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the full report!



WESTERN STATES WATER SURVEY REPORT - EXECUTIVE SUMMARY

In 2024, the North Dakota Department of Water Resources worked with HDR Engineering to survey water resource agencies across the 17 western states. The survey sought to understand data collection practices and challenges in water resource monitoring. Responses captured diverse perspectives from 28 data-collecting agencies. The survey offers insights into common issues and opportunities for improvement.

KEY FINDINGS



QUALITY CONTROL CHALLENGES

Automated data systems can face difficulties ensuring accuracy.



LACK OF COORDINATION

Data collection varies significantly across agencies, which can lead to inefficiencies & difficulties in data utilization.



SOIL MOISTURE MONITORING

Agencies use diverse technologies, suggesting collaboration could benefit multiple sectors.



LIMITED USE OF ARTIFICIAL INTELLIGENCE

Machine learning & AI are not yet widely adopted, though some agencies are exploring their potential.

RECOMMENDATIONS



Explore Telemetry Technologies

North Dakota should meet with other states to enhance its meter & telemetry systems.



Advance Data Centralization

Creating a “network of networks” would allow for better data sharing & decision-making.



Adopt AI and Machine Learning

Predictive analytics can improve data quality control.



Review Resources

Regularly assess resource needs to ensure sustainable data collection expansion.



Enhance Multi-Agency Collaboration

Create a group with agencies & universities to coordinate data-sharing & improve water data collection.



Confirm Soil Moisture Data Integration

Work with the National Soil Moisture Network to ensure North Dakota’s data are included in their network.



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Water Resources

1200 Memorial Highway
Bismarck ND 58504