

## Framework for Enhancing Water Literacy and Sustainable Management in Southwest Nova Scotia

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**Abstract :** Water literacy is essential for addressing emerging water management challenges in southwest Nova Scotia (SWNS), where growing concerns over water scarcity and sustainability have highlighted the need for improved educational frameworks. Current approaches often fail to fully represent the complexity of water systems, focusing narrowly on the water cycle while neglecting critical aspects such as groundwater infiltration and the interconnectedness of surface and subsurface water systems. To address these gaps, this paper proposes a comprehensive framework for water literacy that integrates the physical dimensions of water systems with key aspects of understanding, including processes, energy, scale, and human dependency. Moreover, a suggested tool to enhance this framework is a real-time hydrometric data map supported by a network of water level monitoring devices deployed across the province. These devices, particularly for monitoring dug wells, would provide critical data on groundwater levels and trends, offering stakeholders actionable insights into water availability and sustainability. This real-time data would facilitate deeper understanding and engagement with local water issues, complementing the educational framework and empowering stakeholders to make informed decisions. By integrating this tool, the proposed framework offers a practical, interdisciplinary approach to improving water literacy and promoting sustainable water management in SWNS.

**Keywords :** water education, water literacy, water management, water systems, Southwest Nova Scotia

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