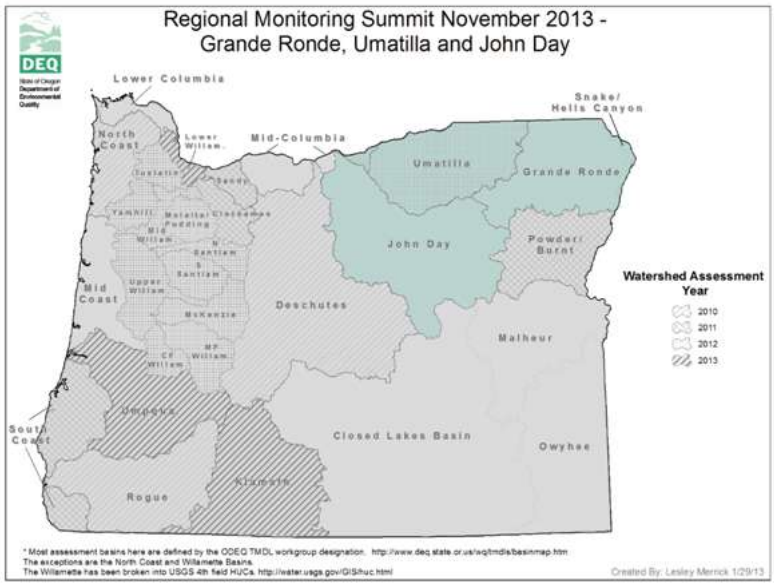
State of Oregon
Department of
Environmental
Quality

Invitation to a Regional Water Quality Monitoring Summit on the John Day, Umatilla and Grande Ronde Basins



Contents

Why are we holding a regional monitoring summit? State and Federal natural resource agencies, Tribes, Watershed Councils, Municipalities, research groups and others collect water quality data throughout the region and across

Oregon. Using an "Enterprise Approach" to monitoring--which clearly identifies roles, responsibilities, areas of expertise and opportunities for collaboration--reduces the duplication of monitoring efforts, focuses monitoring where it is needed, enhances the utility of the data collected and provides better information for implementing management activities designed to protect and restore water quality. Monitoring is expensive and tight budgets necessitate a strategic, focused and efficient approach for deploying available resources to answer important water quality questions at a basin scale.

In addition, the Water Quality Program at DEQ has been developing Basin Assessments and Action Plans around Oregon. These assessments pull together DEQ's state of knowledge on water quality issues at the basin scale and set forth a roadmap of priority activities for the program over the next 5 years. Monitoring is an important part of the identified actions in these plans and while DEQ is committed to addressing as many of the regional high priority monitoring actions as resources allow, there remains many gaps. We will be asking participants to look at and provide comments on monitoring priorities identified in these assessments and to discuss how we can work together to better provide needed data and information.

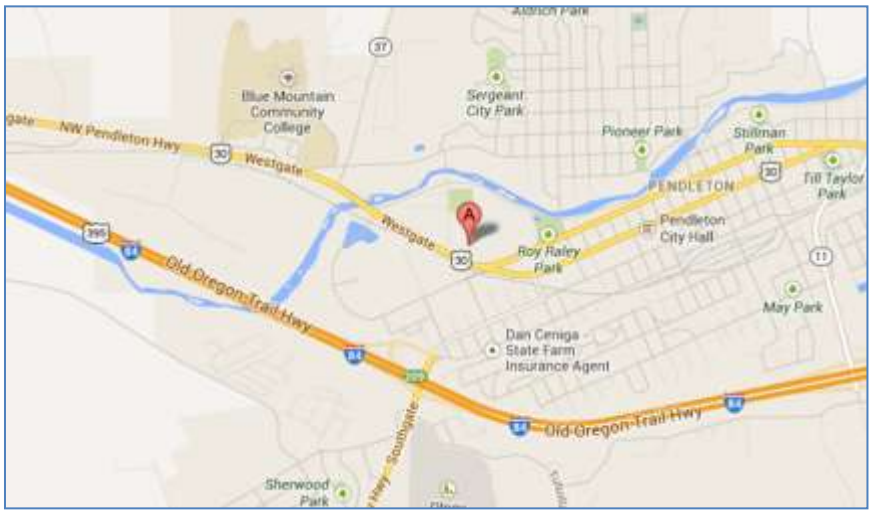
Why this region?

As mentioned, DEQ has been working on Basin Assessments and Action Plans around the State. The Basin Assessment for the Umatilla Basin is nearing completion and we wanted to share this information and the monitoring actions that were identified with other interested and active groups in the region. We hope the summit will provide a useful venue for sharing monitoring activities and experiences and coordinating monitoring activities and data needs in the future. We felt this region presented a great opportunity to bring together three basins in various stages of monitoring and implementation activities so that we can learn from what has been accomplished to date and better formulate a strategy for future monitoring activities.

Who will be invited to the summit? With space limited to about 75 participants, we have to consider who we can invite to the summit. Our goal is to invite interested and active groups engaged in water quality monitoring in the John Day, Umatilla and Grande Ronde Basins. We are also striving to provide a balance of perspectives on data and information needs for the region. With that in mind we will be seeking representation from Tribes, Sister State and Federal

Agencies, Business Groups, Watershed Councils and Environmental Groups. We will also be sending out an online survey to a larger group of people to gather their input on water quality monitoring in the region.

Where will the summit be held? The summit will be held at the Pendleton Convention Center.



Located at 1601 Westgate Pendleton, OR 97801 (541) 276-6569

When will the summit be held? The summit will be held all day (8-5) on Wednesday, November 13th and a half day (8-12) on Thursday November 14th.

Where can I stay? A block of rooms will be available at the Oxford Suites directly across the road from the Convention Center and at the Red Lion down the road.

Will food be provided? Yes. Morning snacks and beverages will be available both days and lunch will be provided on the first day. **Please specify your preference for meat or vegetarian when registering.**

What is the format for the summit? The summit will be a combination of presentations from data collectors in the region and breakout sessions designed to gather information about water quality monitoring in the region. Participants and presenter will be asked to think and relate monitoring objectives to one of the following 5 questions:

1. **What is the overall quality of waters in the region?**
2. **To what extent is water quality in the region changing over time?**
3. **What and where are the problem areas and areas needing protection?**
4. **What level of protection is needed?**

5. **How effective are clean water projects and programs in the region?**

How do I register for the summit?

https://deqwqmonitoringsummit.eventbrite.com/

Is there a registration fee?

No. The summit is free other than your time, travel and per diem costs.

What information can I provide that would be useful?

1. The name of your group
2. Latitude and longitude of monitoring locations.
3. What it is you are monitoring for.
4. Where you store your data.

What outcomes are expected from this summit?

There are 6 primary outcomes for the monitoring summit:

1. First is to network and share information on who is monitoring for what indicators in this region.
2. Second is to share the monitoring activities outlined in DEQ's action plan for the region.
3. Third is to define monitoring roles, commitments and priorities for the next five years.
4. Fourth is to understand where the data gaps are and discuss how we fill them.
5. To work together to track monitoring activities in the region moving forward.
6. To identify ways to share data and information.

Who do I contact for more information?

1. Shannon Hubler at: 503-693-5728 hubler.shannon@deq.state.or.us

2. Aaron Borisenko at: 503-693-5723 borisenko.aaron@deq.state.or.us

State of Oregon Department of Environmental Quality

John Day, Umatilla and Grande Ronde WQ Monitoring Summit: Past, Present and Future
November 13-14, 2014

Wednesday, November 13: Sharing what we know and defining what we don't know?

8:00 – 8:20	**Check-In** – *Coffee and tea*	
8:20 – 8:35	**Group introduction** Name, affiliation and *one important personal value you have around clean water*	
8:35 – 8:50	**Welcome & Logistics, Why we are gathered, Outcomes for our time together** I will welcome the participants and go over the agenda and logistics for the summit. We will briefly discuss the outcomes what we hope to accomplish over a day and a half. I will also introduce the concept of Enterprise Monitoring.	**Aaron Borisenko** DEQ
8:50 – 9:15	**Your Water Quality Monitoring Survey Results** A survey was sent out to participants and other stakeholders of water quality information in the region. This presentation summarizes the findings of that survey.	**Aaron Borisenko** DEQ
9:15 – 9:45	**DEQ Re-Organizing by Basins, and a Umatilla Basin Example** DEQ is re-organizing its many water programs (permits, TMDLs, 401/404, septic, monitoring…) based on holistic assessments of basin water quality conditions and activities, proceeding annually basin-by-basin. Previously, priorities and activities were program specific, and often delineated by political instead of watershed boundaries. More coordinated cross-program and interagency planning and prioritization is needed to achieve best environmental outcomes. In this third year of piloting the new approach, the currently developing Umatilla Basin example will be described to illustrate DEQ's new and evolving watershed approach.	**Don Butcher** DEQ
9:45 – 10:00	**Morning Break**	
	Groundwater	
10:00 – 10:30	**Selected Groundwater Quantity Monitoring near Hermiston and La Grande, Oregon** Oregon Water Resources Department conducts both long-term and short-term groundwater level monitoring across the state. Current projects in the Umatilla and Grande Ronde Basins include a groundwater and surface water study in the Catherine Creek Basin, near La Grande, OR; monitoring of the Ordnance Gravel and shallow basalt aquifers, near Hermiston; and authorization of artificial recharge projects in the Ordnance Gravel Aquifer, near Hermiston.	**Karl Wozniak, Josh Hackett, Jen Woody** Oregon Water Resources Division
10:30 – 11:00	**Nitrate Concentrations and Trends in the Lower Umatilla Basin Groundwater Management Area** Nitrate data from about 650 wells were used to evaluate nitrate concentrations while data from 201 of these wells was used to evaluate nitrate trends in the LUBGWMA.	**Phil Richerson** DEQ
11:00 – 11:30	**The influence of hyporheic exchange on temperature profiles along the Umatilla River, Oregon** Groundwater and surface water interaction create patterns of thermal diversity crucial to normative ecosystem function. Native salmonids utilize upwelling hyporheic water, which both, create and expand critical cold water refugia. Using several known factors for hyporheic exchange, we created a potential hyporheic influence using 30-meter Digital Elevation Model data. Trend in valley width, stream slope, trend in floodplain width, variance in slope and sinuosity were derived from the DEM data and combined into an estimate of hyporheic potential. We compared several known stream temperature influences to hyporheic potential. These influences include riparian shade, topographic shade, tributary influences, irrigation dam influence, and reservoir releases. FLIR - Forward	**Scott O'Daniel** Confederated Tribes of the Umatilla Indian Reservation

	Looking Infrared Radiometer - data was used to create a longitudinal temperature profile for the mainstem Umatilla River. Potential thermal influences were compared to a continuous temperature profile of the river. Hyporheic potential explains the majority of thermal variation during a peak temperature loading period. These results suggest, at river basin scales, that hyporheic exchange is an important driver in thermal variation.	
11:30 – 12:00	**Water quality status of selected parameters in the Umatilla Basin.** Presentation will consist of portions of sediment monitoring results and update on Wildhorse Creek, a tributary to the Umatilla River. Temperature monitoring in the lower Umatilla River around low head diversion structures. Nitrate sample results and trends at Athena Springs and Spring Hollow.	**Greg Silbernagel & Dick Nichols** Umatilla Basin Watershed Council
12:00 – 1:00 **Working lunch** **Note:** *lunch provided for registered attendees only*	**Statewide Toxics Monitoring: Program overview and summary of John Day, Grande Ronde, and Umatilla Basins** A brief overview of the DEQ's statewide toxics monitoring program. In addition, a summary of the data results from the John Day, Grande Ronde, and Umatilla basins will be included along with next steps and a vision for the future direction of the program.	**Lori Pillsbury** Department of Environmental Quality
1:00 – 2:00	**Break-out Session # 1 –** What are the key issues in your basin and are they being adequately addressed through current or future monitoring activities? What type of information would most useful to address your needs? (5 minutes for session introduction, 30 minutes for break-out, & 15 minutes for report to group, and 10 minutes open discussion)	
	Surface Water	
2:00 – 2:30	**ODA's Water Quality Program** ODA staff will provide a background summary of the Agricultural Water Quality Management Program, current statewide activities, and focused efforts in local regional monitoring projects and discuss how they relate to the big picture goals.	**Sheila Marcoe & Tom Straughan** Oregon Department of Agriculture
2:30 – 3:00	**Streamflow gages in the John Day, Umatilla, and Grande Ronde basins** We will show the locations of various streamflow gaging stations that OWRD operates in the John Day, Umatilla, and Grande Ronde basins and talk about the data we collect. For the most part our gages collect streamflow quantity data, but we do have some that also collect temperature.	**Mike Ladd and Jason Spriet** Oregon Water Resources Department
3:00 – 3:15	**Afternoon Break**	
	Habitat	
3:15 – 3:45	**National Best Management Practices for Water Quality Management on National Forest System lands** Water quality protection and restoration requires strong linkages to land practices. Monitoring the implementation and effectiveness of water quality BMPs provides this essential connection. In 2012 the FS published the first of 2 technical program guides providing direction to national forests for use in new planning efforts. The national BMP program is the agency's nonpoint source pollution control program for achieving and documenting water resource protection. Volume 1 provides program direction and description of management activities and core BMPs. Volume 2 (in preparation) provides monitoring protocols for 10 categories of land management activities. Monitoring protocols describe population development and sampling methods. Program information and recent examples from the Blue Mountains.	**Caty Clifton** United States Forest Service
3:45 – 4:15	**Using PIBO Effectiveness Monitoring to access Status and Trends in three basins in Oregon** Evaluation of Status and trend of stream habitat and macroinvertebrate data collected by	**Eric Archer** United States Forest Service

