



**4K** **THE GREAT LAKES**

3 x 50 min. Written by **Ted Oakes**

4K, 5.1 and Stereo Directed by **Jeff Morales, Andrew Manske and Ted Oakes**

Executive producers: **Susanne Lummer, Sabine Holzer**



**TERRA MATER**  
Factual Studios

## A spectacular visual exploration of the natural history of the largest freshwater ecosystem on Earth — North America's Great Lakes.

**N**early as wide as the Atlantic Ocean with three of Earth's five largest lakes, this spectacular watershed contains one quarter of our planet's available freshwater; and yet, we've rarely seen it before on the screen. But how were these lakes formed and how have its animals, plants and people been shaped by the extremes of this vast watershed? For the first time we reveal the natural history secrets of one of our planet's most important, beautiful and forgotten ecosystems: North America's Great Lakes.

This is the largest freshwater environment on Earth, containing 84 % of North America's freshwater. There are cities here, but also vast wildernesses.

Within each film we'll tell visually dramatic natural history stories delivered in a ratio of 60 % wildlife, 20 % incredible landscapes and phenomena, and 20 % visually-driven human/nature narratives. Each story will be surprising and told by an Emmy-award-winning team with a remarkable television pedigree. Our goal is to blow the audiences' minds, making them fall in love with Earth's most important watershed.

**Why now? In a changing planet with a looming shortage of freshwater it's time to look at the beautiful and fragile ecosystem that contains one quarter of Earth's available freshwater.**

### EPISODE 1: OCEANS OF ICE

This is the story of how extremes of cold created the largest and important freshwater environment on our planet and shaped the present-day behaviour of life here, and how it has adapted to this spectacular landscape. The annual great freeze and thaw mimics the glacial and biological history of these lakes. Winter shows us the physical forces that shape the incredible wildlife, landscapes and people who live here.

Sample stories:

- › New science around how wolves, eagles and ravens compete to scavenge 'winter kill' deer on vast frozen lakes.
- › New science reveals how flying squirrels communicate via incredible fluorescent displays that only squirrels and owls can see.
- › Hundreds of thousands of waterfowl are forced together by the ice at Earth's longest freshwater sandpit and attacked by eagles.
- › As Black bear cubs emerge from winter dens just as the snow falls, we meet Dr Lynn Rogers who has devoted 50 years to creating a spectacular relationship with these feared bears.
- › Just one of the five Great Lakes has 30,000 islands. On these islands, voles undergo population explosions creating the largest gathering of owls on Earth, nine species in a single patch of forest including the spectacular Snowy owl.
- › We reveal weird ice phenomena such as 'ice tsunamis' and 'ice volcanoes'.

### EPISODE 2: EXPLOSION OF LIFE

Spring is when the Great Lakes' bizarre wildlife has a short season to reproduce. A time when animals reveal their extreme nature. We'll see new behaviour and new science of how life rushes to reproduce in brief transition from brutal cold to blazing heat.

Sample stories:

- › Canada Dogwood, the world's fastest flower explodes releasing pollen in less than a millisecond, a relic of a glacial past when there were no insects to pollenate.
- › Spectacular 'flying fish'; the redbreasted dace is the only fish on Earth that has specialised in jumping out of the water to catch insects on the wing.

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in association with TVO, Smithsonian Channel, Doclights/NDR Naturfilm, ARTE France  
and Two Wise Monkeys Entertainment

- › Wolf pups at the den. But are there two species here?
- › We see the Pixar-inspired piping plover with its bizarre mating dance and cute precocial young that hatch and start running in Earth's largest freshwater sand dunes, dunes which can swallow whole towns.
- › See some of the 8,000 shipwrecks creating some of the best and spookiest diving on Earth.
- › Monstrous invaders: A weird and terrifying influx of species from other parts of the world have taken hold. We meet 'Dr Lamprey' Chris Holdbrook at this monster's spawning grounds as he shows us how 'mass alarm fear pheromone' response might stop them in their tracks.

### **EPISODE 3: WORLD'S MIGHTIEST RIVER**

This film follows the flow of the water from 'source to sea'. We see how the five Great Lakes and the watershed are really Earth's largest river system and how the flow of water here determines all life. But what does the future hold?

Sample stories:

- › A beaver family, 'The Hoover's, have created the world's largest beaver dam. But does this rodent control much of the watershed?
- › Water creates a deadly obstacle for spectacular Monarch butterfly on their mass migration south.
- › The Great Lakes have the most spectacular fall colours on Earth. But is this spectacle 'human-made' and a result a water flow within trees, and plants talking with insects?
- › Great migrations as 20,000 sandhill cranes migrate down Lake Michigan dodging eagles and coyotes.
- › These lakes experience massive storms creating weird phenomena like 'seiche tides' and 'meteo-tsumanis'.
- › The water going over Niagara Falls eventually arrives in the Atlantic where the largest and rarest whales on Earth depend upon its purity. What is the future of Earth's most spectacular watershed?



**NATURE**

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