



WATER AND AGRICULTURE INFRASTRUCTURE



CONNECTING THE ACRE, SECURING WATER'S FUTURE

LoRaWAN Network

LoRaWAN network supports battery-powered low-cost device deployment across rural communities, farms and ranches.

The IoT allows for connections that were once deemed impossible such as groundwater well monitors, surface water sensors, soil moisture probes, temperature and humidity sensors in produce and more.

Real-Time Management

You can't manage what you don't measure. Real-time measurement allows for immediate and informed decision making.

Operational loss is significantly reduced, water accounting is more precise and years of water managers intuition and expertise is captured to ensure continuity for the next generation.

Democratizing Access

Democratizing access to technology allows for increases collaboration and informed management and policy creation.

Aside from conservation and efficiency gains, democratization of data increases public awareness, community engagement and drives research and innovation.



The Connected Acre, Securing Water's Future

RAIN GAUGE

Tracking real-time rainfall enables smart irrigation management and reduced water usage.



GROUNDWATER LEVEL MONITOR

Consistent, real-time groundwater level monitoring delivers an insight into groundwater behaviors once deemed impossible.



SOIL MOISTURE PROBE

Real-time soil moisture levels and root zone needs allow for exact water requirements to be applied, reducing overwatering and run off.



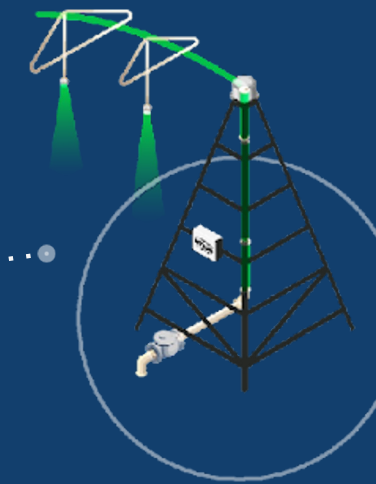
SURFACE WATER LEVEL MONITOR

Consistent, real-time surface water monitoring provides unmatched insight on water patterns and interactions with groundwater.