	PIBO Effectiveness Monitoring program in 3 Basins in Oregon.	
4:15 – 4:45	**ODFW Collaborative Watershed Monitoring in NE Oregon** Overview of ODFW's research & monitoring incorporating Columbia Habitat Monitoring Program (CHaMP) protocol and Intensively Monitored Watershed (IMW) approaches for monitoring fish habitat quality. Our monitoring emphasizes temperature because it is a common limiting factor for recovery of listed salmon and steelhead. Watershed spatial scales are emphasized to measure cumulative effects of restoration activities (IMW) and for monitoring complete fish populations (CHaMP).	**Jim Ruzycki** Oregon Department of Fish and Wildlife
4:45 – 5:00	**Debrief** – a brief summary of what we heard throughout the day	

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John Day, Umatilla and Grande Ronde WQ Monitoring Summit: Past, Present and Future
November 13-14, 2014

Thursday, November 14: Working together

800 -830	*Coffee and tea*	
830 – 845	**Recap of yesterdays presentations**	
845-915	**OWEB's Monitoring Grant Portfolio and the Programmatic Effectiveness Monitoring Efforts-Current Status and Future Direction** A brief background will be provided to describe OWEB's involvement to fund monitoring projects including those specifically related to restoration actions. This presentation will highlight OWEB's past, current and future effectiveness monitoring efforts.	**Ken Fetcho** Oregon Watershed Enhancement Board
915-945	**How can PNAMP support monitoring coordination and information sharing in NE Oregon?**	**Jen Bayer and Jacque Schei** United States Geological Survey
945-1015	**Creating a truly integrated monitoring, data management and data sharing system for natural resources information in Oregon.** Monitoring needs continue to increase, while resources available to collect information and answer questions decline. Historically, integrating data collection has involves agencies letting other agencies what they are doing. A tentative proposal to build on programs at the DAS Geospatial Information Office and the Oregon Explorer portal to help create efficiencies in data collection, identify multi-agency priorities and help fund these, and expand tools for data sharing, discovery and archiving.	**Jimmy Kagan** Oregon Institute of Natural Resources
1015 -1035	**Break**	
1035 -1135	**Break-out Session 2:** How do we find the resources to do what we want to do? Or how do we collaborate on monitoring design to get the answers we want? Data management tools? (5 minutes for session introduction, 35 minutes for break-out, & 15 minutes for report to group & discussion)	
1135-1200	**Recap and next steps**	**Aaron Borisenko** DEQ

DEQ
State of Oregon
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Your Water Quality Monitoring Survey Results

