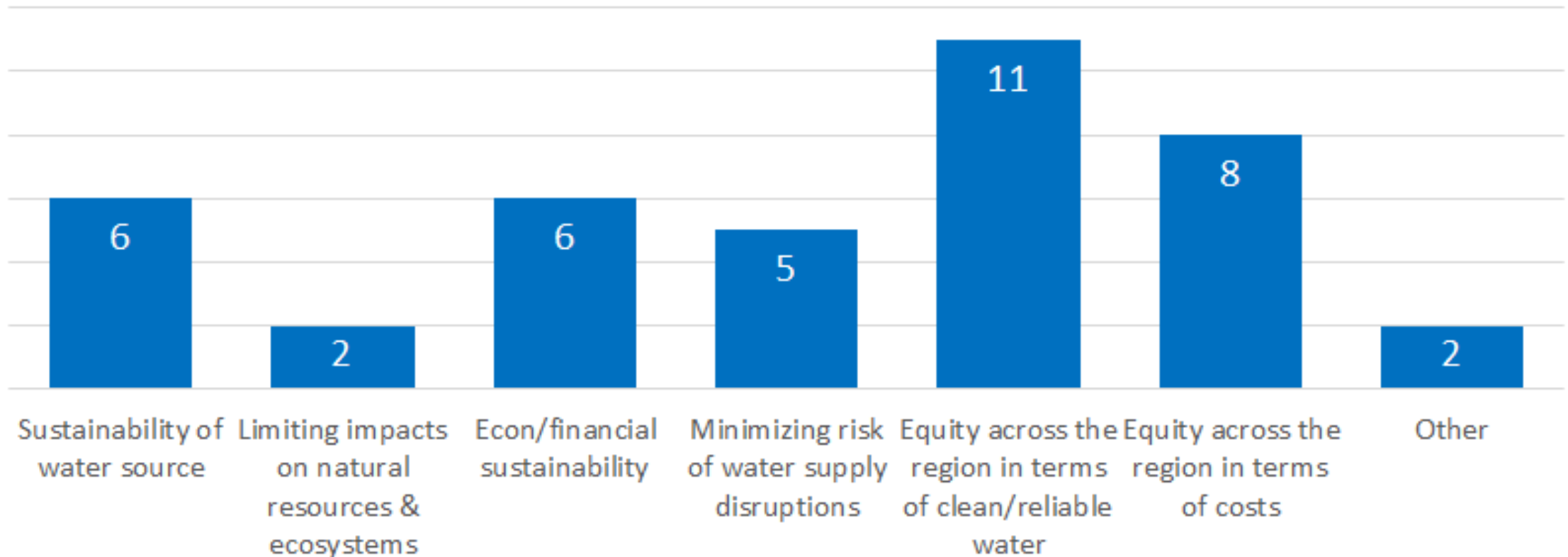
Is Sustainability a Priority?



Survey results: Sustainability

Diversity of responses about which elements of sustainability are most important

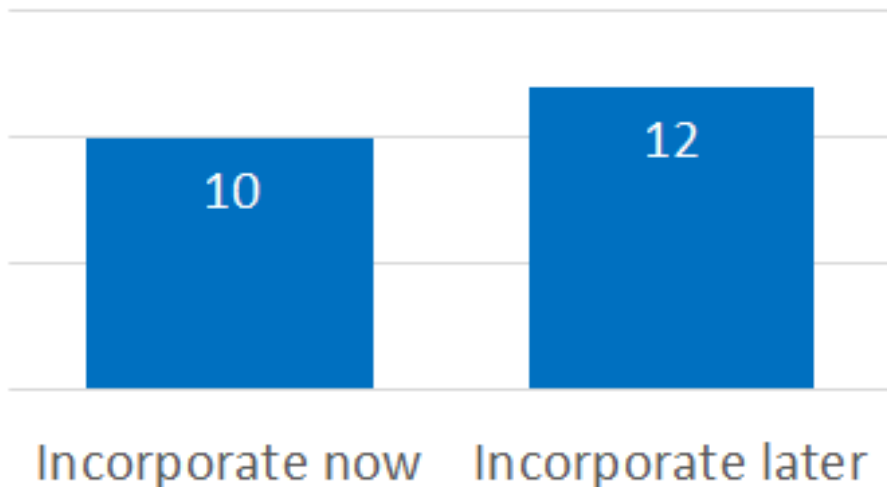
Which elements of sustainability are most important?



