

The Fishery Is the Asset

How WaterWatcher turns angler field observations into durable, structured fisheries science data.

WaterWatcher is a voice-driven trip log for freshwater and saltwater fishers, live now across the United States, with Australia and New Zealand launching Q4 2026. Every trip logged contributes catches, sightings, and structured environmental observations — each timestamped and georeferenced, and recorded with a full conditions envelope — to the WaterWatcher | LEDGER: a georeferenced conservation data layer where a zero-catch trip counts as fully as a banner day. Trips are contributed by default; anglers may opt out at any time. Live now on iOS and Android.

This document is written for conservation scientists, fisheries managers, and partner organizations. It describes what the data looks like, how it is collected, why it is durable, and what a partnership looks like.

THE GAP

Everywhere on the Water. Nowhere in the Data.

Recreational anglers are on the water with a frequency and geographic reach that structured survey programs don't have the resources to replicate on their own. They observe water conditions, bait presence, species behavior, habitat change, and catch outcomes across seasons, years, and micro-geographies. They notice when the bait shows up two weeks early. They see water clarity shift before any sensor records it. They know which structures hold fish under which conditions, and they know which days the conditions were right but nothing came.

That knowledge exists. It has never had a place to go.

Existing mechanisms each have structural constraints that are well understood:

- **Survey programs** — such as NOAA's MRIP in the U.S. — produce trip-level catch and effort estimates, but without a conditions envelope — no water temperature, tide state, pressure trend, or chlorophyll context attached to the catch or the skunk.

- **Voluntary creel logs and paper reporting** produce sparse, inconsistent data that is difficult to aggregate at scale.
- **Existing fishing apps** are architecturally catch-centric: they record what the angler landed, not what the angler saw. Sightings, environmental observations, and zero-catch trips — the data most valuable to fisheries science — have no place in these systems. Participation also decays quickly when the fishing is slow, precisely when that absence-of-catch signal matters most.
- **Depredation** — a hooked fish lost to a shark or other predator before landing — is a growing fisheries management concern with no existing mechanism to capture it at scale. A depredated fish never reaches the dock, so it is invisible to landings data, dockside intercept surveys, and any system that only records what came home. The event is only observable if the angler reports it themselves, in the moment.

The result is a persistent gap: the largest distributed observation network on the water generates no structured, durable, science-usable signal. WaterWatcher is built to close it.

THE DATA

What the WaterWatcher | LEDGER Captures

Every trip logged on WaterWatcher produces three categories of structured data. All three are timestamped and georeferenced, and recorded with a full conditions envelope at the moment of logging. Critically, non-catch events — sightings and observations — are first-class records in the system, not afterthoughts. A trip with no catches is as complete a data contribution as a banner day.

Catch events	Species, count, size, weight, method, notes. Georeferenced to event-level coordinates. Timestamped at the moment of logging.
Sighting events	Species observed but not caught. Estimated count, behavioral context (feeding, schooling, transiting), notes. Presence data without harvest bias — a category most platforms cannot capture at all.
Observation events	Structured environmental observations: water clarity, bait presence, wildlife activity (marine mammals, birds), habitat condition. Categorized and tagged, not free-form.
Depredation outcomes	Recorded when a hooked fish is lost to a shark, dolphin, or other predator before landing — species (if known), predator type, and whether the event was witnessed. Logged as an outcome on the catch event, with the same conditions envelope attached.

Each event is recorded with the following conditions at the moment of logging. Sources and data age are logged alongside each value:

Water temperature	Nearest regional buoy or satellite SST (NOAA in the U.S.; MUR satellite SST in Australia/New Zealand). Source and age logged.
Tide state	Flood / ebb / slack, plus tidal range in feet and minutes from nearest slack.
Barometric pressure	Current mb, 6-hour trend, and hours since most recent pressure bottom.
Moon phase	Phase name and illumination percentage.
Wind	Speed and direction.
Wave height	Nearest regional buoy or model source (NOAA in the U.S.; Copernicus Marine Service in Australia/New Zealand). Source and age logged.
Chlorophyll proximity	Distance in miles to nearest chlorophyll edge (satellite ocean-color data via NOAA VIIRS, global coverage).
Solunar period	Whether the event occurred within a major or minor solunar window.
Sky cover	Clear / partly cloudy / overcast / rain, and percentage.
Air temperature	Nearest weather station.
Sunrise offset	Minutes from sunrise or sunset at time of event.