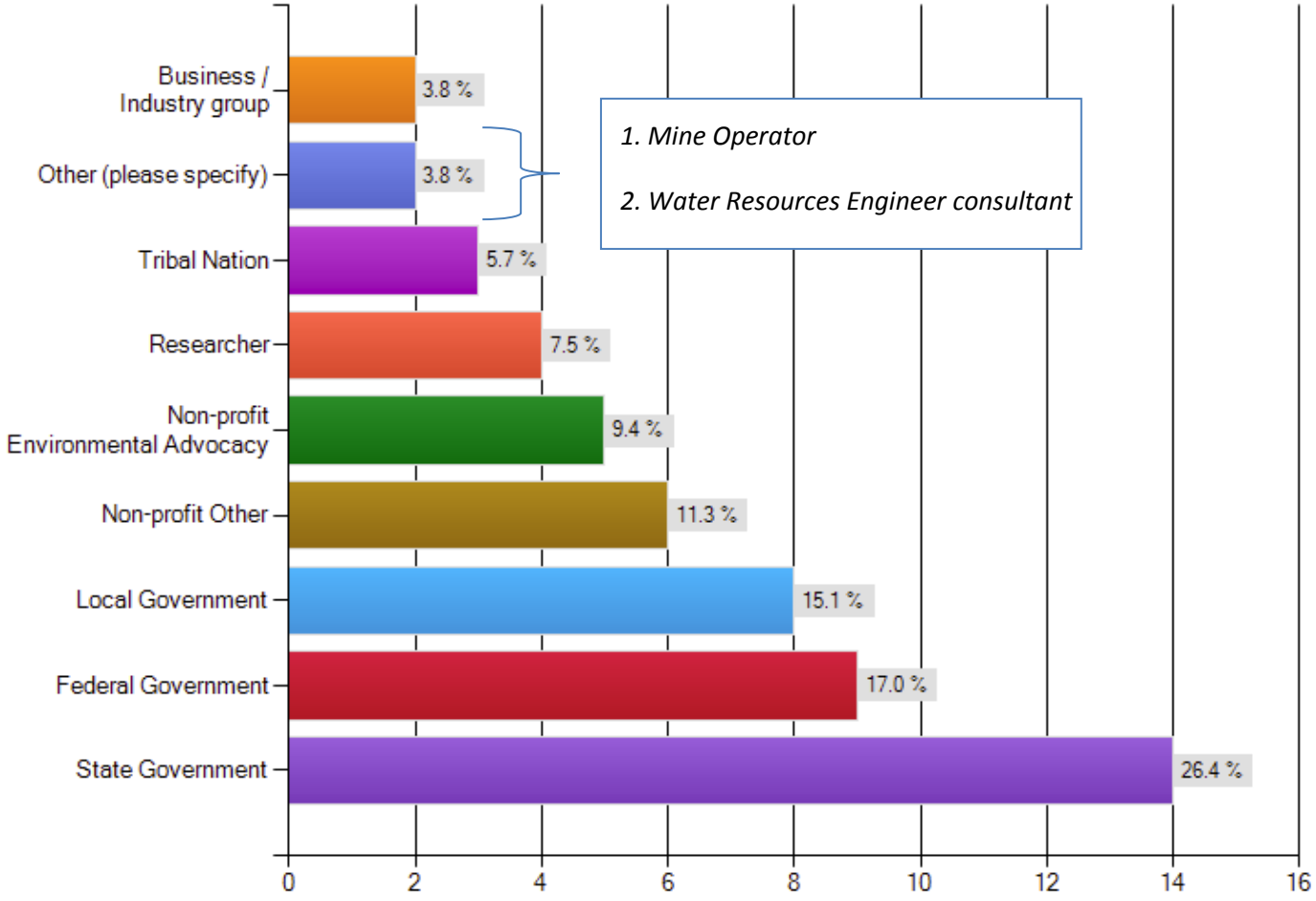
JUG Water Quality Monitoring Summit

November 13, 2013

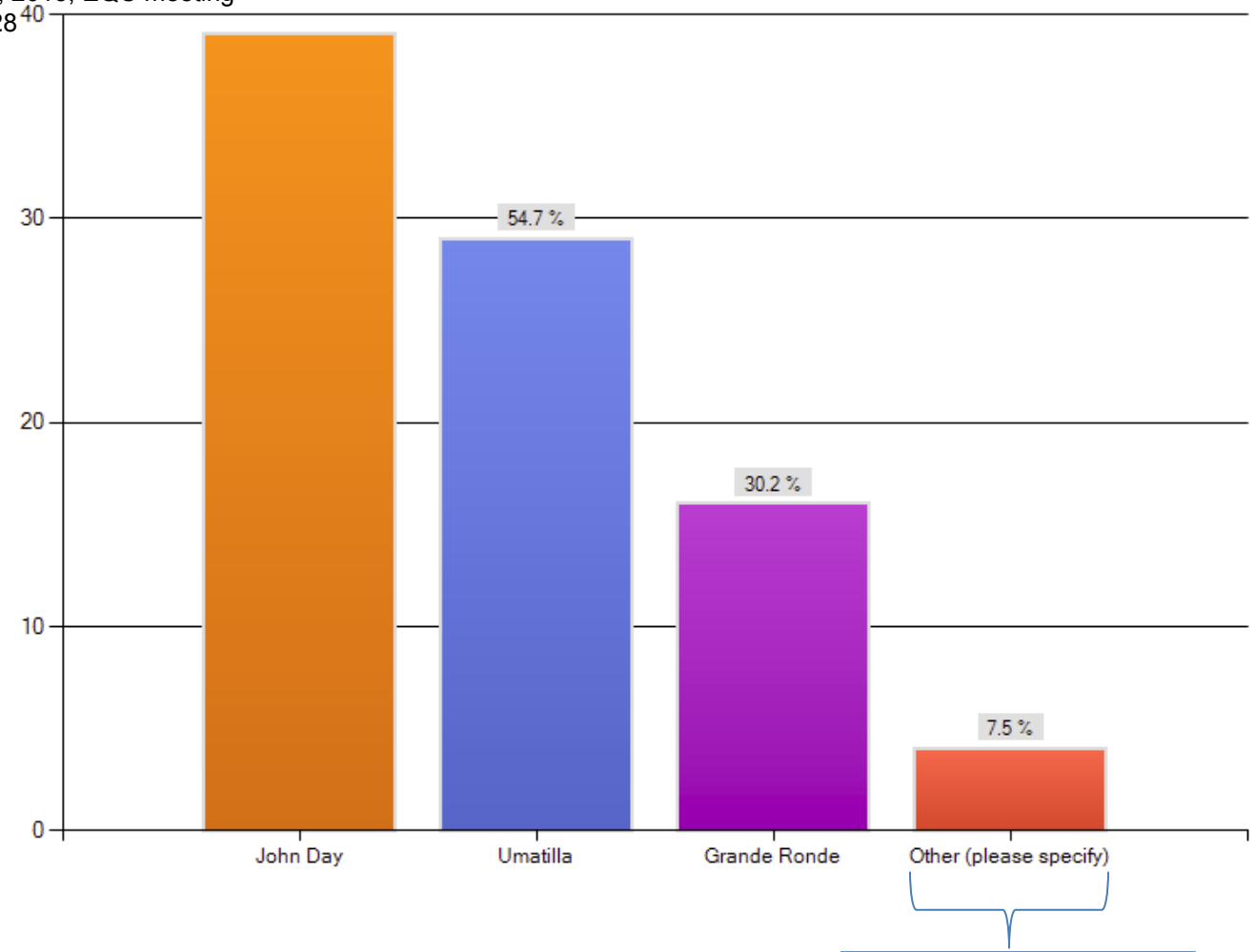
Presented by: Aaron Borisenko

Participant Information

1. Which category best describes your nation, organization or affiliation (please select the most appropriate category)?



2. Which watershed(s) or region(s) are you most interested in? (select all that apply)



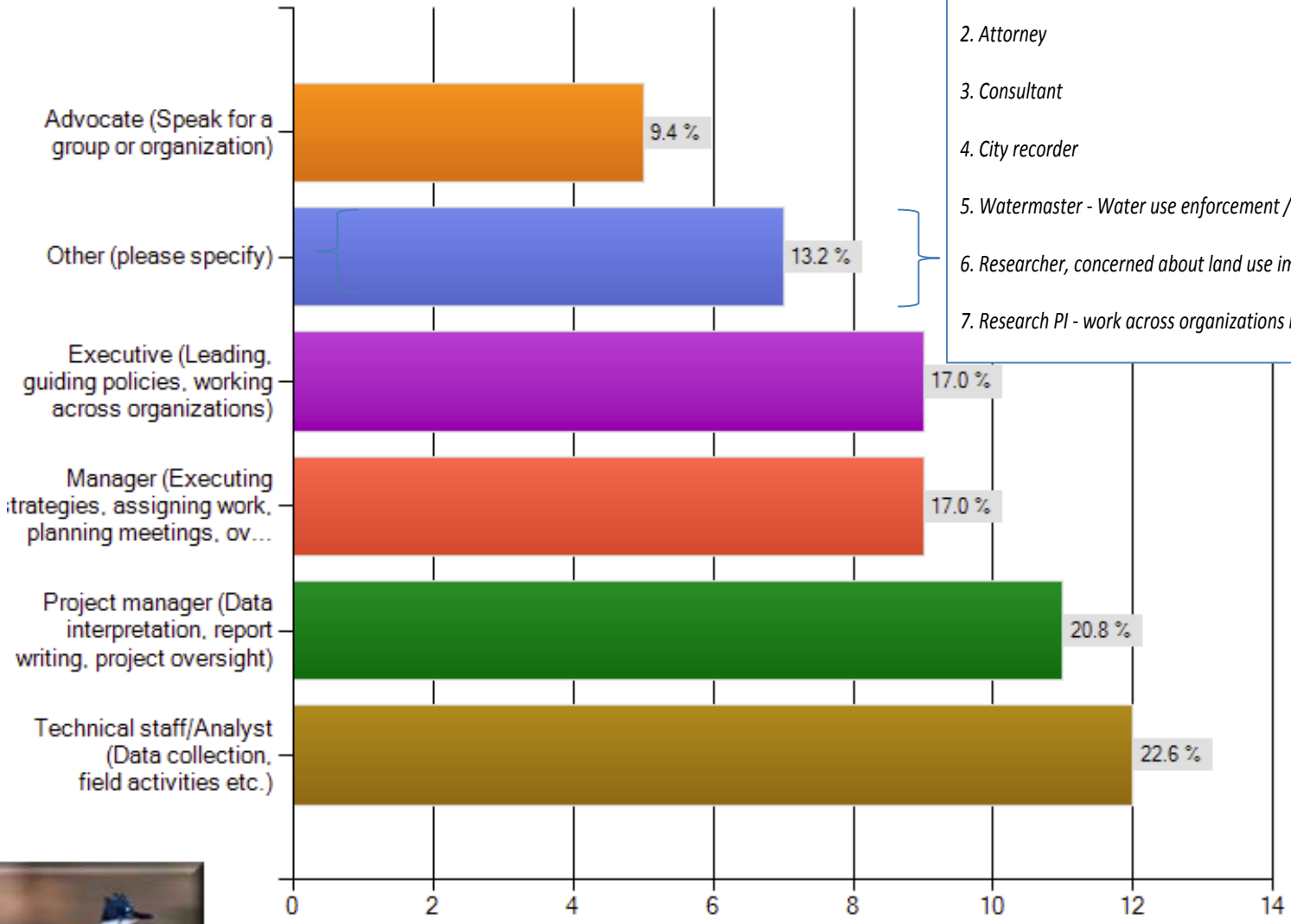
1. Approach

2. All

3. Statewide

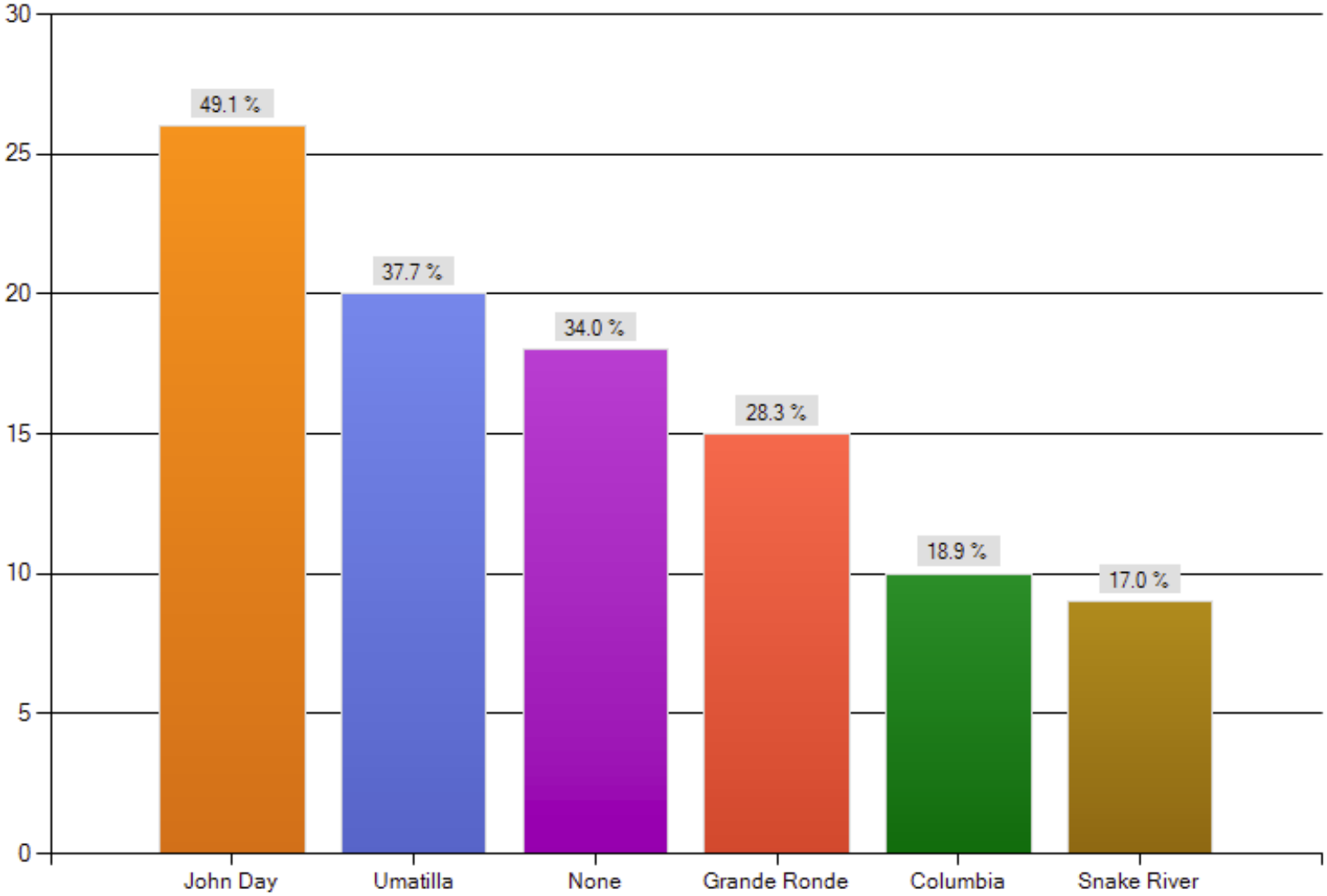
4. State and National

3. Which selection best describes your role in your nation or organization?



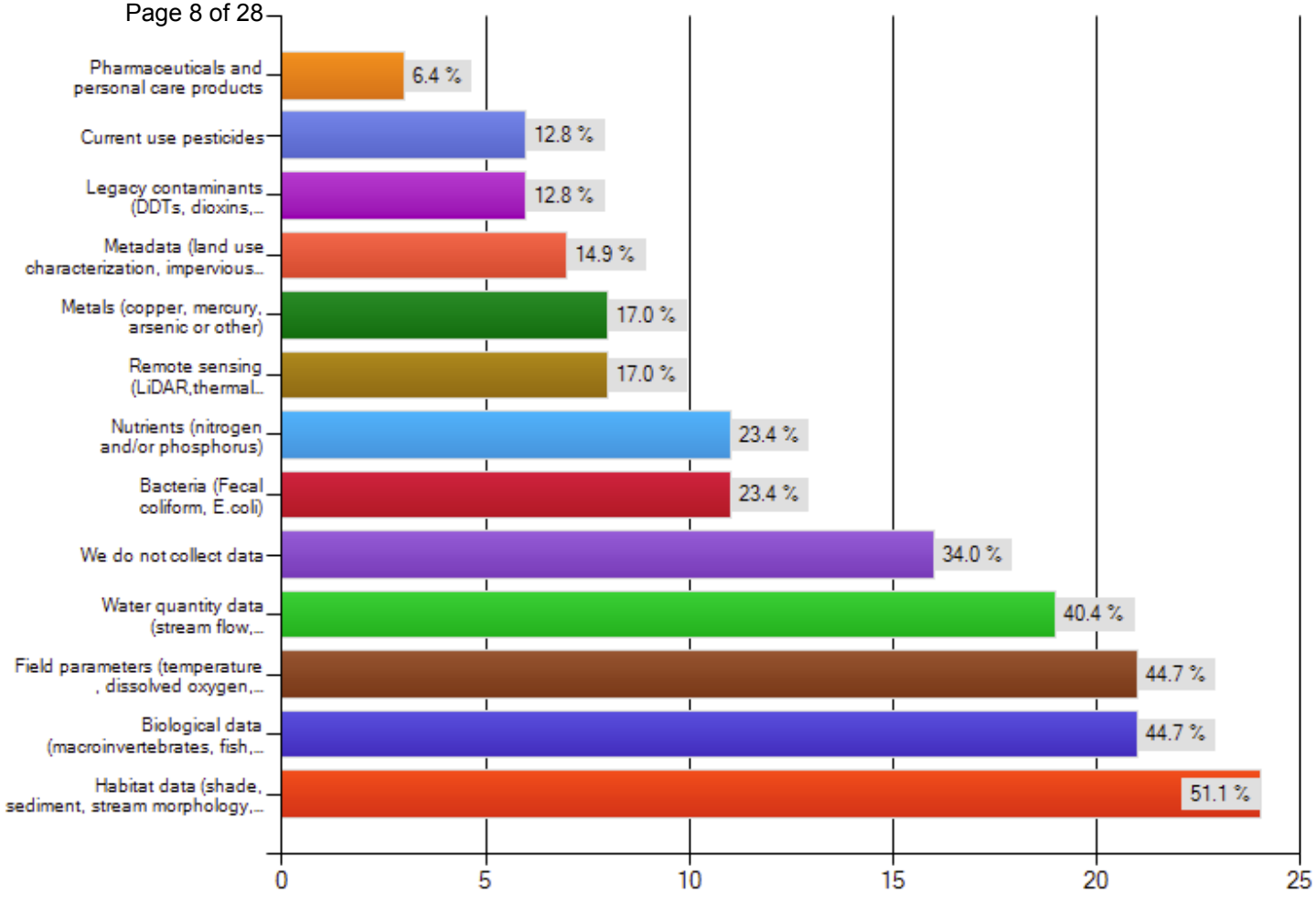
1. *Research scientist*
2. *Attorney*
3. *Consultant*
4. *City recorder*
5. *Watermaster - Water use enforcement / Water Law*
6. *Researcher, concerned about land use impacts to watershed and water*
7. *Research PI - work across organizations in national aquatic resource surveys*

4 Does your nation or organization collect water quality data in any of the following basins? (select all that apply)?



Information about your data

5. Which of the following categories best characterizes the samples/data your nation or organization collects? (select all that apply)



