



# HydroForecast Short-term

*Industry-leading  
streamflow forecasts for  
the coming hours and  
days*

Trusted by organizations across  
**six continents**, including:

**Brookfield**  
Renewable

  
**US Army Corps  
of Engineers.**





The Nature  
Conservancy 















 **Seattle City Light**

**TACOMA POWER**  
TACOMA PUBLIC UTILITIES



# Benefits

Accurate forecasts can mean the difference between safely drawing down water levels ahead of a storm and flooding, holding valuable water or spilling, and complying with regulations or risking legal exposure.

- Optimize reservoir operations and minimize spilled water

- Earn 3 - 6.4% more each year from energy marketing\*

\*Idaho National Laboratory, 2022

- Reduce flood risk to people, facilities, and downstream communities

- Maintain regulatory compliance & improve stakeholder relationships

- Quantify future earnings more confidently

- Conduct maintenance safely and with minimal disruption

- Redirect time from wrangling data to making data-informed decisions

**Link:**

[How organizations use HydroForecast](#)

# Best in class

HydroForecast Short-term provides the best available information about water flows into your dams, reservoirs, and water infrastructure for the coming days.

*This includes:*

## Industry-leading insights

- Hourly inflow rate and volume forecasts out to 10 days
- Updates throughout day, assimilating observed flows
- Fully probabilistic predictions showing the range of possible outcomes
- Access to underlying inputs for context, including weather forecasts and satellite imagery
- User notifications ahead of large, potential events

## Scalable delivery

- Easy-to-use web dashboard to inspect forecasts
- Secure API to connect directly to systems like RiverWare, FEWS, and PLEXOS
- Over 99% uptime, resilience to data outages for reliable delivery
- Operational forecasts anywhere on Earth in <90 days

## Built for a changing climate

- Methods based on peer-reviewed research
- Ongoing improvements delivered regularly
- Validated performance during extreme weather, including floods of record and droughts
- Automatic adaptation to changing basin conditions (e.g., forest fires or development)

**Link:**

[Read about HydroForecast's features](#)



# Proven, unique and science-led



## From R&D to operations...

In a 1-year evaluation, HydroForecast swept the competition, **proving most accurate across 5 diverse regions.**

See [Fig B] in Reference.

**Link:**

Also, [read more here.](#)



## Trained on 500+ hydrologically diverse basins...

Improving accuracy during extreme events that occur outside of a single basin's historical record and in **ungauged** basins. In new basins, the core model is further tuned using local data.

**Link:**

[Read more about it.](#)



## HF is *the only* operational deep learning distributed model...

Enabling it to split large and heterogeneous basins into smaller units to route peak flows more accurately. This improves hourly flow predictions and allows the model to take advantage of upstream gauges

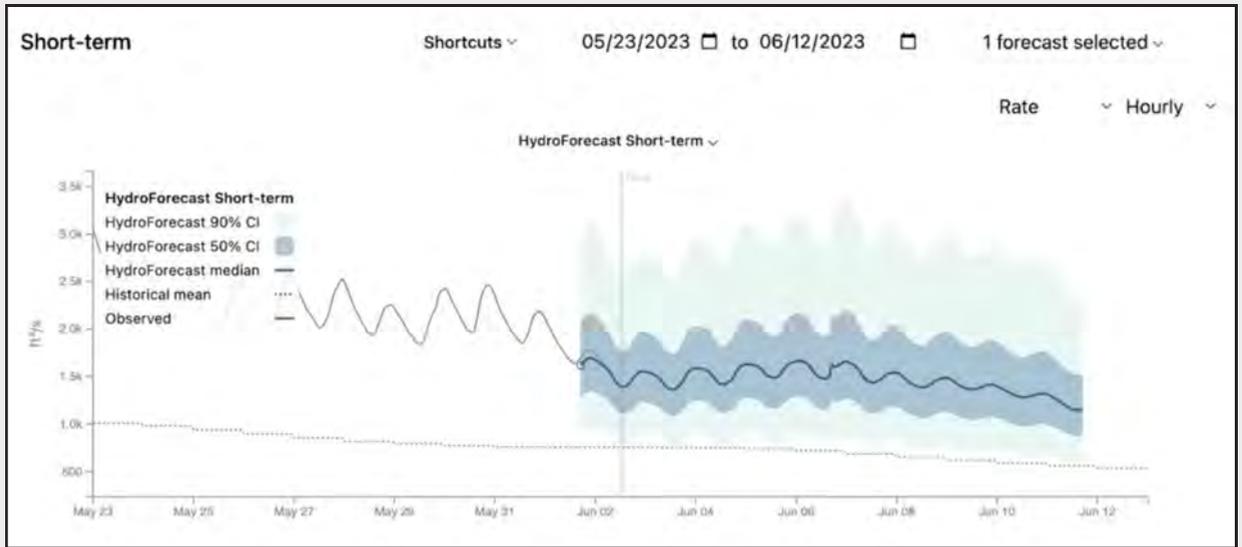
**Link:**

[Learn about the unique technology.](#)