WHY THE DATA IS DURABLE

The Flywheel: Why Anglers Keep Contributing

The central challenge in citizen science platforms is participation decay. Systems that rely on altruistic data contribution see engagement fall off sharply after initial adoption. When fishing is slow, people stop logging. When the experience creates friction, people stop logging. The data becomes sparse precisely when coverage matters most.

WaterWatcher is structurally different. The user has a personal incentive to document every trip — including zero-catch days — because the platform's core value depends on it. WaterWatcher's correlation engine — the pattern-matching technology behind this per-user model — is patent pending and sits at the core of that incentive.

The WaterWatcher Flywheel

1. Voice capture removes friction. Fishers speak naturally on the water — what they caught, what they saw, what the water looked like. The platform transcribes and structures the data automatically. No dropdowns. No number pads. No end-of-day memory dump. The cost of logging approaches zero.

2. Zero-catch days are rewarded, not ignored. WaterWatcher's per-user pattern model learns what conditions produce success at the user's spots — and it can only do that if it also knows which conditions did not. Fishers who understand this log more, not less, when the bite is slow. A skunk is a data point, not a failure.

3. Better data means a better brief. More consistent logging leads to a more accurate pattern model, which leads to more useful info back to the user, which leads to more fishing — and more logging.

The conservation implication: WaterWatcher is the first platform that structurally rewards zero-catch trips as first-class data. Effort data and negative space — conditions that did not produce fish, habitat present but unused, species expected but absent — are among the most scientifically valuable signals in fisheries research. They have historically been the hardest to collect at scale.

CONSENT & PRIVACY

Conservation Contribution: On by Default

All WaterWatcher trips contribute to the LEDGER by default. Users who prefer not to contribute may opt out at any time via the Settings menu. This design reflects the platform's conservation-first posture: contribution is the norm, and the data pool reflects genuine engagement from the user base, not a self-selected subset of conservation-motivated users.

- **Trip-level default:** all trips are contributed unless the user has opted out in Settings.
- **Observation-level override:** a user may toggle conservation contribution on or off at the individual observation level, independent of their trip-level default.
- **No personally identifiable information is shared with partner organizations by default.** Data is contributed as georeferenced, timestamped, structured observations — not linked to named individuals. The one exception is tag-recapture reporting: a fisher may separately opt in, event by event, to share their real location and contact details for a specific recaptured tag — under its own explicit, logged consent, distinct from general conservation contribution.

REGIONAL COVERAGE

Full Catch Logging at No Cost

WaterWatcher's Logbook tier — the free tier — is not a stripped-down trial. It is a fully featured catch log: unlimited voice-captured trips, all three event types (catches, sightings, observations), the complete conditions envelope recorded on every event, and full contribution to the WaterWatcher | LEDGER at no cost to contributors or partners.

This matters for the LEDGER data pool: the conservation dataset is not gated behind a paywall. Every user who downloads WaterWatcher — regardless of subscription status — contributes the same quality and depth of data. Coverage is not limited to a paying minority.

PARTNERSHIP

What a Partner Relationship Looks Like

The WaterWatcher | LEDGER is built to complement the research programs of partner organizations, not compete with them. We are at the beginning — which means founding partners have a genuine role in shaping what the LEDGER captures. Scientific questions from the field can inform the data model before it scales.

Our Founding Conservation Partnership with Bonefish & Tarpon Trust (BTT) is the first example of this in practice: a formal data-sharing agreement that routes georeferenced, condition-recorded observations by species, region, and season to BTT's research programs at no cost.

WaterWatcher is also supporting the academic side of restoration science: angler-logged data from the LEDGER is feeding a living shoreline restoration research program, informing pre- and post-restoration fish population monitoring at a partner research site.

"Every angler has those days they remember. The morning at the canal when the stripers wouldn't stop. The April west coast bluefin that showed up a month early because the water was warm. The largemouth that fed for twenty minutes right as the front rolled through, and never again all week. Those days have patterns — the tide, the bait, the pressure, what the water looked like. WaterWatcher captures those details when they happen and tells you when today matches. But the slow days matter too. The morning nothing

ate, the observations, the habitat conditions — that's the data that tells the real story of the fishery. The angling community is the best field observation network on the planet. For the first time, we have a way to use it."

— Mike Lee, Founder, WaterWatcher

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