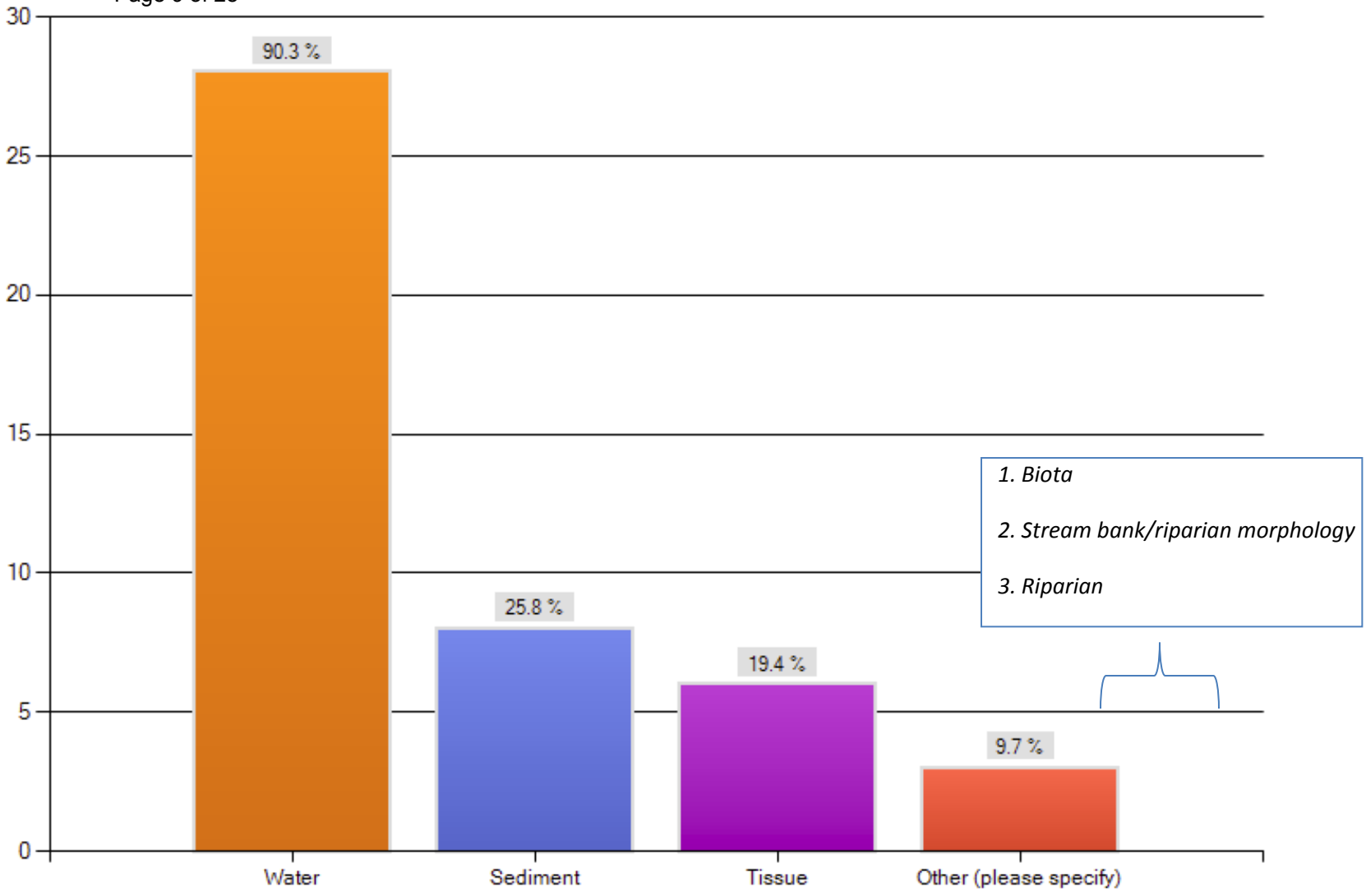
1. We are an end user of data collected in the Umatilla and have contributed resources to make those collections possible.

2. We either collect all of the data - or use the data (collected by others)

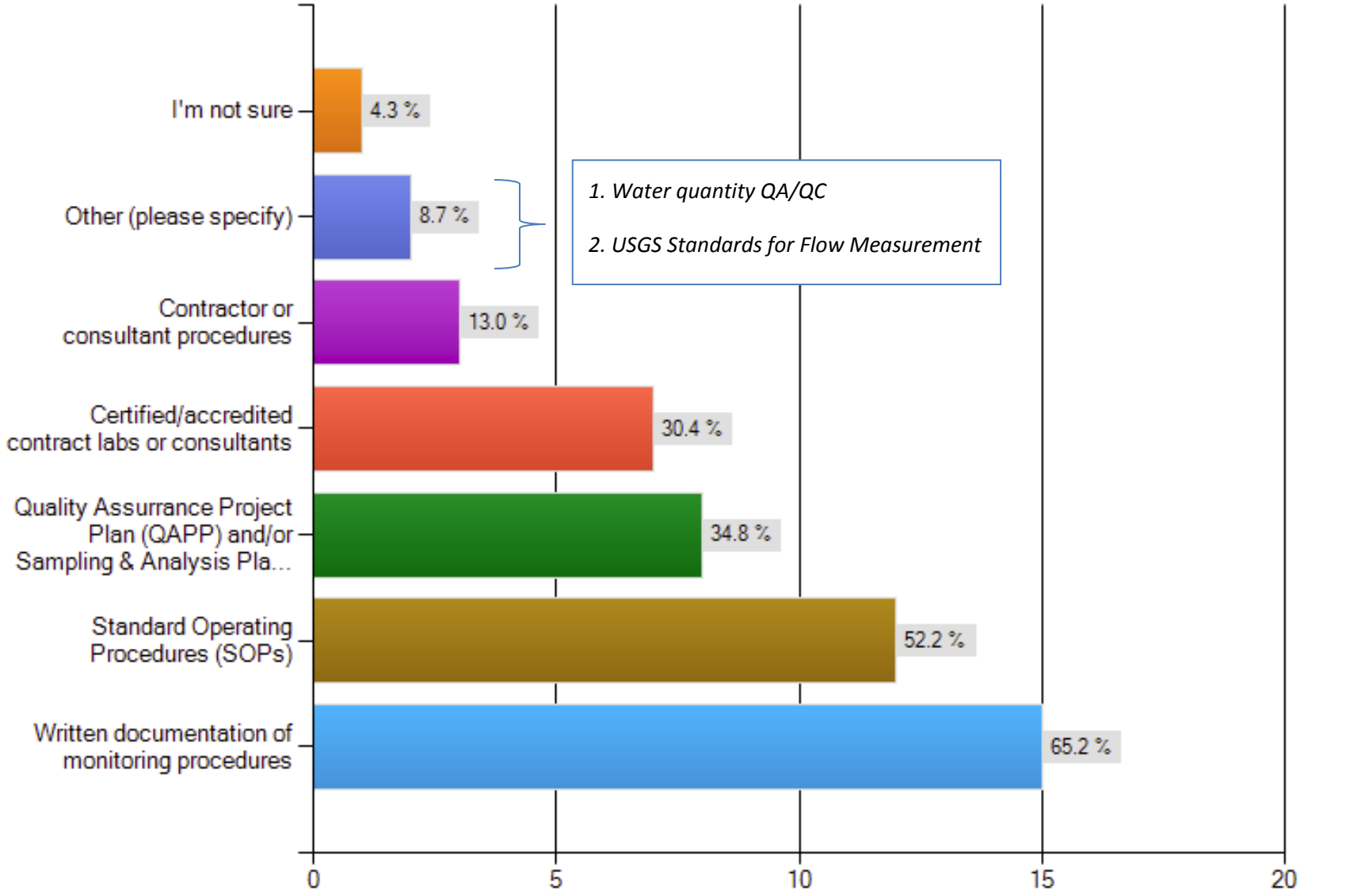
3. Temperature

4. We do not collect, but we use/analyze data collected by others

6. What type of media / matrix do you sample (choose all that apply)?



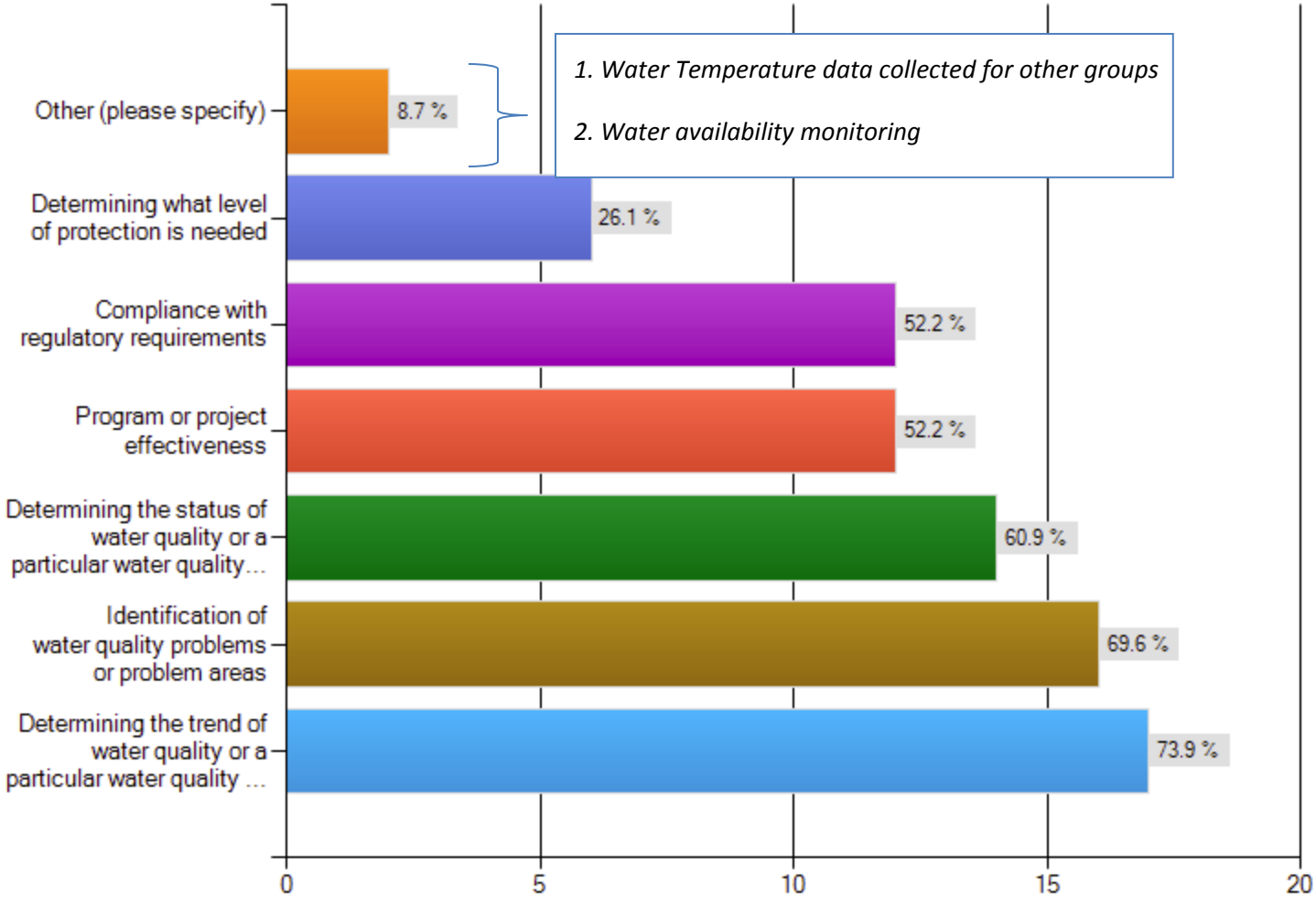
7. What type of quality assurance documentation, if any, do you have related to the water quality data you collect (please select all that apply)?



1. Water quantity QA/QC

2. USGS Standards for Flow Measurement

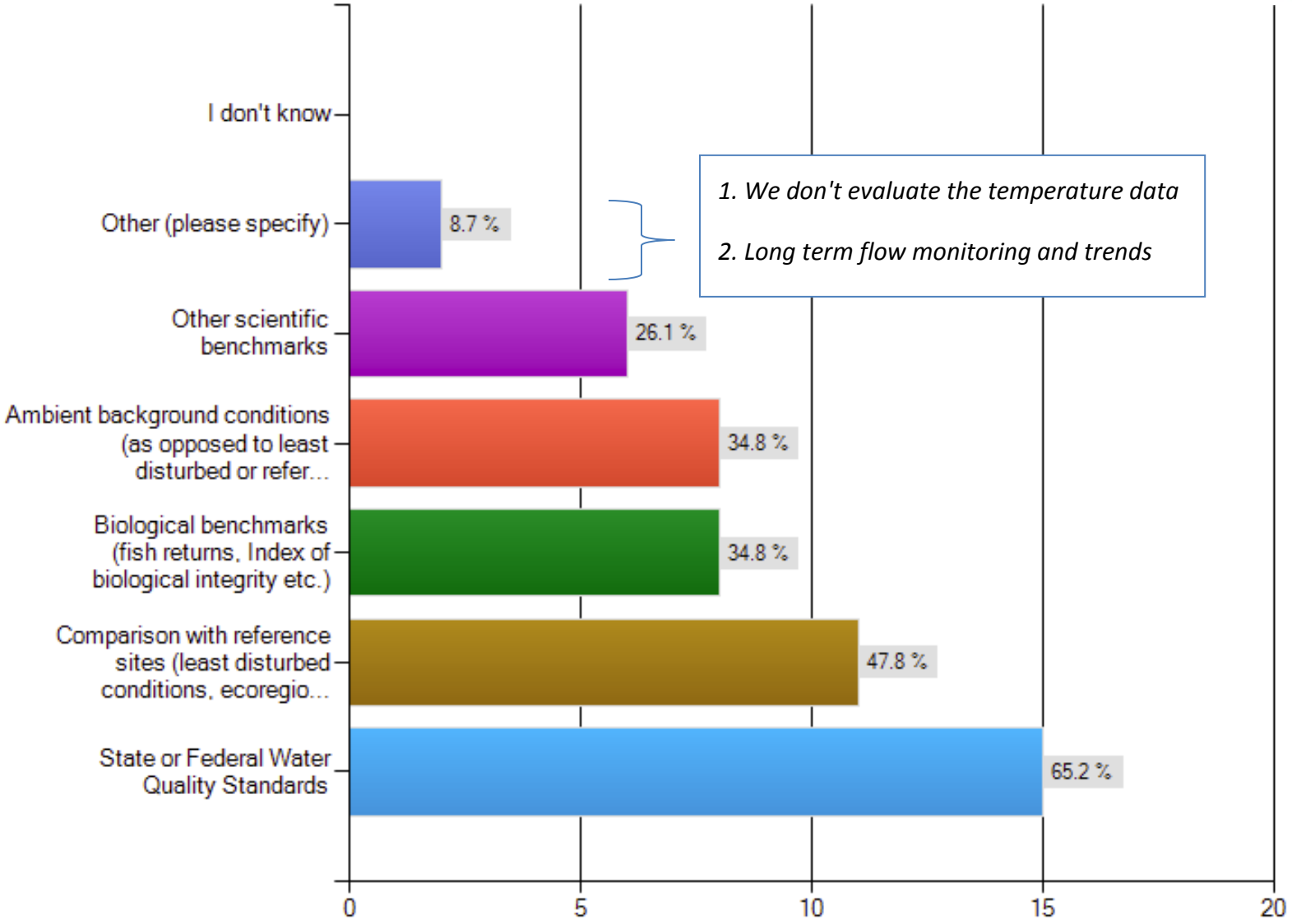
8. For what purpose does your nation or organization collect water quality data (select all that apply)?