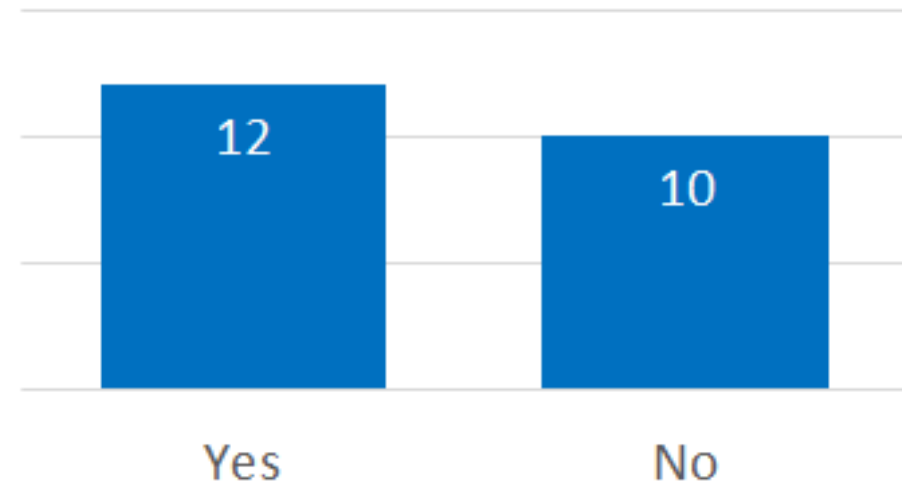
Survey results: Sustainability

- Close to even split in the responses about when to incorporate sustainability and whether Settlement implementation should include incentives for sustainability

When to incorporate sustainability?



Use incentives for sustainability?



Does the group have any additional input on the topic of sustainability?

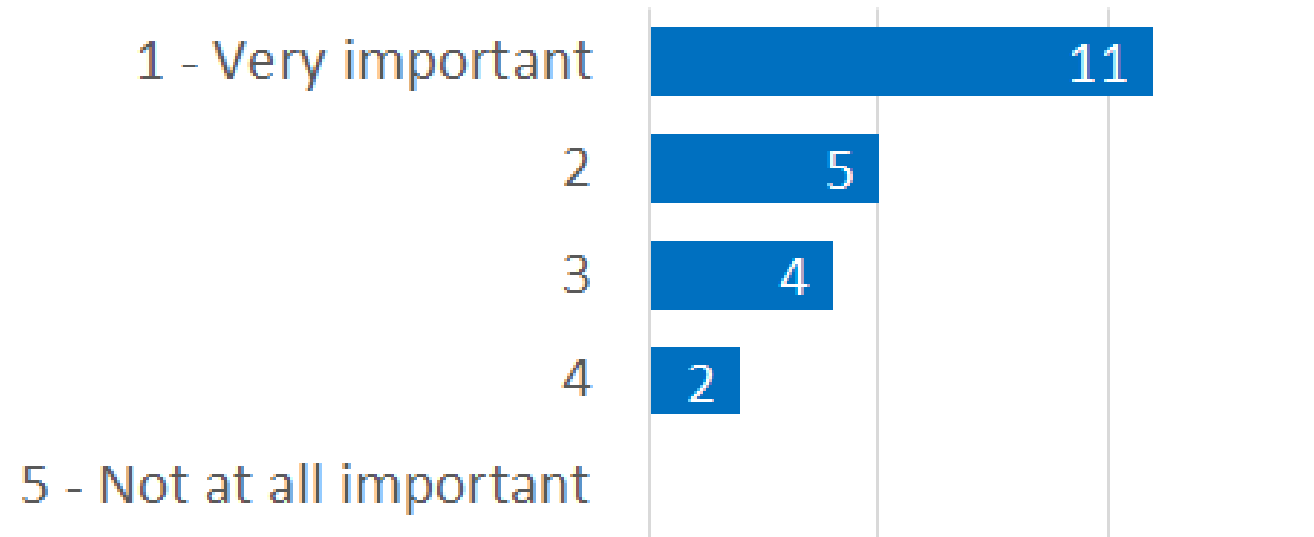
Context

- Many of the issues covered in this survey could be addressed, at least in part, through cost-sharing mechanisms
- Cost-sharing would mean that communities would cover some portion of the capital and/or O&M costs of water supply projects. The percentage share could be based on various criteria including water demand, degree of well contamination, affordability, and others
- Existing costs for water supply faced by communities and homeowners will continue into the future regardless of projects implemented under the Settlement; this will include standard costs for infrastructure for new developments