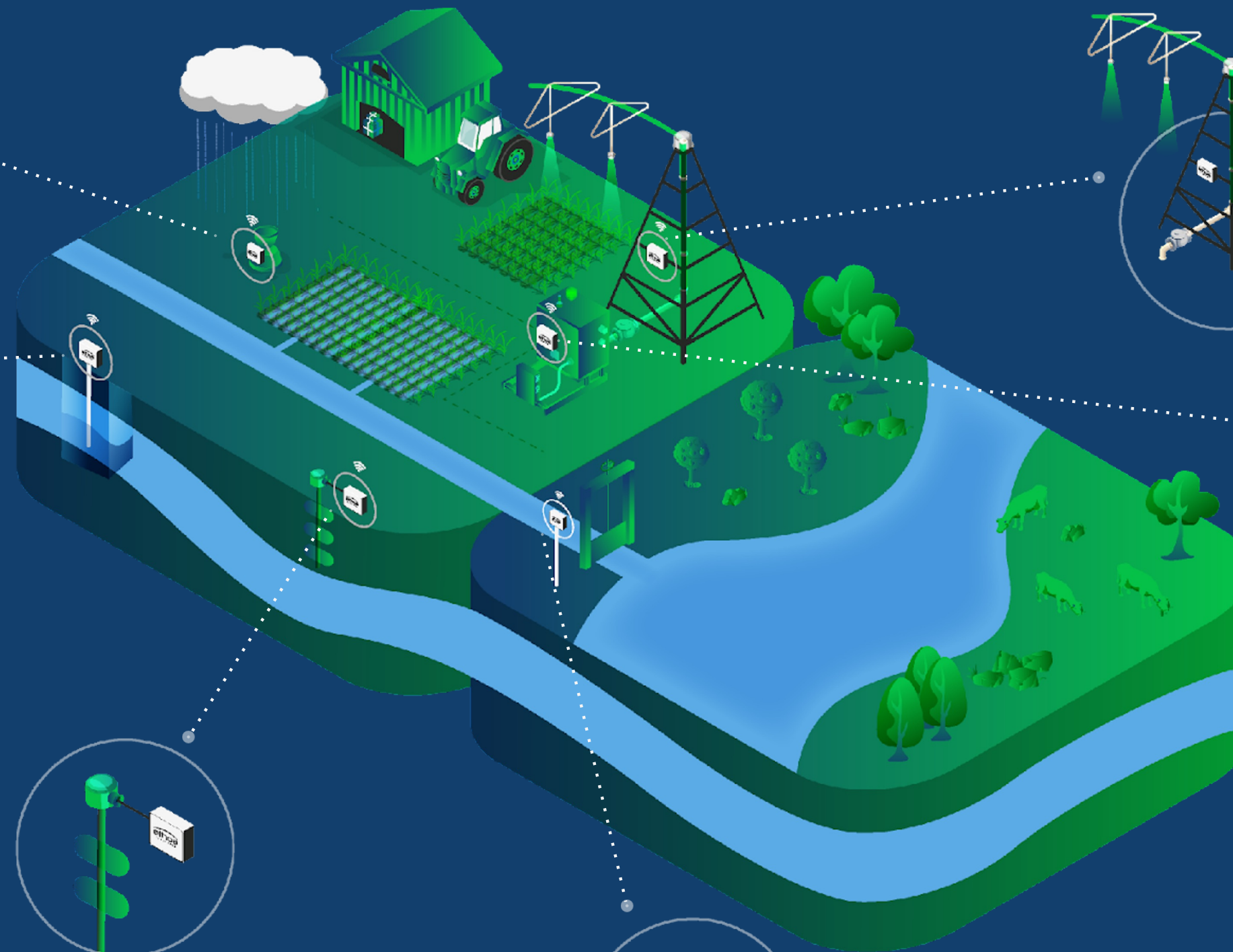
FLOW METER

Real-time data allows for a correlation to be built between irrigation water applied and effects on groundwater levels.



PUMP MONITOR

Remotely monitor the real-time condition of pumps while identifying costly issues before they happen and continuously improving efficiency.