1. Water Temperature data collected for other groups

2. Water availability monitoring

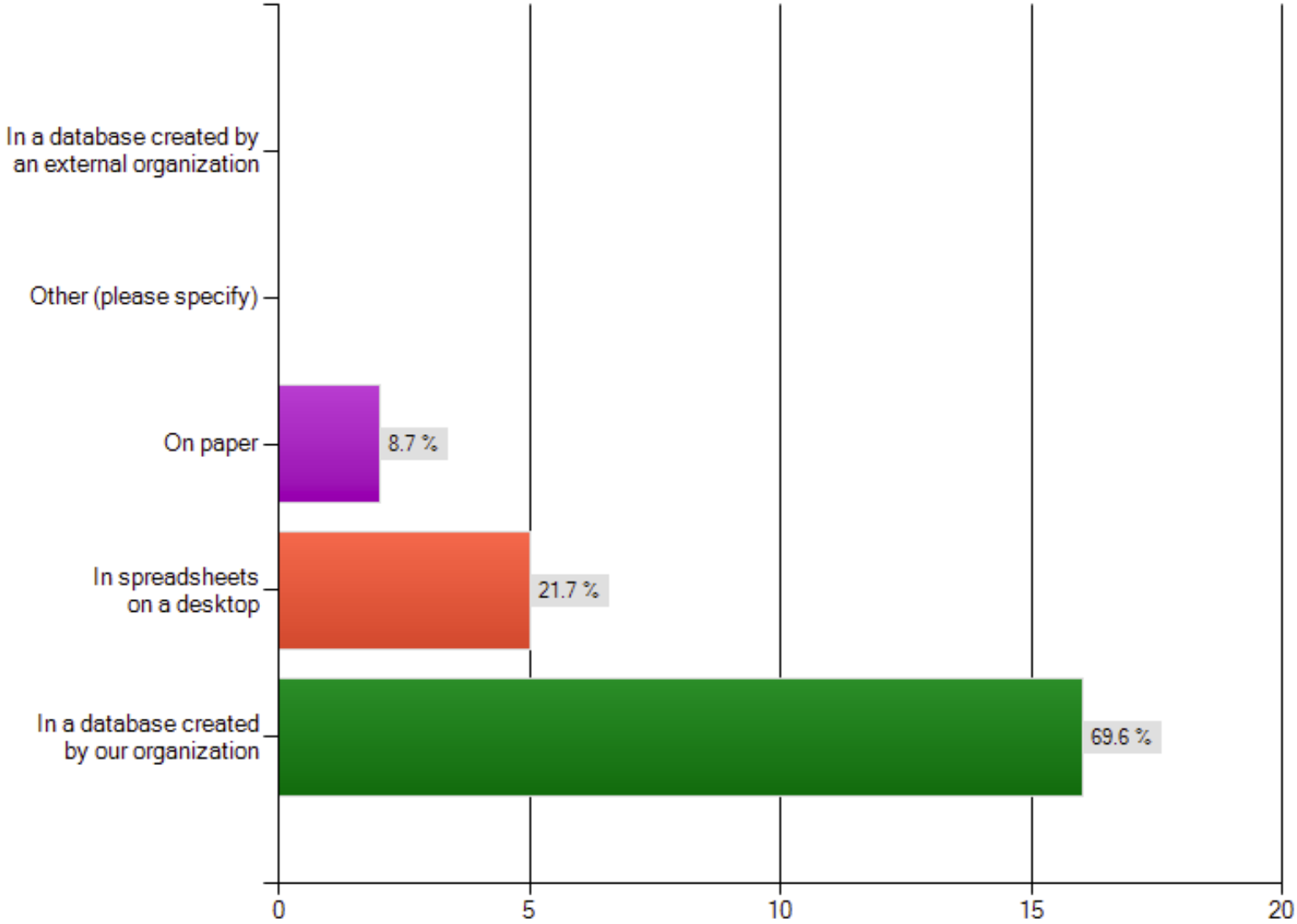
9. **What criteria do you use to evaluate your data (select all that apply)?**



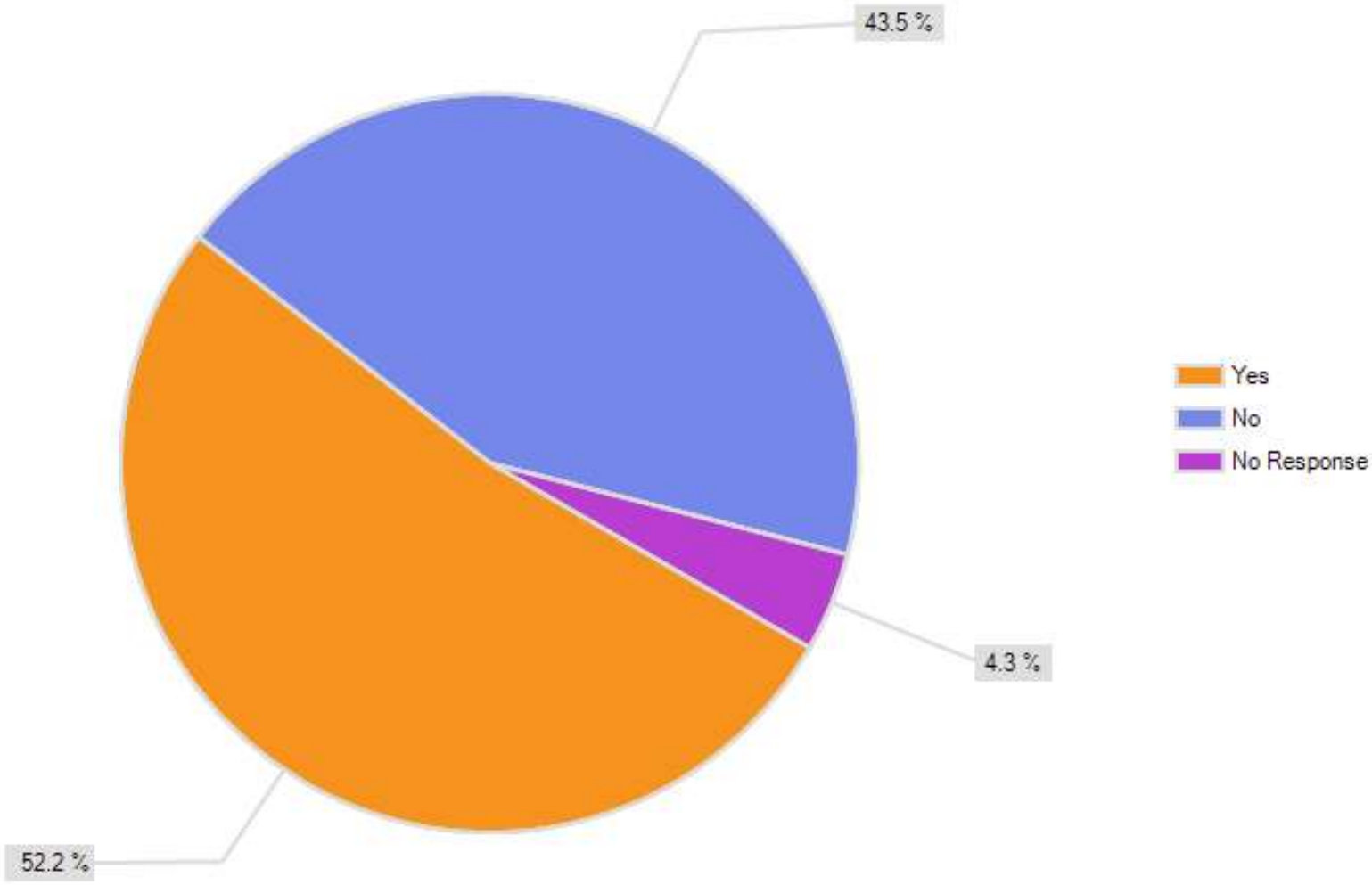
1. We don't evaluate the temperature data

2. Long term flow monitoring and trends

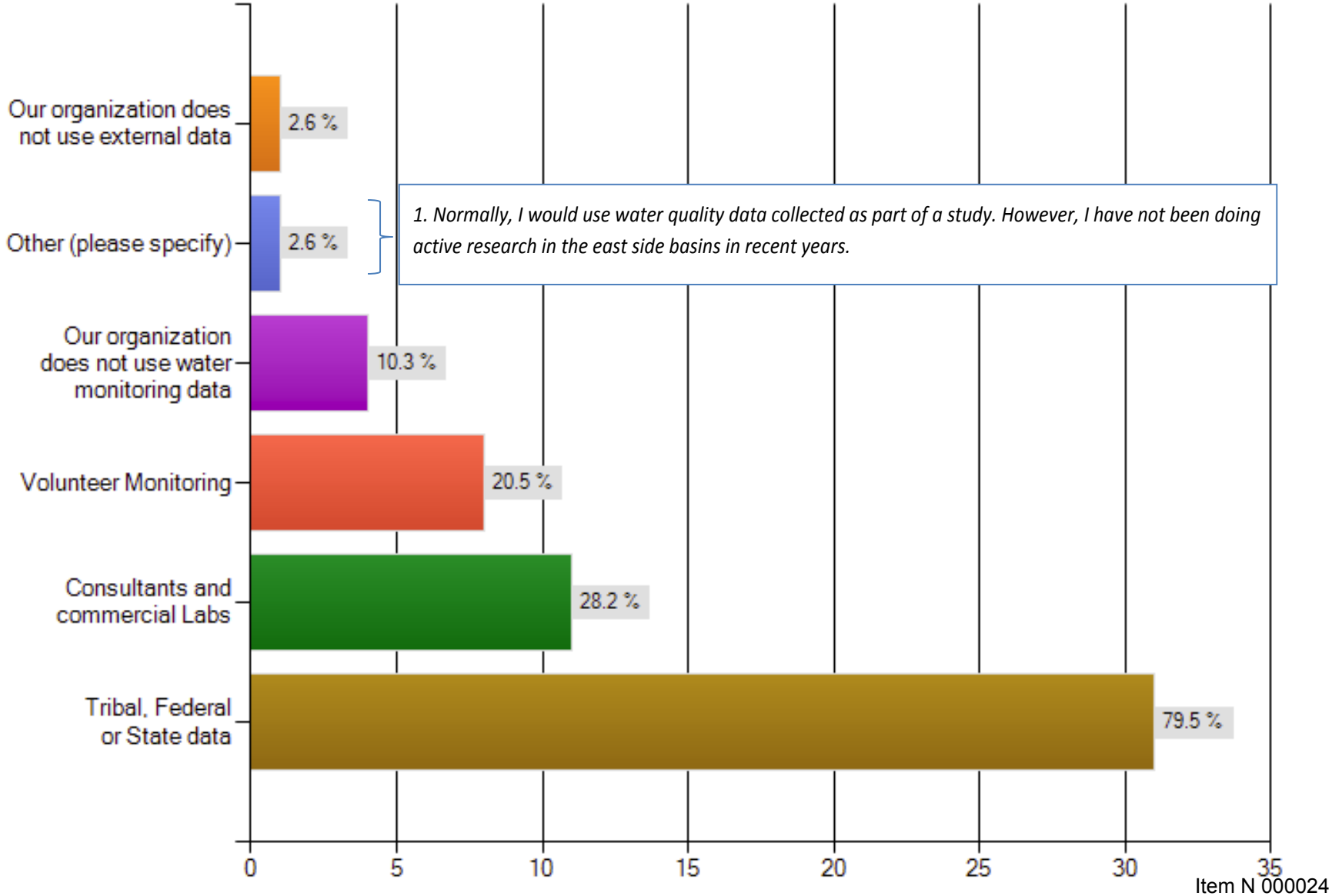
10. How do you store your information? (please select the best response)



