

# SkyWind Solutions

## Actionable Water Level Intelligence

# The Data Gap Undermining Coastal Decision-Making

**America's $8.3 trillion coastal economy** operates with insufficient data.

- Only 207 tide stations cover the entire U.S. coast, with gaps often spanning 50 to 100+ miles between locations.
- Operators rely on the nearest gauge, even when conditions differ dramatically nearby
- Astronomical tide forecasts are based on sun–moon cycles, but don’t reflect wind, weather, or local geography
- Small changes in shoreline, seabed, or river flow can shift water height by feet — and timing by hours.

The result: critical blind spots in coastal operations, planning, and safety.

Source: NOAA Office for Coastal Management, 2022.



# Why It Matters Now

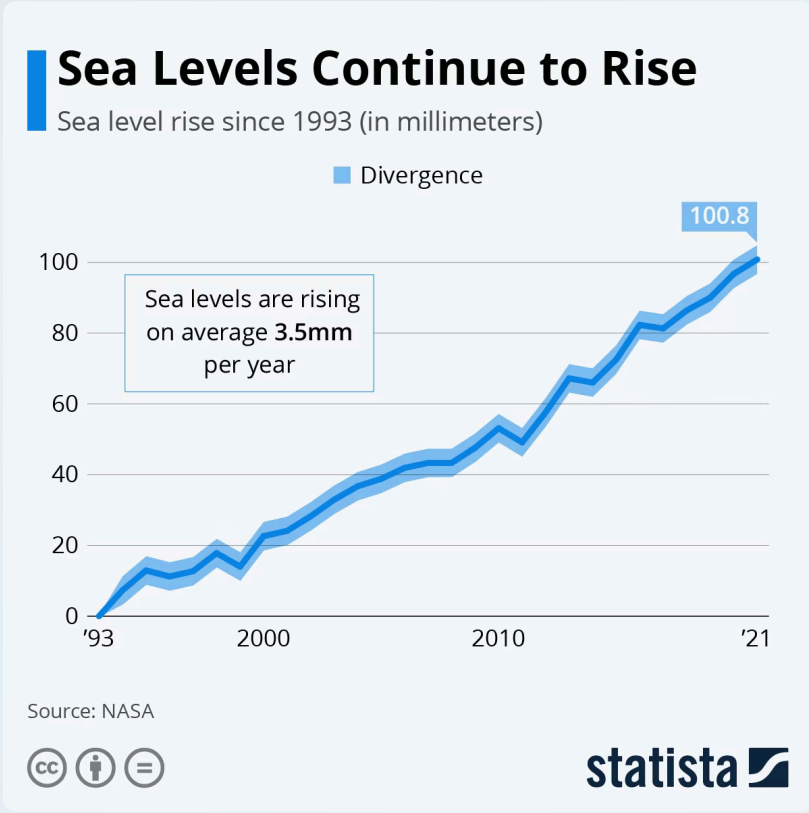
**Rising coastal risk calls for next-generation forecasting**

Sea level projected to rise **10–12 inches in 30 years**

"100-year floods" now occur every **30–50 years** in many U.S. cities

**85% of coastal areas underestimate surge probability**

⏳ Legacy models ignore real-time climate volatility — and that's costly.



# Our Solution

**SkyWind Solutions delivers hyperlocal, AI-powered, total water level forecasts.**

## Hyperlocal, Site-Specific

Customized to your location, not just the nearest tidal gauge

## Proprietary ML Models

Custom-trained with site-specific bias correction, learning from historical forecast errors

## 90% Confidence Intervals

Expected levels *plus* projected range of likely outcomes for better decision making.

## API-First Architecture

Easy plug-in for enterprise users

- Designed to support critical ops and under-served coastal regions.
- Designed to ingest IoT sensor feeds where available.



# Scientific Firepower

**Built by experts in numerical modeling, weather science, and coastal risk.**



## Bonnie Schneider

Former national TV meteorologist (NBC News, CNN, Bloomberg, Weather Channel). Author: *Extreme Weather* (Macmillan) and *Taking the Heat* (Simon & Schuster) and the *EcoTech Report*, advancing sustainability in technology. Graduate of Boston University.



## Dr. Greg Rainwater

Applied mathematician and atmospheric scientist with a research focus on numerical methods and parallel computing for weather and climate models. A Native American researcher, Dr. Rainwater developed advanced time integration techniques during his Ph.D. at UC Merced and holds an M.S. in Mathematics from Portland State University.



## Dr. Kevin Viner

Meteorologist specializing in numerical methods and dynamical systems for global atmospheric prediction. Dr. Viner spent over a decade at the U.S. Naval Research Laboratory advancing large-scale forecasting systems. Ph.D. in Atmospheric Sciences from Texas A&M University and an M.S. from Purdue University.

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## Extended Team:

The extended executive team includes senior-level scientists with doctoral degrees in meteorology, mathematics, and engineering.

Collectively, they lead initiatives in numerical weather prediction, high-performance computing, and advanced software architecture — bringing decades of specialized experience at the forefront of their fields.



# Technical Advantage & Defensibility

**SkyWind's system is proprietary, flexible, and grounded in scientific expertise.**

- Custom-trained AI models, developed with deep meteorological and mathematical expertise
- Proprietary bias correction, dynamic model correction, not static assumptions
- Adaptive model feedback: forecasts improve with usage
- Modular API for seamless delivery and deployment

🚧 Our defensibility is layered: scientific credibility + model tuning + delivery infrastructure.




