

## Cover Story

Trade association WaterPower Canada is advocating for hydropower to sustainably meet electricity needs in the country

## 5 World News

Millions in funding awarded for dam safety and repair works; Final forensic report released on Michigan dam failures

## 8 Spotlight

When it comes to streamflow forecasting, can AI models beat existing approaches asks Marshall Moutenot of Upstream Tech

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## features

### North America

#### 14 Managing dam hazard in changing urban spaces

Dam owners and regulators must be constantly vigilant for the creeping hazard of a changing urban landscape. With downstream housing and commercial development increasing the demands on inspections and resources constrained, regulators are turning to new digital tools to help them reduce risks and keep people safe

#### 14 Modernizing hydropower on the Snake River

New turbines have been installed that improve fish passage at the Ice Harbor Lock and Dam in the US

#### 18 New builds and upgrades

IWP&DC provides details on hydropower projects currently underway in the US

#### 20 More than a mark of assurance

For more than 20 years the Low Impact Hydropower Institute in the US has provided an independent, science-based analysis of a hydropower project's impacts on its ecosystem



#### 22 Flood protection project

A landmark climate change mitigation project that intends to address major flooding across the US states of North Dakota and Minnesota, should be completed by 2027. Development of the Fargo-Moorhead Area Diversion was prompted by historic flooding of the Red River in 1997, which caused an estimated US\$3.5 billion in damages. Once completed, the scheme will protect more than 235,000 people from flooding

#### 24 Canada's energy future is powered by water

Canada has a wealth of untapped hydropower potential. Meeting the country's ambitious climate goals will require collaboration from multiple industries, careful planning, and the gumption and tenacity to get started right away. WaterPower Canada explains



how it is helping to lead the way towards a low carbon future

### Operations & management

#### 26 Managing lakes for multiple uses

Hydro Tasmania was proud to recently support the 2022 National Canoe Slalom Championships at Bradys Lake in Australia. The country's largest water manager says that balancing energy generation requirements with providing water releases to help the local community is all in a day's work

### New developments

#### 27 Electrifying fish protection

Research by the University of Innsbruck has shown that

the use of a hybrid fish barrier paired with a pulsed electric field can distinctly increase fish protection rates at hydropower plants

#### 28 First of a kind

Turlock Irrigation District is set to pilot the US' first water-energy nexus project involving the innovative installation of solar panel canopies over some of its existing canal network

### Young professionals

#### 30 Meeting the Challenge of the Grey Tsunami

The Hydropower Foundation is offering new hope in the challenge of attracting younger professionals into the US industry. Linda Church Ciocci, the foundation's Executive Director, explains how