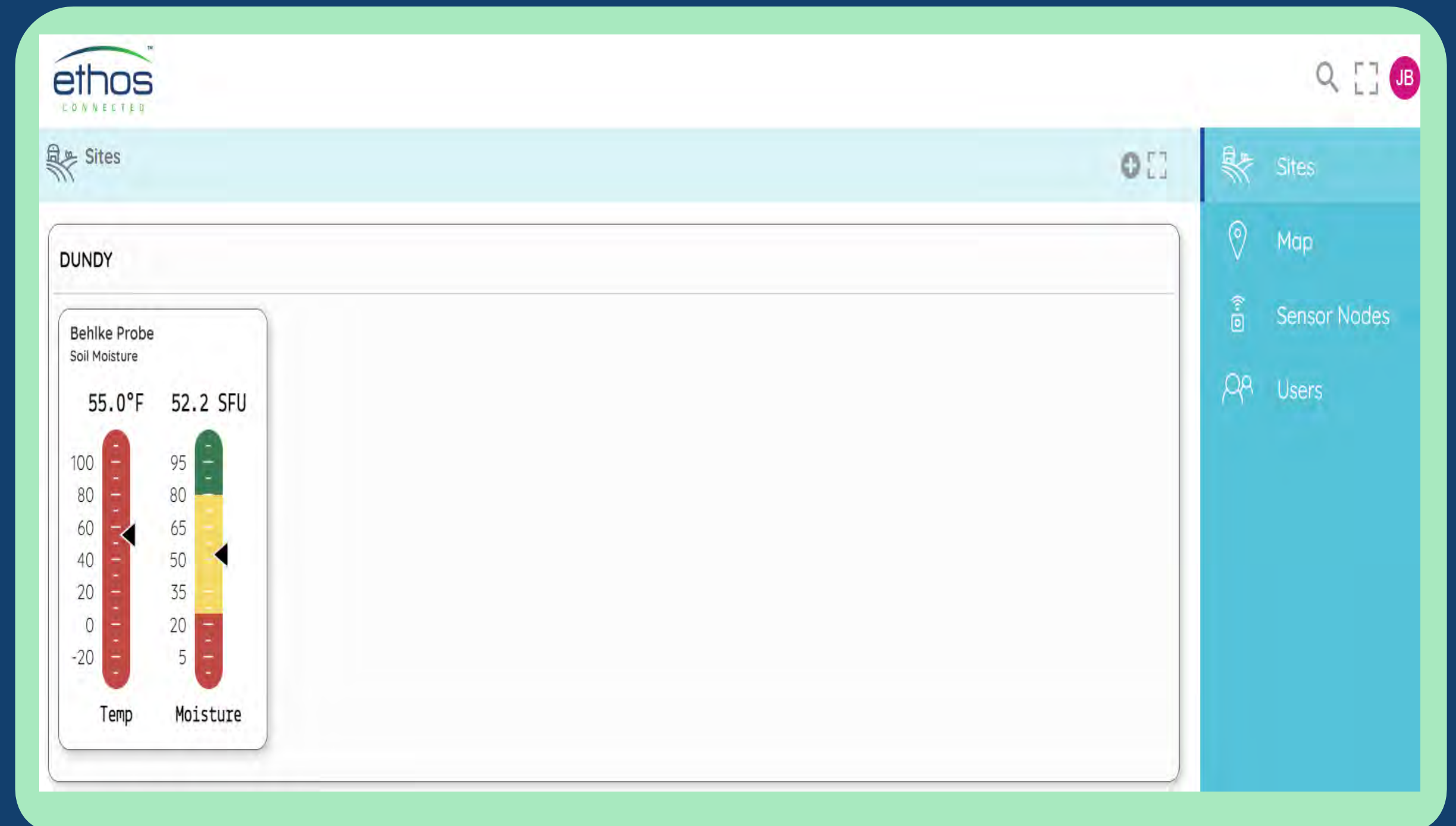


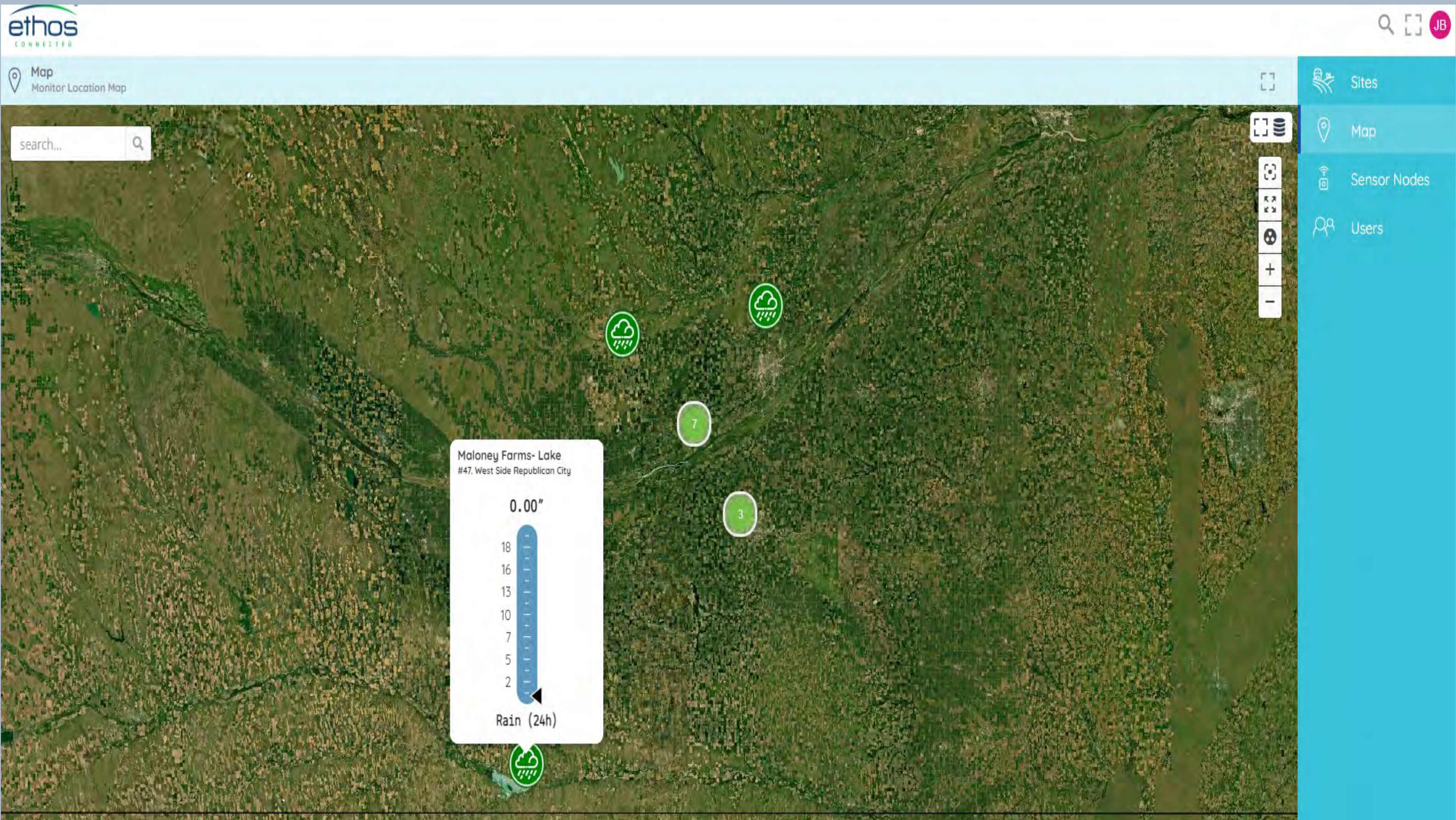


SOIL MOISTURE MONITORING

Real-time soil moisture levels enable accurate water accounting, improved irrigation management and reduced water consumption.

Easy- to- deploy sensors and easy- to- read data create daily efficiencies that result in huge cost savings and additional stored water.