**Link**

Read the research behind HydroForecast [here.](#)

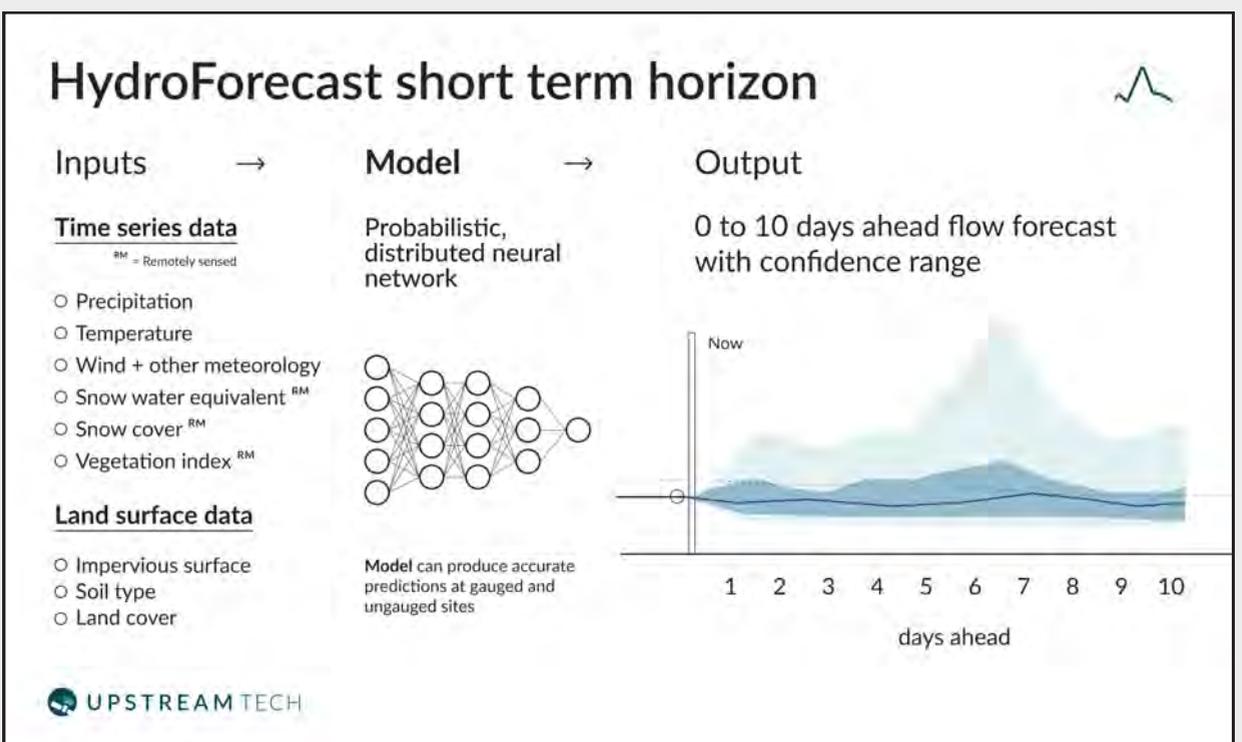
# In action



[Fig A] Easy to use dashboard to inspect forecasts and communicate with partners

Category	Region				
	US West	US Southeast	Alabama	Québec	US mtn west
<b>All arounders</b> All metrics					
<b>Flood forecaster</b> Highest flow range					
<b>Quick draw</b> Shortest forecast					
<b>Eagle eye</b> Longest forecast horizon					
<b>Straight shooter</b> Lowest bias					

[Fig B] In a yearlong forecast competition, HydroForecast Short-term took 1st in 23 out of 25 categories



[Fig C] See the inputs that go into our probabilistic, distributed neural network model

# Need a different time scale?

HydroForecast provides information across vastly different timescales, from the past to the far future. Many of our customers who use our Short-term forecast also use our seasonal.

[Learn more here](#) or browse our other offerings, below.

PAST



## Historical

Create records for data-poor places

PRESENT



## Virtual gauge

Near real-time now-casts

## Short term

0 to 10 days ahead

## Seasonal

90 days to 1 year ahead

FUTURE



## Long term

Climate-informed, multi-decadal analyses

Upstream Tech is trusted by dozens of leading hydropower producers, water utilities, government agencies, and conservation organizations on six continents and is backed by leading investors, including the Bill Gates-led Breakthrough Energy Ventures.