11. Is your data available on the web?

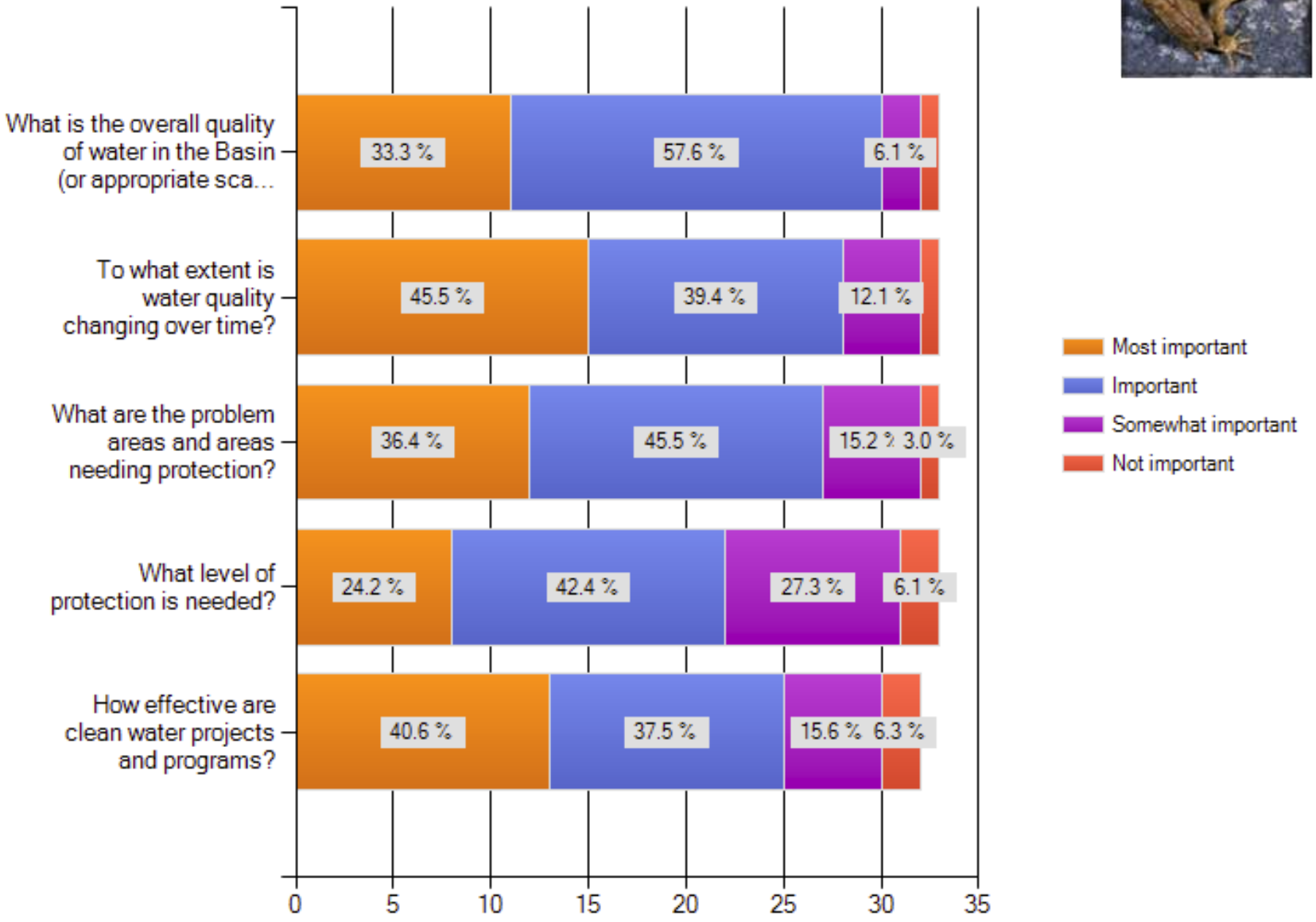


12. What external water quality data or information sources does your nation or organization typically use (Select all that apply)?

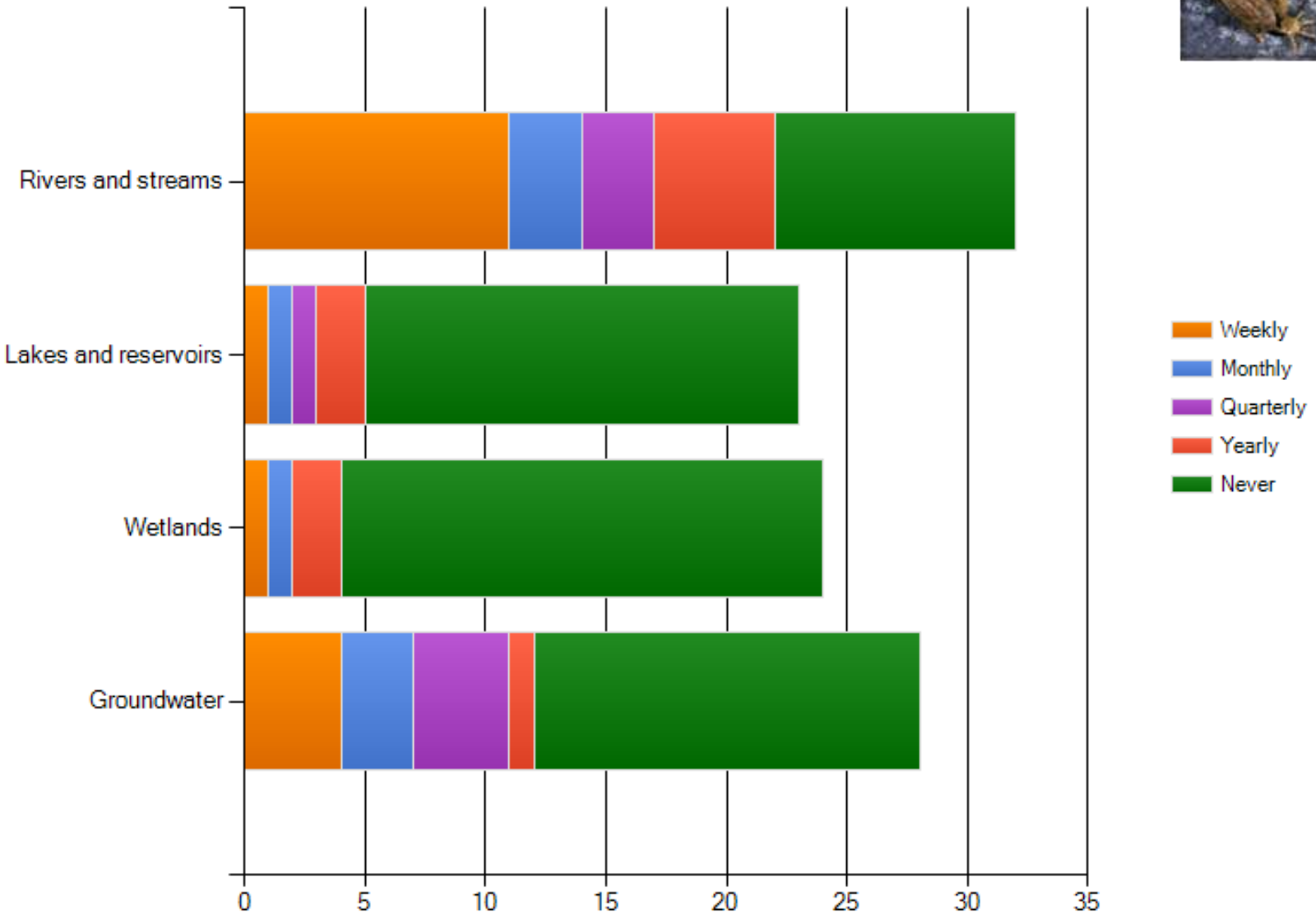


Ranking Water Monitoring Issues

Which of the following water monitoring program questions are most relevant to your organization (rank each question)?



14. Please indicate the waterbody type your nation or organization collects monitoring data or information on (rank the frequency for each waterbody).



1	Stream temperature, fish habitat, dissolved O
2	Sediment input, seasonally bacteria, flows
3	Water temperature, water quality and riparian/stream fish habitat.
4	Impacts from livestock grazing
5	Sediment, temperature, nutrient
6	Fish Spawning Effectiveness, Bank Erosion, and Stream Plant Communities/Shading.
7	1. Implement real time on the ground WQ improvement 2. Addressing potential ways to effectively minimize non point source pollution (i.e. nutrient trading, etc) 3. Funding solutions
8	Water quantity. Water use. Water temperature.
9	ssss
10	?
11	Water temperature, sediment, and channel morphology
12	Temperature
13	safe drinking water
14	Temperature, sediment and nitrates
15	surface water temperature groundwater nitrate pesticides in both surface water and groundwater
16	Temperature, channel morphology, and fish habitat.
17	cattle grazing, protecting/restoring native trout habitat
18	Impacts to water quality (elevated water temperature, e coli pollution) from livestock grazing; sedimentation in streams from grazing, roads, logging; impacts to humans, fish, other wildlife from inadequate protection of water quality.
19	1. Volume 2. temperature 3. sediment
20	temperature, nitrates, TDS
21	water quality equity of water consumption maintenance of water supplies for all uses, including natural resources
22	temperature, sediment, bacteria
23	1. Biological condition 2. Riparian protections 3. Sediment
24	Water temperature, sediment, fecal coliform
25	Temperature, disolved oxygen and trubidity
26	Nitrates TDS Arsenic
27	Nitrates in groundwater, sediment and temperature in surface water
28	temperature, dissolved oxygen,
29	Quantity, timing and overall quality
30	temperature & sediment (turbidity), and the land uses affecting them
31	groundwater contamination, nitrates and fecal pesticide presence in surface water groundwater contamination, legacy pesticides and pcbs
32	Stream temperatures Fish habitat Water utilization for agriculture
33	For most of the geographic areas I work in, riparian habitat degradation and its resulting sediment, heat and water contaminant inputs are most widespread and carry the greatest risk for biological degradation.
34	Temperature, suspended sediment and habitat modifications

