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REPORT

Global Hydrological Monitoring Industry Trends

October 17, 2013 Stu Hamilton Senior Hydrologist



AQUARIUS in 21 Countries

350+ customers with 5000+ AQUARIUS licenses

> *De facto* North American standard





Introduction

Global Hydrological Monitoring Industry Survey

- Conducted in September & October 2012
- Promoted by AI, WMO, IAHS, & AWRA
- > Over 700 respondents from 90 countries
 - 47% engineers / hydrographers
 - 33% scientists / researchers
 - 13% program managers
 - 7% other



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Introduction

7 categories with 35 questions:

- 1. Organization Profile
- 2. Network Design

3. Technology

- 4. Quality Management System
- 5. Training & HR
- 6. Data Consumer Expectations
- 7. Data Management

Today we will focus on 2 categories.



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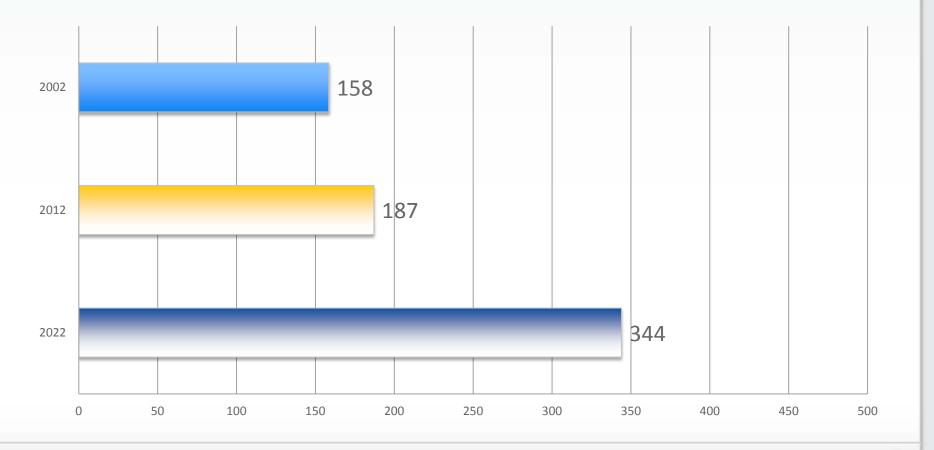
Is the <u>size</u> of USA networks changing over time?





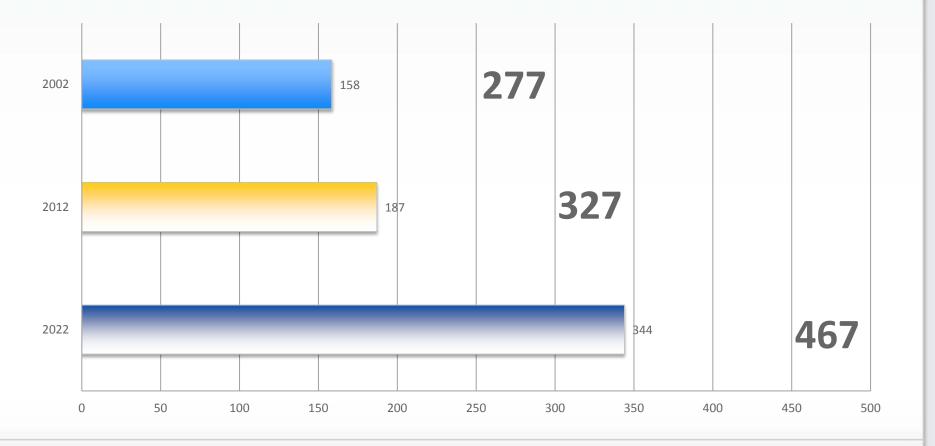


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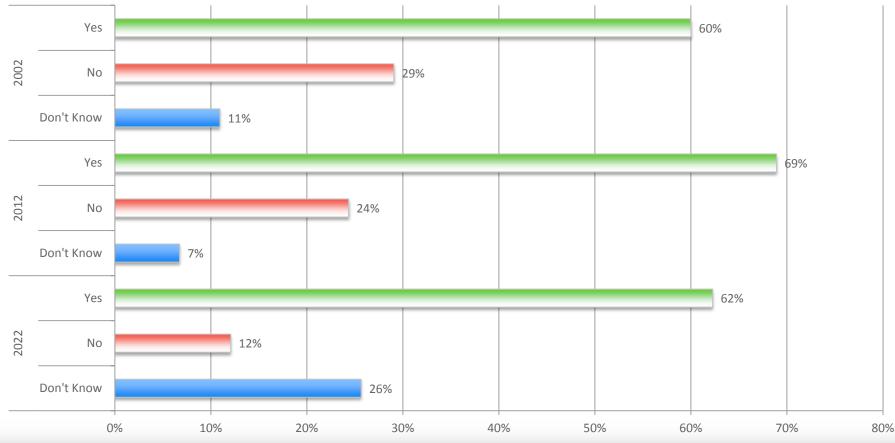


Do USA organizations <u>co-operate or co-</u> <u>manage</u> with other agencies / organizations?