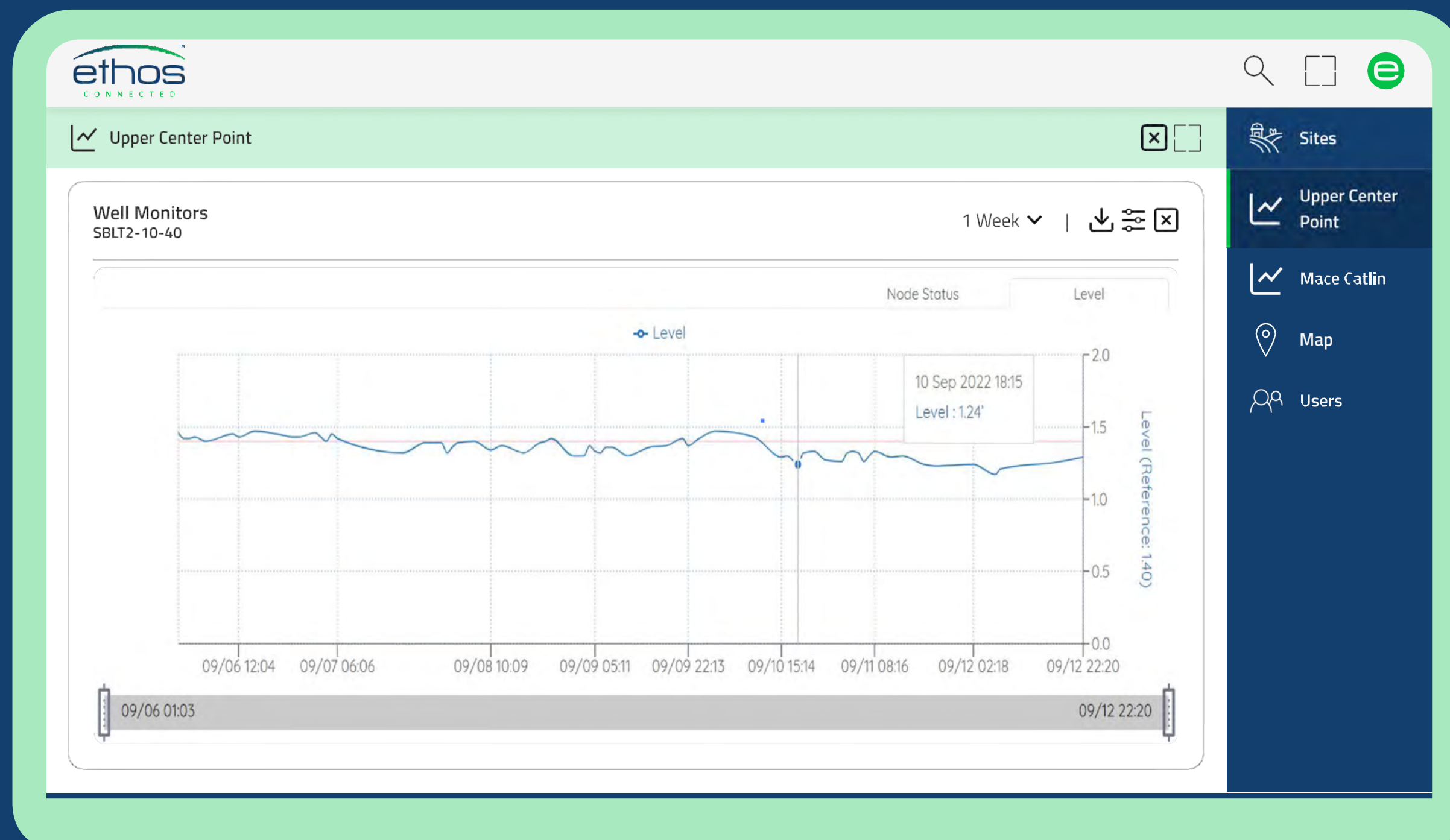




SURFACE WATER MONITORING

Real-time surface water levels enable accurate water accounting, management and response.

Easy- to- deploy sensors and easy- to- read data create daily efficiencies that result in huge cost savings and additional stored water.