Survey results: Cost-sharing

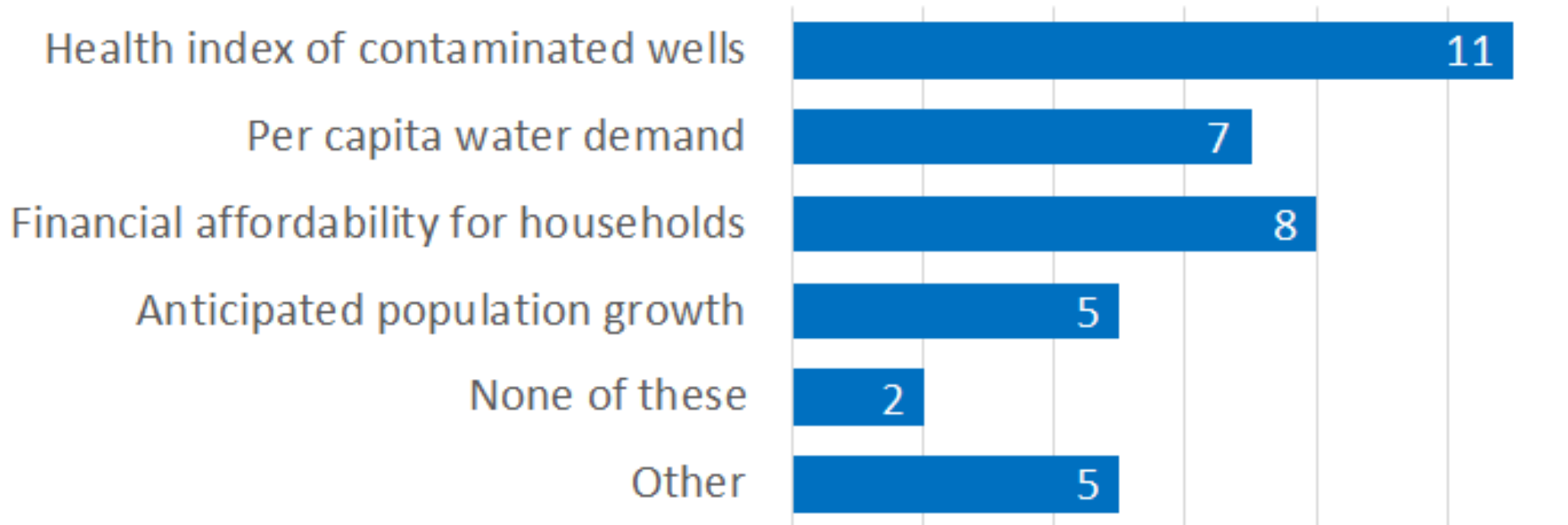
A majority of responses indicate it is *important* or *very important* to consider cost-sharing as part of the Settlement

Importance of considering cost-sharing as part of Settlement?



Survey results: Cost-sharing

Most appropriate factors for cost-share percentages?



Suggestions when “Other” was selected include:

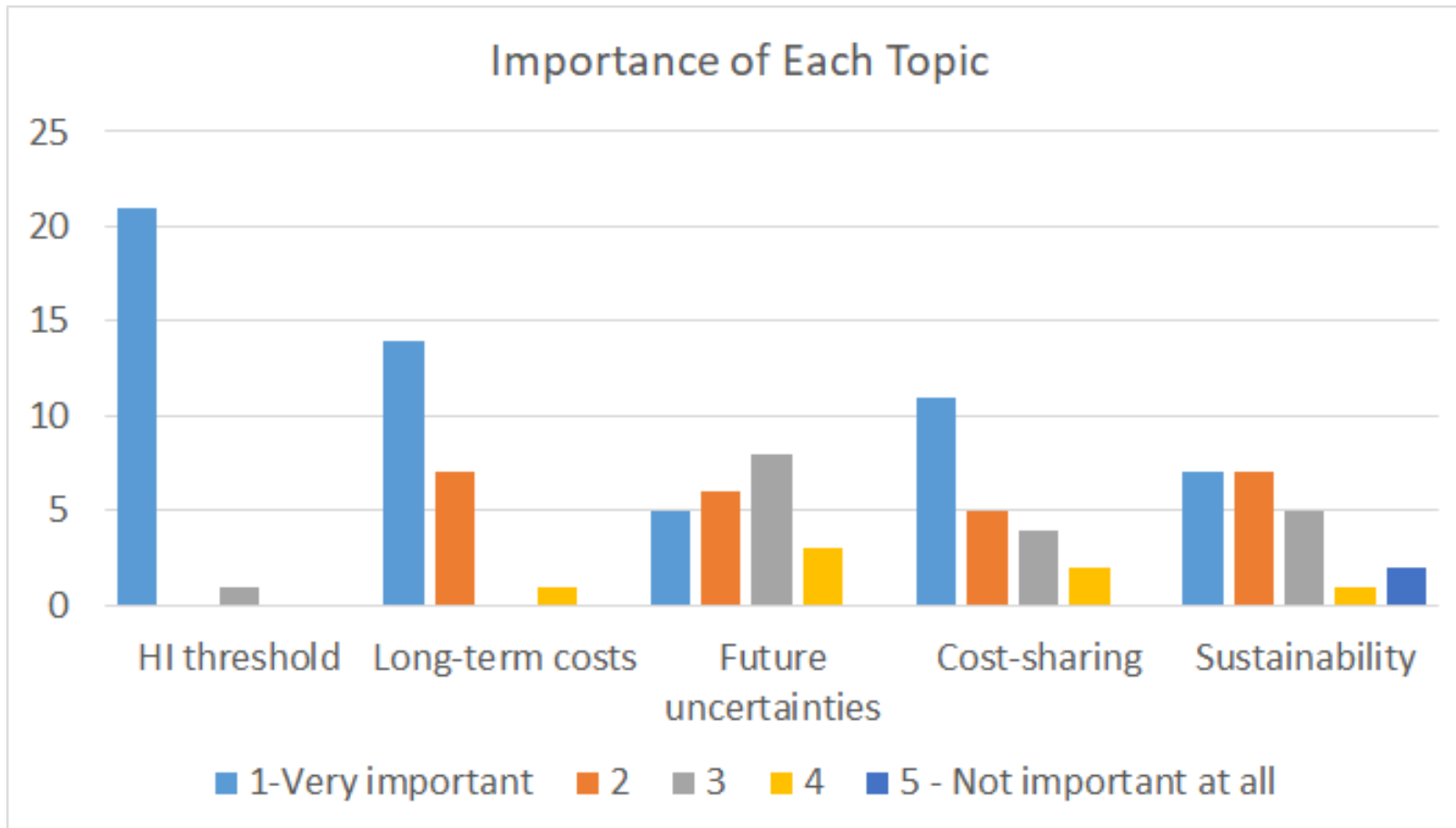
- Water demand peaking factors
- Health Index, but only if the well is below the acceptable threshold level

Does the group have any additional input on the topic of cost sharing?

Discussion Questions

- Several questions that tie together different issues
- You may have the slides in front of you, but please ask if you want us to go back to a slide to help with the discussion

Discussion Question #1



Note – the questions were each a little different so this is not a perfect apples-to-apples comparison

Conclusion:

- HI threshold is the top priority among these issues
- Long-term costs is 2nd
- Future uncertainties, cost-sharing and sustainability are lower priority

Question: How should Co-Trustees use these results when refining scenarios and determining good/better/best?

Discussion Question #2

- How should Co-Trustees handle the strong support for HI threshold less than 1, the limited funding available (~\$700M), and the need to help cover long-term costs?
- What if costs for scenarios with $HI \geq 0.5$ exceeds the total amount of funding available?
- Would cost-sharing provide a means for dealing with this issue? (Moderate amount of support in the survey)
- Are there any fatal flaws or major problems with the Co-Trustees incorporating cost-sharing?

Discussion Question #3

- While there is some diversity of views, responses suggest that Co-Trustees should prioritize the following issues, in this order:
 1. Immediate capital costs to address current PFAS contamination, targeting HI threshold of 0.5 or less
 2. O&M for 20 years, if possible
 3. A contingency fund for addressing new science about PFAS and their health effects, if possible
 4. If feasible, contingency fund for cost over-runs as well
- *Do you think this is a reasonable overall representation of the group's views and priorities? Would you propose any changes?*

Discussion Question #4

- Survey results show support for cost-sharing, with most supported factors being Health Index, water demand and affordability
- Other potential factors from the survey include population growth and water demand peaking factors
- The Settlement will not fund new infrastructure for new developments
- *What are the most appropriate ways to use these factors for cost-sharing?*
- *What other factors should the Co-Trustees consider?*

Discussion Question #5

- Fewer of you see sustainability as a top priority for the Settlement. This suggests that Co-Trustees should:
 - For determining good/better/best, use priority 1 Evaluation Criteria that address sustainability (i.e., Criteria 5, 10, & 11)
 - Consider additional sustainability issues for project implementation, potentially including incentives or sustainability as factors for cost-share
- *Do you think this is a reasonable overall representation of the group's views and priorities? Would you propose any changes?*

Thank you