Do organizations <u>co-operate or co-manage</u> with other agencies / organizations?







Are the <u>technologies</u> used in the USA changing?

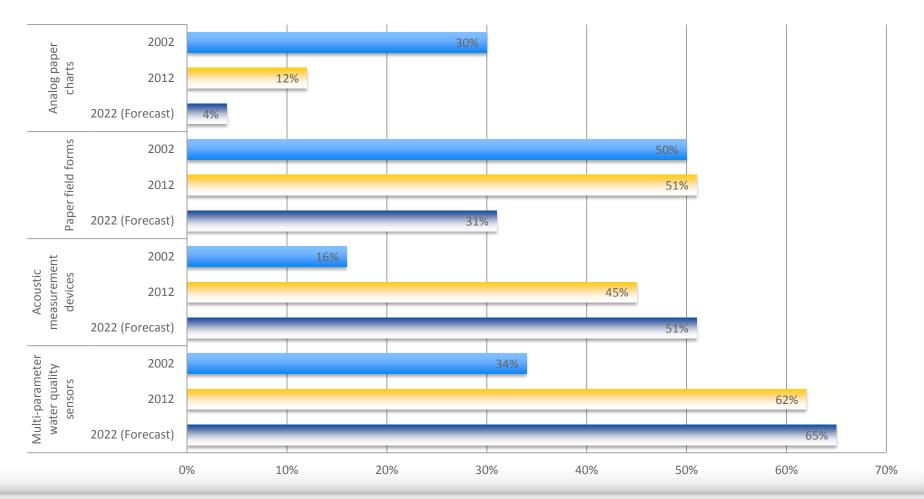






Technologies

Are the technologies used in the USA changing?







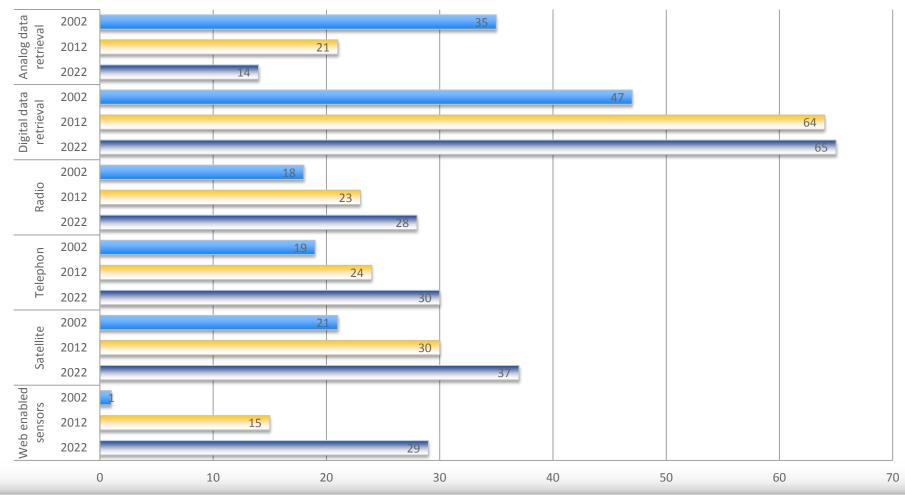
Are data communications technologies changing?





Technologies

Are data communications technologies changing?







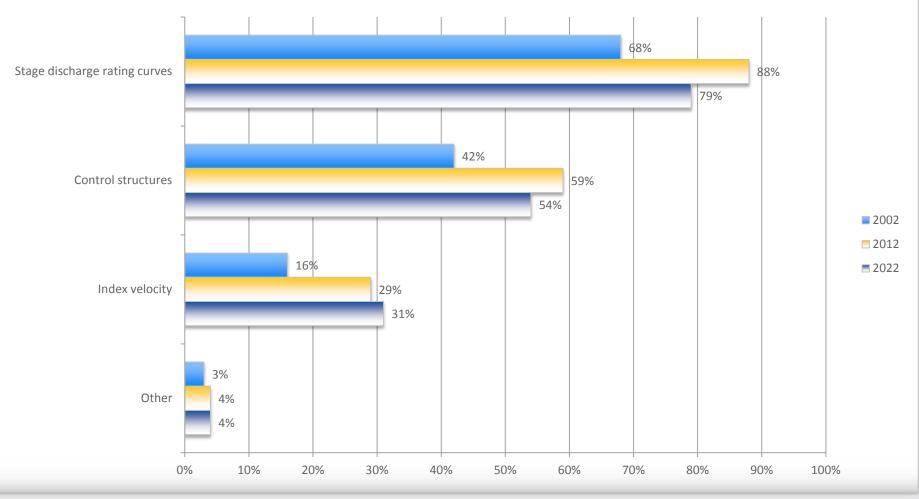
Are <u>hydrometric monitoring techniques</u> changing?