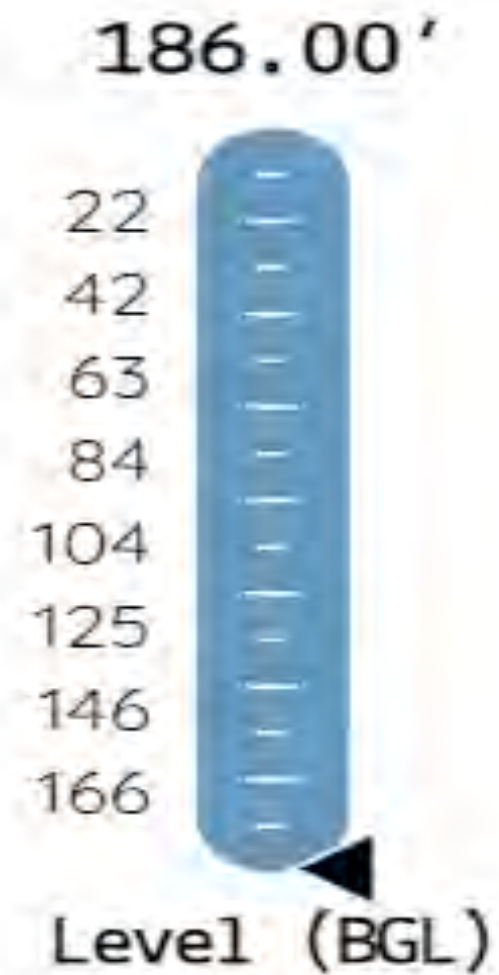


GROUNDWATER MONITORING

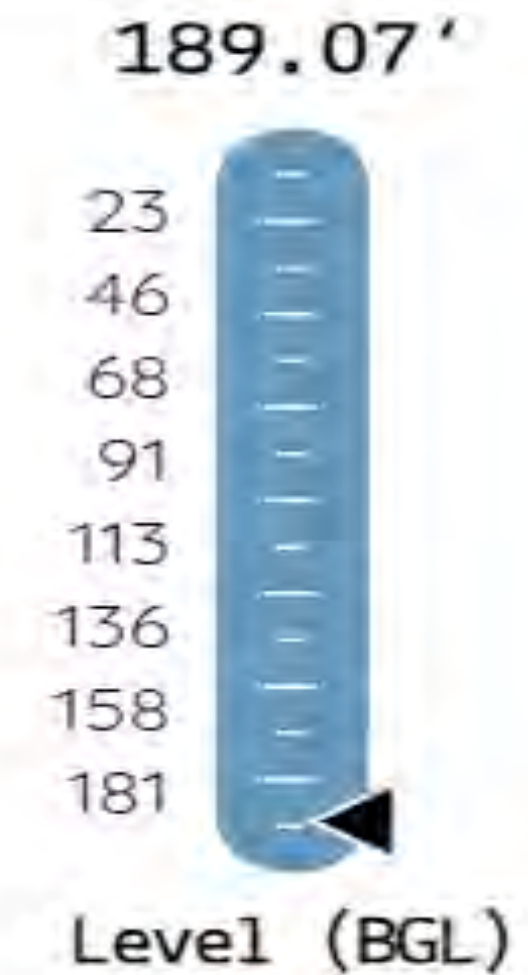
Groundwater levels reported every hour give insight into aquifer behaviors never seen before.

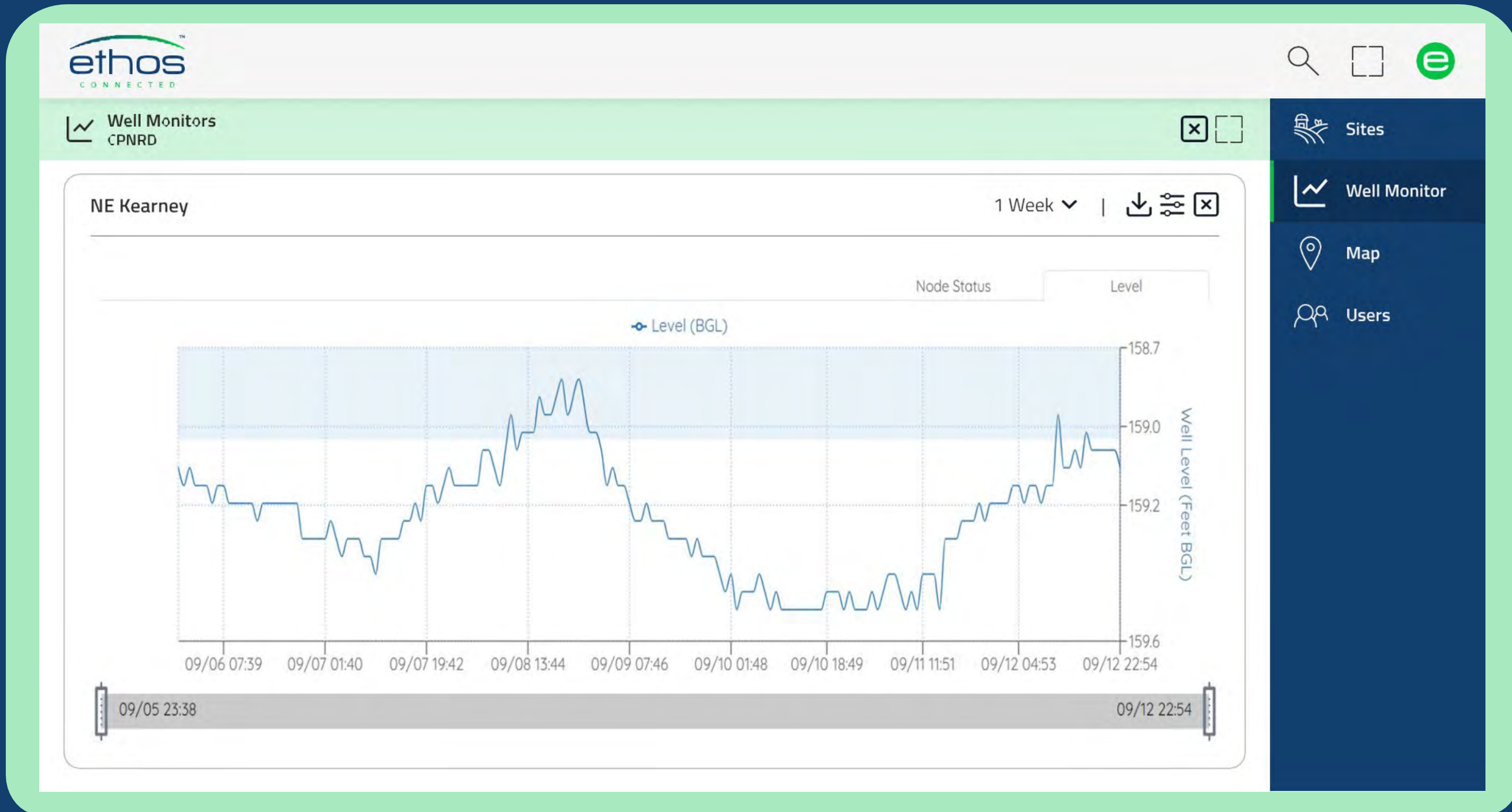
The impacts of groundwater pumping and climatic occurrences are seen real-time, providing the opportunity for immediate reaction.

