



**NTSB** National Transportation Safety Board

*Office of Marine Safety*



Photo by Brian E. Stover

## **Collision of Caribbean Sea/The Resource with DUKW 34**

Thomas Roth-Roffy, P.E.  
Investigator-in-Charge

# The Accident

Date:	July 7, 2010
Location:	Philadelphia, PA
Vessels:	
– Barge	<i>The Resource</i>
– Tugboat	<i>Caribbean Sea</i>
– APV	<i>DUKW 34</i>
Injuries:	2 fatal, 27 minor

# Caribbean Sea



Type: Tug  
Length: 78.9 ft  
Breadth: 24 ft  
Draft: 8 ft  
Crew: 5

# The Resource



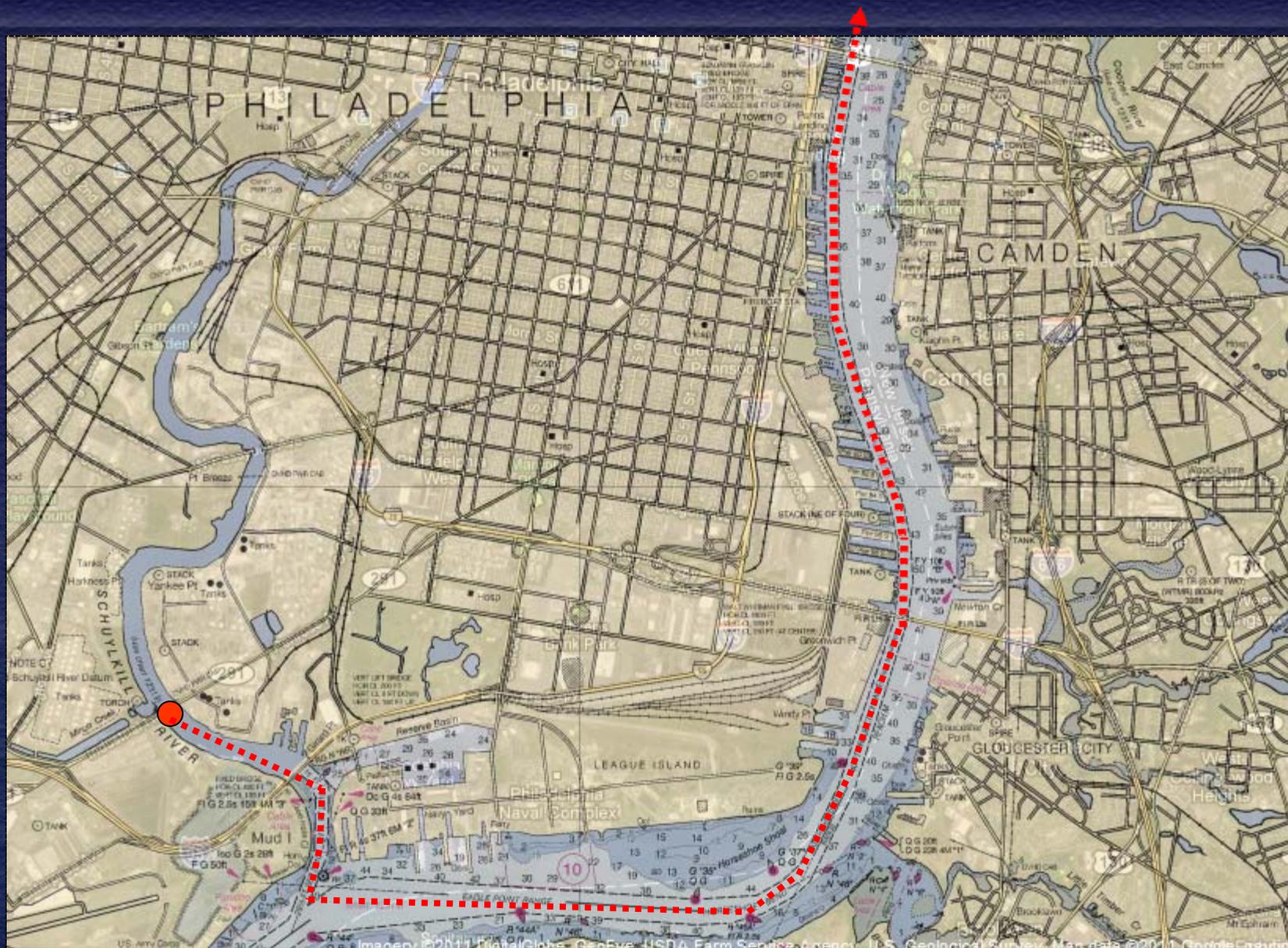
Type: Tank Barge  
Length: 250 ft  
Breadth: 50 ft  
Draft: 3 ft, 6 in  
Crew: Unmanned  
Capacity: 1 million gallons