Technologies

Are hydrometric monitoring techniques changing?





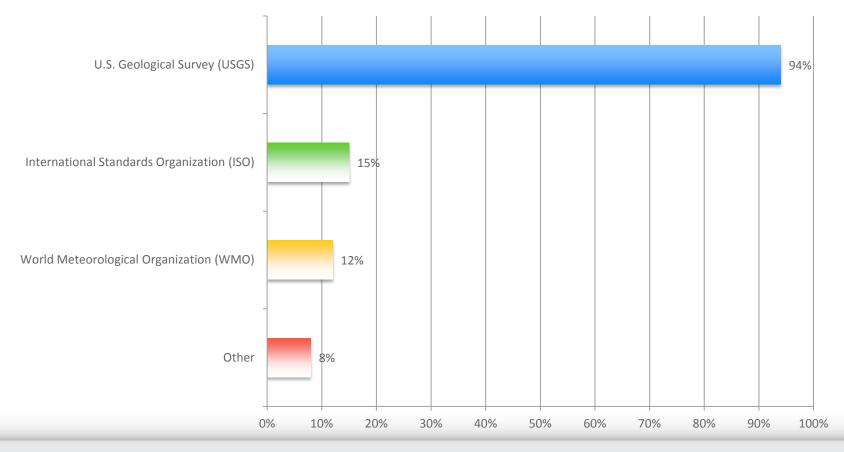
Quality Management System

Which <u>standard operating procedure</u> documents does the USA use, or plan to start using?



Quality Management System

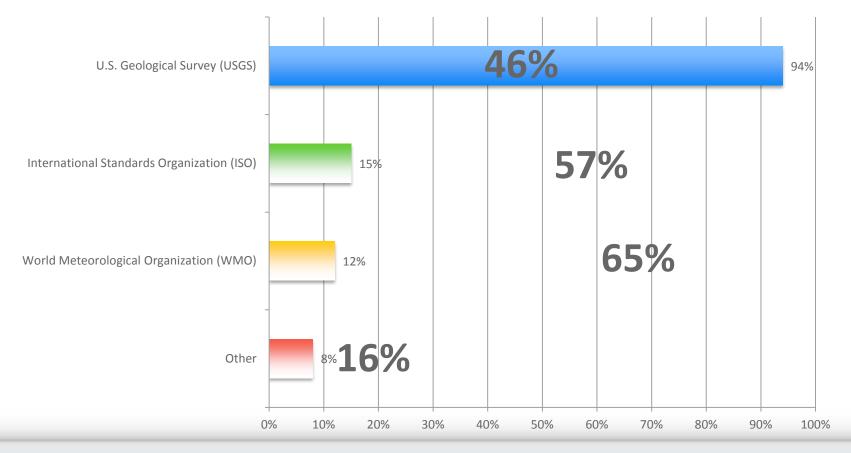
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Quality Management System

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Stakeholder Expectations

How are expectations changing with respect to the <u>timeliness</u> of quality controlled data in the USA?