# Go-to-Market Strategy

**Start with mission-critical coastal operators. Expand from there.**

### 📍 Initial Targets:

- High-risk U.S. municipalities (e.g. FL, LA, Gulf Coast)
- Ports & marinas with active tidal operations
- State and regional climate resilience programs

### ➡️ Approach:

- 3-month no-cost pilot
- Validate accuracy and operational benefit
- Convert to paid annual subscription

📈High-value contracts ($20K–$100K/year) drive strong multi-year LTV. CAC estimated at $2K–$5K per site through direct outreach and partner referrals.

# Market Opportunity

**Coastal intelligence is a billion-dollar global opportunity.**

## $1B+

### TAM

- Global coastal forecasting + data services
- Accelerated by $50B+ in public and private investment in climate resilience and coastal infrastructure.

## $30-60M

### SAM

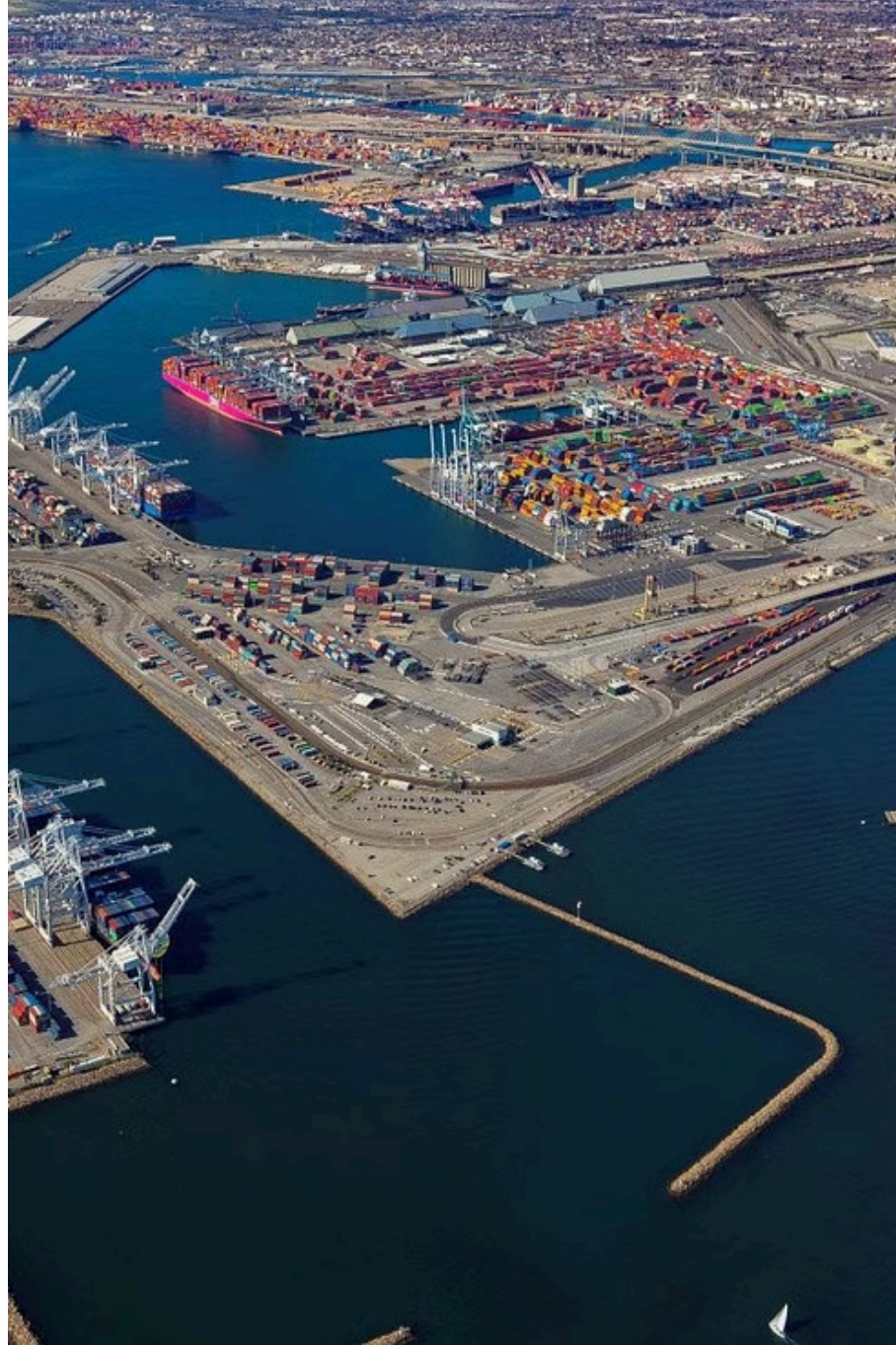
- $20K–$100K/site/year × 3,000 US coastal municipalities
- Plus: ports, marinas, insurers, engineering firms, and climate agencies

## $2-5M

### SOM

- Year one from pilot conversions
- (municipalities, ports, engineering firms, public sector)

🌍 Coastal zones represent 60% of global GDP.






# 3-Month Pilot Program

**Risk-free onboarding. Real-world validation.**

For qualified ports and municipalities, we offer:

✔️ Site-specific forecast delivery

✔️ Accuracy verification + comparison

✔️ Data feedback to refine model performance

🛠️ *Pilot Requirements:* Operational need + access to basic local conditions data

# Let's Talk

**Ready to replace guesswork with precision?**

Book a short call to discuss your port, municipality, or use case.



## Email

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## Phone

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## Website

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## Meet with Us

[Meeting Calendar Link]