Well 10
MBLT2-2SC-IVPF-181-196



Well 11
MBLT2-2SC-IVPF-197-212







The Connected Acre: Securing Agriculture's Future

- Decreases impact on natural resources
- Improves producer's quality of life
- Allows for immediate action and informed insights
- Data needed for value-added agriculture
- Control the data, control the story





The Source

A recent report¹ found that 63% of consumers want to know where their food comes from, as they are actively seeking more informed choices and want data to reinforce their decisions.

The Desire for Transparency



Sustainable Choices


Over half of consumers (52%) want to make sustainable food choices in 2023. They want to build relationships with brands that value transparency and can back up all sustainability and ESG claims.

Consumers who tend to emphasize transparency and sustainability:


- Flexitarians
- Millennials
- People living in the West and Northeast
- Urban dwellers
- Households with kids living at home
- High-income households
- Scratch cooks

¹The Power of Meat 2023 report was conducted by the Food Industry Association, the North American Meat Institute, and 210 Analytics. [Learn more here.](#)


Leveraging Transparency for Agriculture's Future

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Date	Location	Char	Description	Completed
10/02 02:59	- - -	Check_ZZ maintenance	ensure that the euthanasia tool is properly maintained to manufacturers specifications.	No



Date	Location	Char	Description	Completed	By
09/30 15:48	- - -	Check Water	Check water to insure that pump has not timed out due to unforeseen circumstances.	Yes	Lukas Fricke (UF)



Union Farms, Inc. | Chor Completion Log

Group: 54
Date Arrived: 09/27/2021

Total Count: 1,173

51/94

Daily Visit Ratio

54%

Daily Visit %

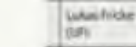
229/509

Char Completion Ratio

45%

Char Completion %

Date	Location	Char	Description	Completed
09/30 13:44	- - -	Check Brooder Heaters	Check to make sure brooder heaters are all working properly.	Yes
09/30 13:44	- - -	Check Water	Check water to insure that pump has not timed out due to unforeseen circumstances.	Yes
09/30 13:44	- - -	Check Feeders	Check on feeder to insure that there are no blockages and other broken parts.	Yes
09/30 13:44	- - -	Check Brooder Heaters	Check to make sure brooder heaters are all working properly.	Yes
09/30 13:44	- - -	Check Feeders	Check on feeder to insure that there are no blockages and other broken parts.	Yes



Capturing Authenticity

Telling the Story



Authenticity



Trust



Value



Loyalty

"In the end we will conserve
only what we love;

we will love only what we
understand;

and we will understand only
what we are taught."

Baba Dioum, 1968.





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