15. What do consider the three most important water quality issues in your geographic area?

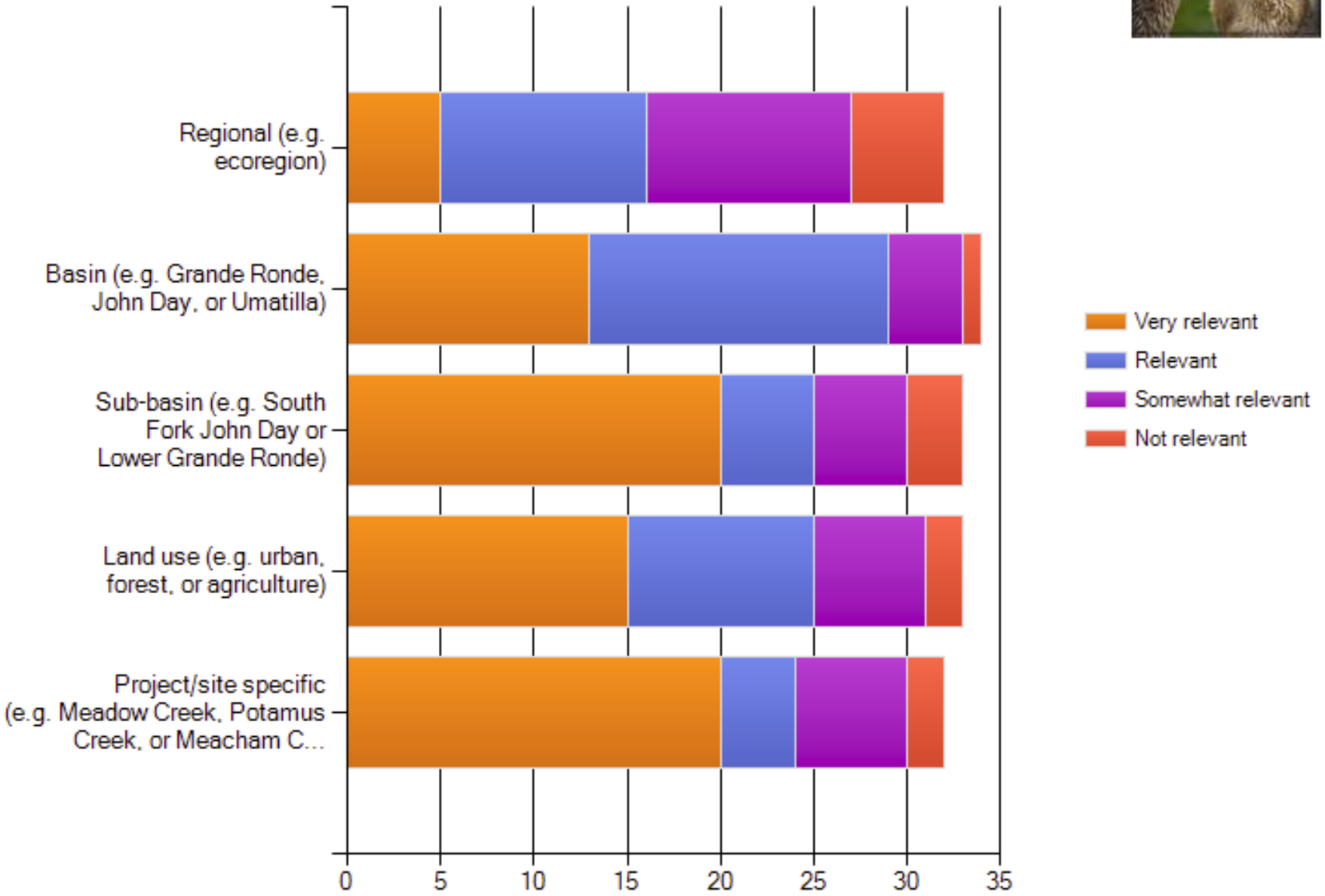
Frequency and top words :

Word	Occurrences	Frequency	Rank
water	19	9.6%	1
temperature	17	8.6%	2
sediment	11	5.6%	3
quality	5	2.5%	4
nitrates	5	2.5%	4
habitat	5	2.5%	4
groundwater	5	2.5%	4
grazing	4	2%	5
surface	4	2%	5
fish	4	2%	5
impacts	3	1.5%	6
morphology	2	1%	7
quantity	2	1%	7
channel	2	1%	7
turbidity	2	1%	7
dissolved	2	1%	7
biological	2	1%	7
uses	2	1%	7
tds	2	1%	7
riparian	2	1%	7

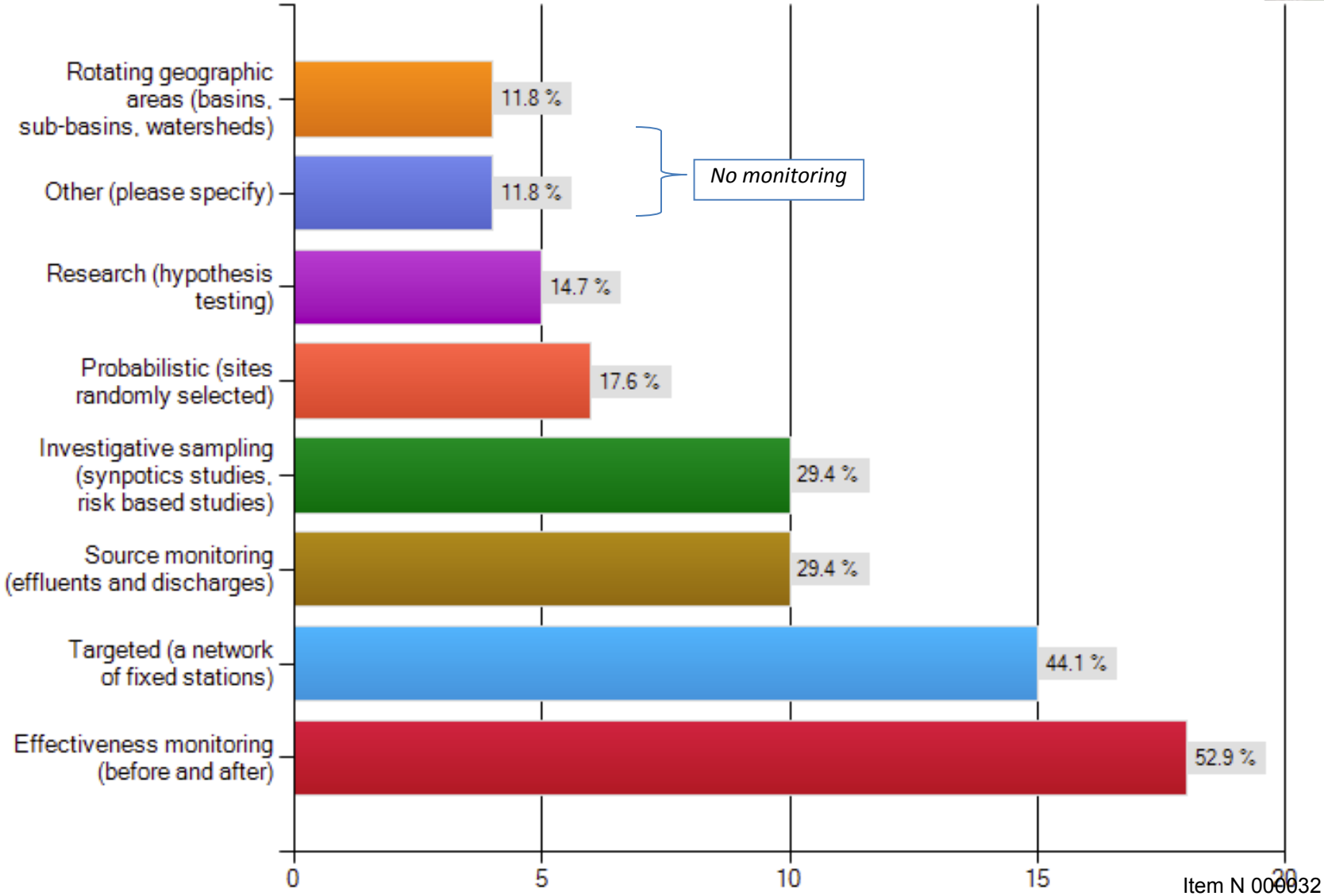
What do consider the three most important water quality issues in your geographic area?

Monitoring Design

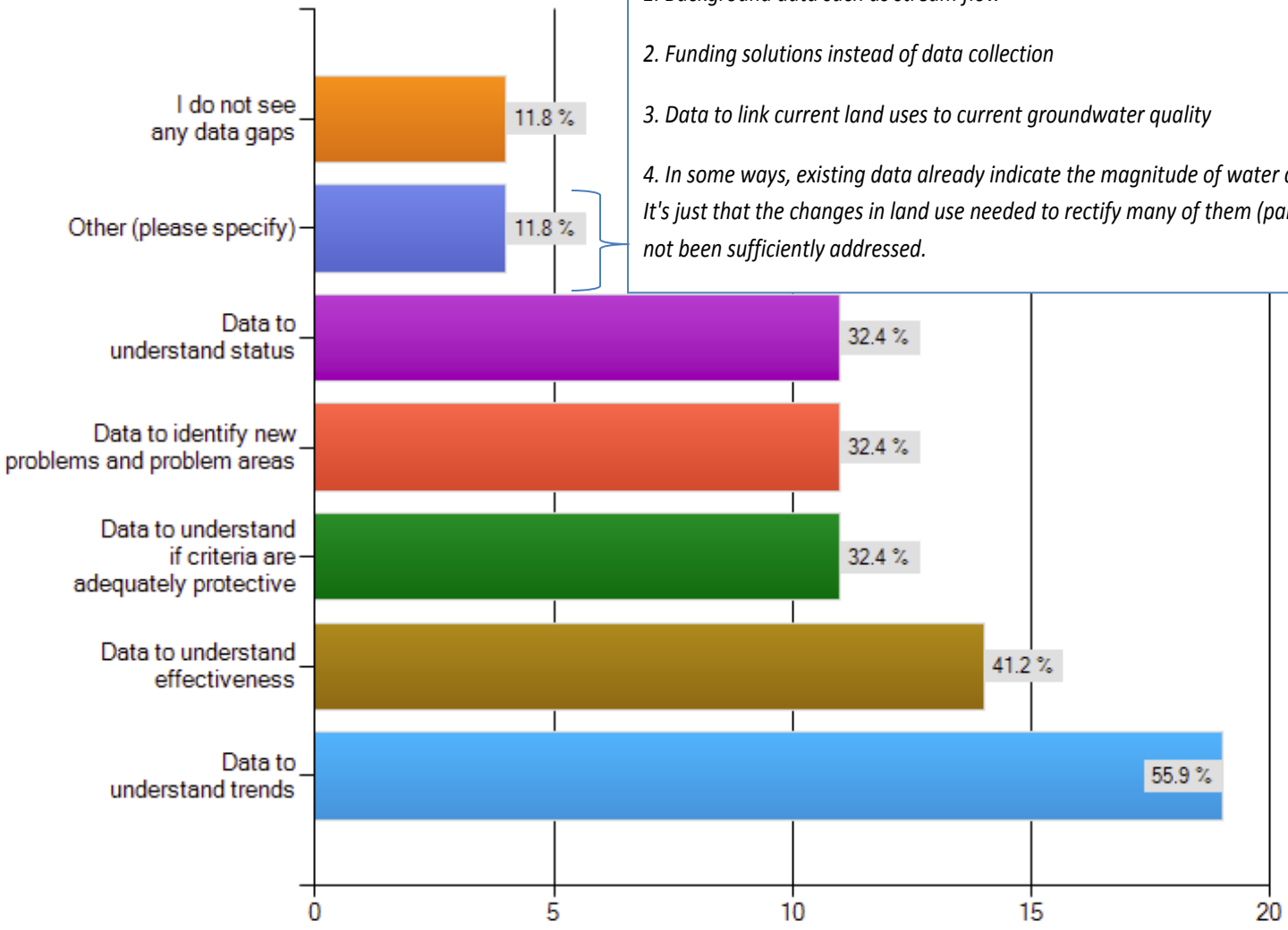
Please indicate the spatial scale of (water quality) data collection that is most relevant to your organization (rank the relevence for each spatial scale).