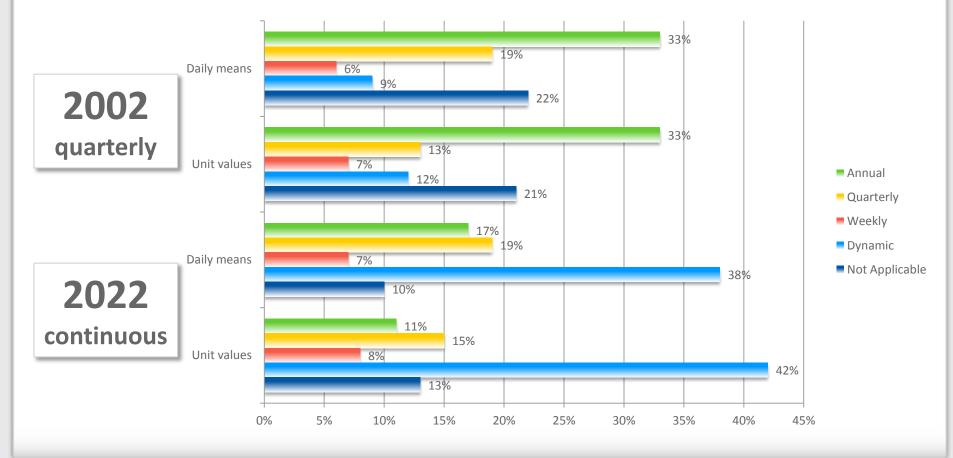






Stakeholder Expectations

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Data Dissemination

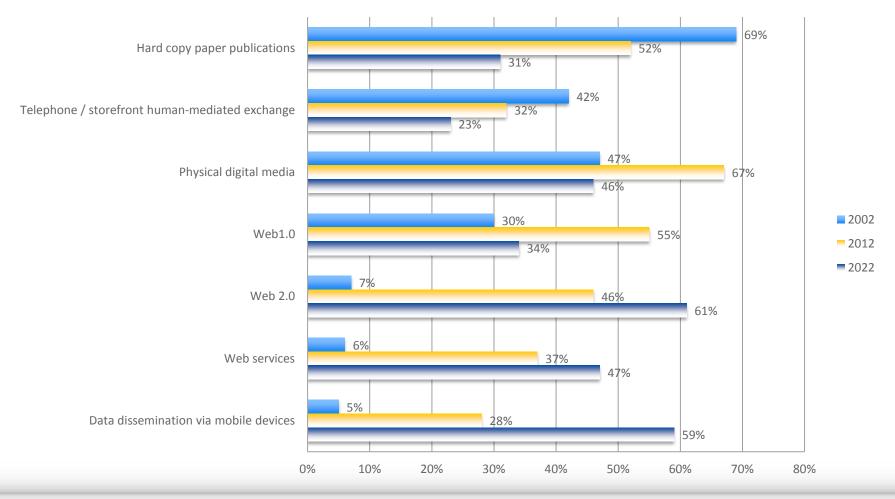
Are USA data dissemination methods changing?





Data Dissemination

Are USA data dissemination methods changing?





Which <u>data management system</u> do USA organizations primarily use?





Which <u>data management system</u> do organizations primarily use?

Office Software (E.g. Microsoft Excel), 33% Actively licenced Commercial Hydrological Data Management System, 20%

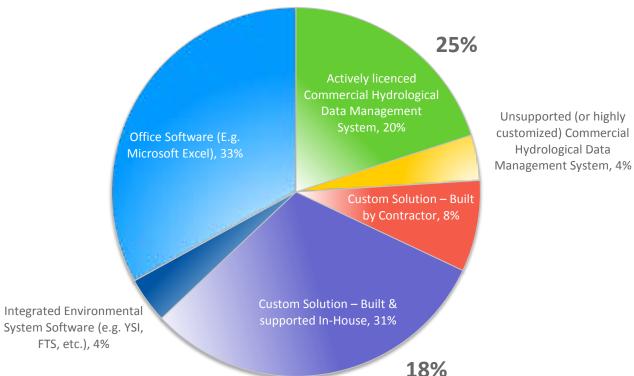
> Custom Solution – Built by Contractor, 8%

Unsupported (or highly customized) Commercial Hydrological Data Management System, 4%

Integrated Environmental System Software (e.g. YSI, FTS, etc.), 4% Custom Solution – Built & supported In-House, 31%



Which <u>data management system</u> do organizations primarily use?

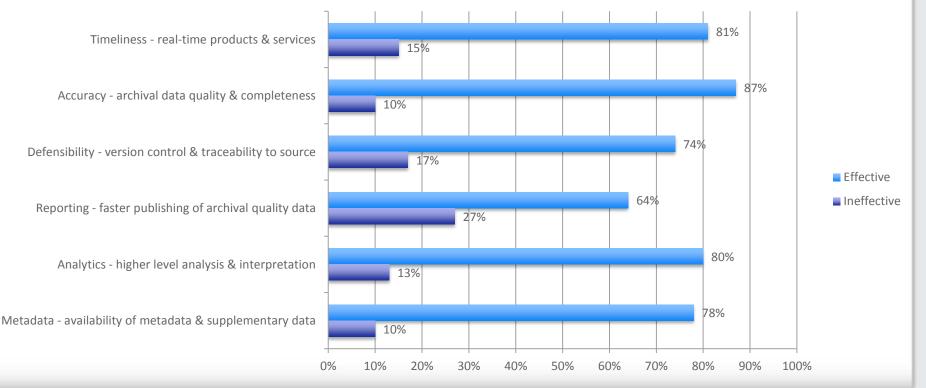




What is the <u>effectiveness</u> of commercial data management software in helping meet the expectations of today's data consumers?



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Concluding Remarks

Next Steps for US Environmental Monitoring Agencies:

1. **TBD**



Website Resources

Read the full report!

REPORT: GLOBAL HYDRC MONITORING INDUSTRY1

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