17. What type of monitoring designs does your nation or organization employ (select all that apply)?



18. What are the biggest data gaps that you see in your region (select all that apply) ?



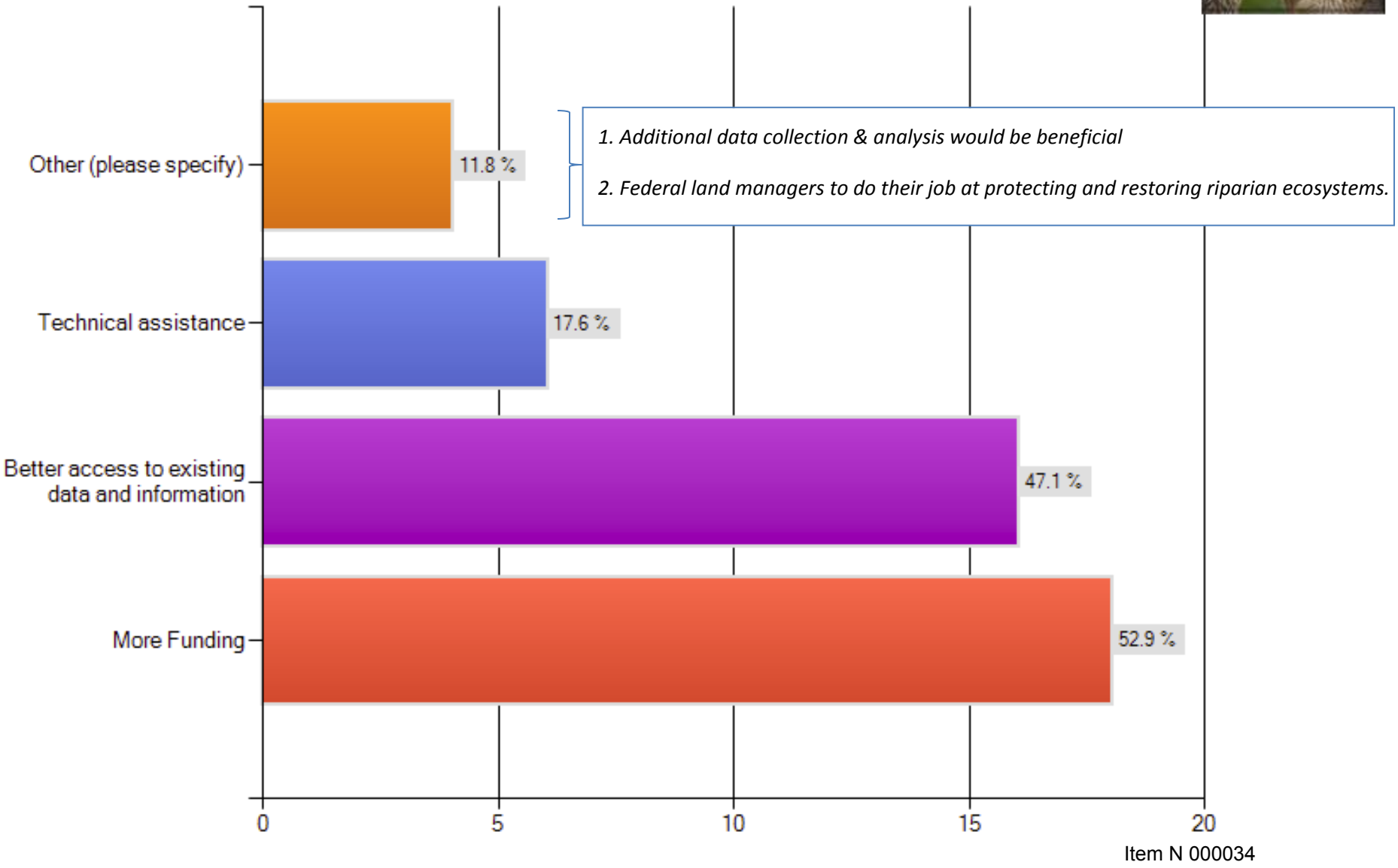
1. Background data such as stream flow

2. Funding solutions instead of data collection

3. Data to link current land uses to current groundwater quality

4. In some ways, existing data already indicate the magnitude of water quality problems in these basins. It's just that the changes in land use needed to rectify many of them (particularly livestock impacts) have not been sufficiently addressed.

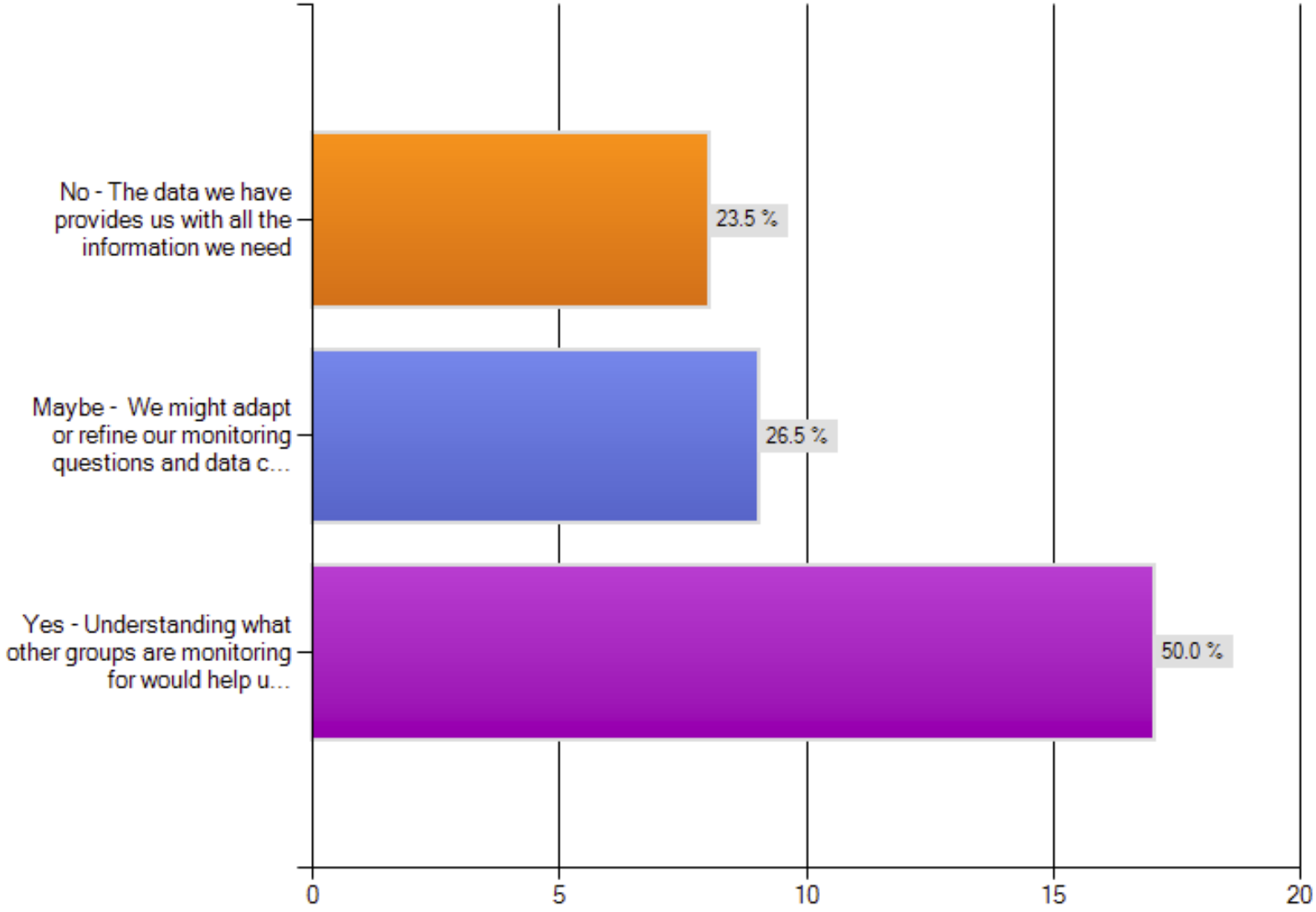
19. What would help your nation or organization best meet your data needs (select all that apply)?



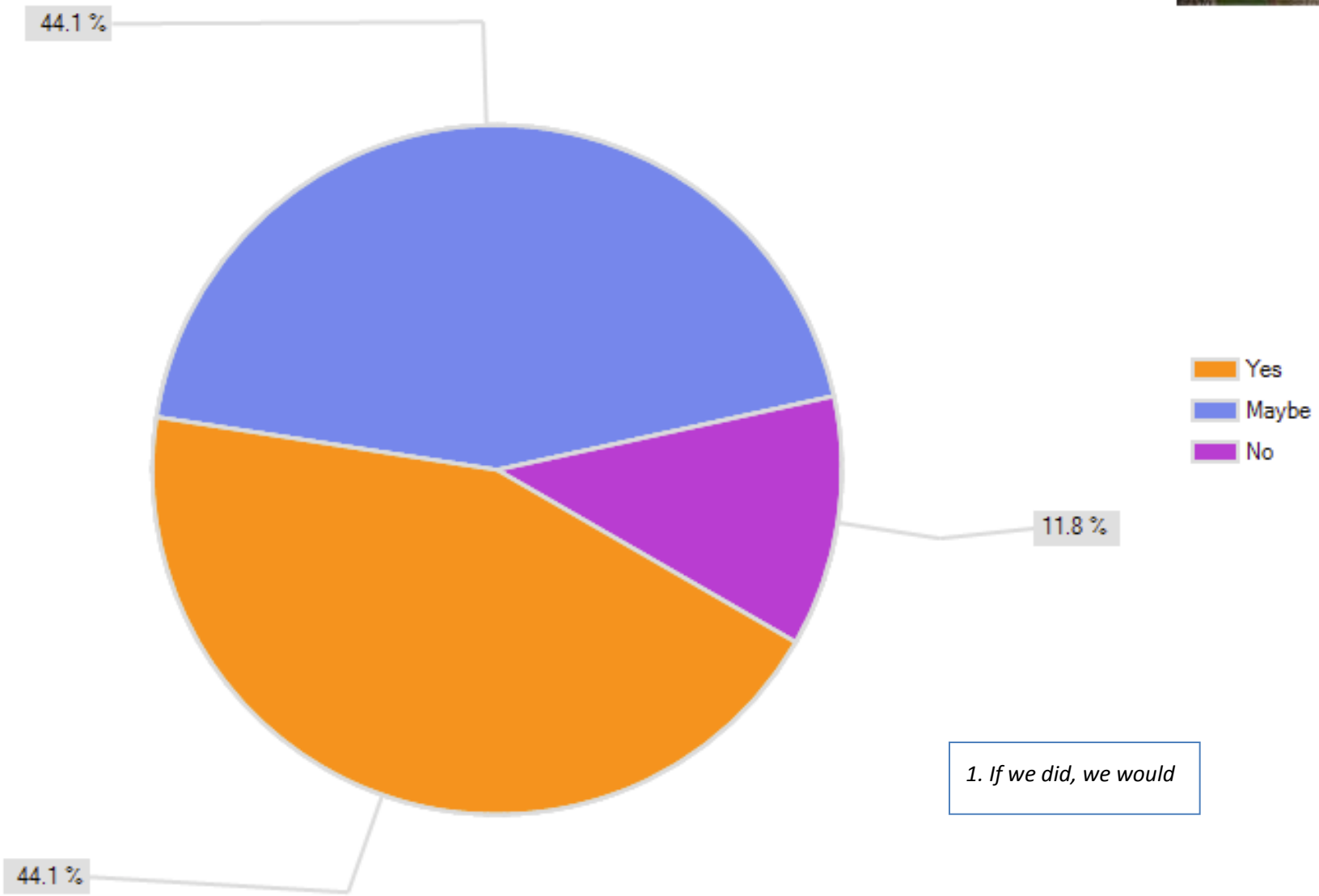
1. Additional data collection & analysis would be beneficial

2. Federal land managers to do their job at protecting and restoring riparian ecosystems.

20. Would collaborative inter-organizational monitoring or data management benefit your nation or organization (select the best answer)?



20. **Are you willing to share your nation or organization's monitoring locations (lat long), monitoring parameters (general) and dates for display on a map?**



1. If we did, we would

Thank you…….Questions?

Summit gathers agencies for watershed monitoring

By GEORGE PLAVEN
East Oregonian

Local, state and federal agencies gathered Wednesday at the Pendleton Convention Center to discuss water quality monitoring in three river basins spanning most of northeast Oregon.

About 70 people attended the all-day summit to address water monitoring programs and potential collaboration in the Umatilla, Grande Ronde and John Day watersheds. Presentations covered a range of data from existing programs, and identified issues affecting flow and habitat throughout the basins.

Aaron Borisenko, water quality monitoring manager with the Oregon Department of Environmental Quality based in Hillsboro, said the summit is a regional response to a statewide meeting held last year. By getting together, groups can better understand their roles in maintaining watershed health, Borisenko said.

Regionally specific issues include nitrate levels in DEQ's Lower Umatilla Basin Groundwater Management Area, water flows and stream temperatures needed to protect endangered salmon and steelhead populations.

"If we can better coordinate, and implement something like an enterprise approach to monitoring ... that would be something I'd like to achieve," Borisenko said.

Afternoon sessions focused on surface water monitoring efforts, led by the Oregon Department of Agriculture and streamflow gauges from the Oregon Water Resources Department. ODA is responsible for preventing water pollution from agricultural activities, funded through the Agricultural Water Quality Management Act of 1993.

The legislation also protects against soil erosion on rural lands. Area districts include Umatilla County at Big Spring Creek and Wildhorse Creek, and Morrow County at Willow Creek.

At a minimum, each district conducts a streamside vegetation assessment using aerial photography and field data. Sheila Marcoe, water quality monitoring specialist with ODA, said projects measure stream bank stability and conditions on surrounding rural land.

The challenge, Marcoe said, is determining exact results.

"We've been trying to identify those priorities, and hone in on those different milestones and timelines," she said. "Trees take time to grow, or certain activities take time to show a difference."

The water resources department, meanwhile, keeps tabs on water regulation for agricultural reasons and monitoring instream flows using a number of gauges throughout the watersheds. It posts surface water figures, including near-real time and historical streamflow and lake levels, on its website.

"We have to have a pretty accurate picture of who's taking what and when," said Mike Ladd, region manager in Pendleton.

The summit continues Thursday morning, as speakers with the Oregon Watershed Enhancement Board, U.S. Geological Service and DEQ review integrated monitoring and management tools.

"We all want clean water," Borisenko said. "It is a critically valuable resource to all of us."

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