# DUKW 34

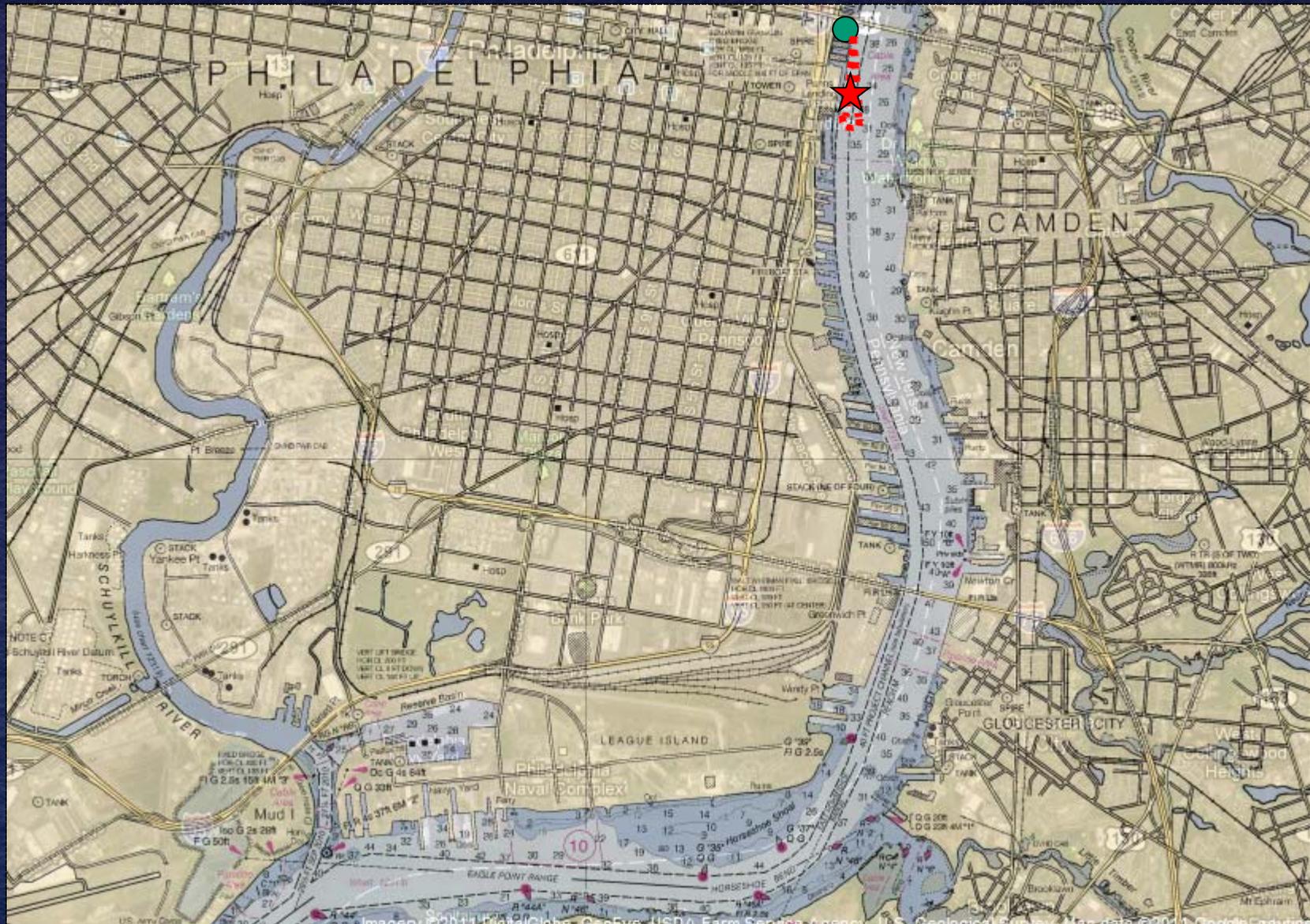


Type: APV  
Length: 33 ft  
Breadth: 8 ft  
Draft: 5 ft  
Crew: 2  
Pax: 35

# Accident Site



# Accident Site



# Accident Timeline

1315 – *Caribbean Sea* under way

1415 – *DUKW 34* enters river

1425 – *DUKW 34* mechanical problem

1429 – *DUKW 34* anchor deployed

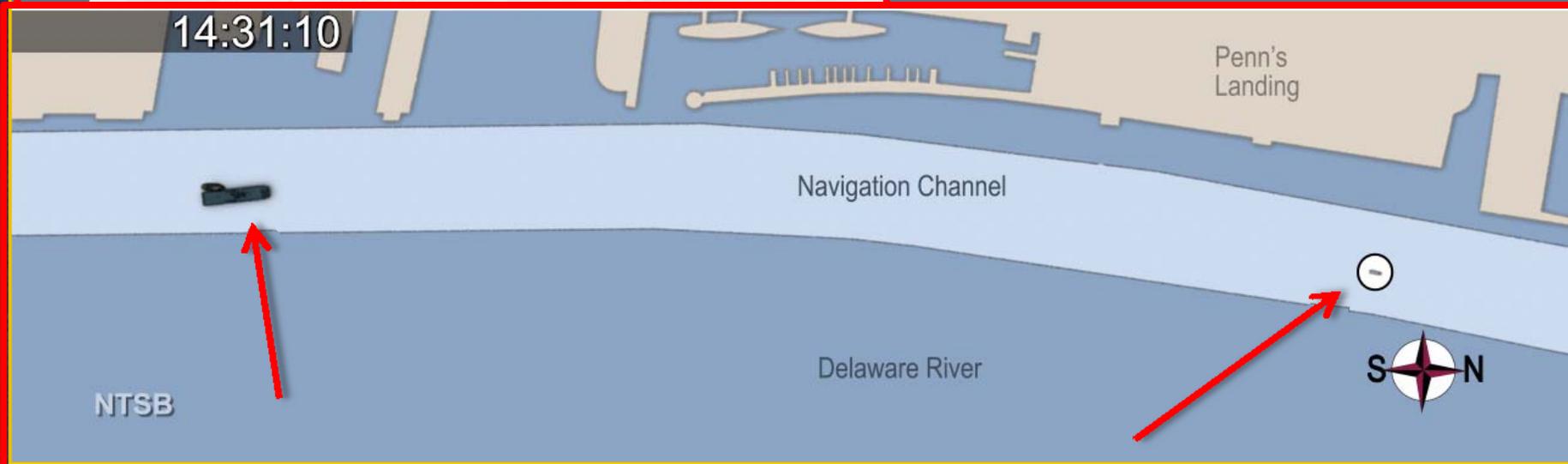
1436 – *DUKW 34* VHF callouts

1437 – Collision

# Animation - Description



Outbound personal text message from  
*DUKW 34* Deckhand



# Animation



# Damage to DUKW 34



# Emergency Response

## On Water Responders:

- Ferry *Freedom*
- Philadelphia Marine Police
- U. S. Coast Guard
- U. S. Navy

# Investigation

- Crew qualifications & certificates
- Crew medical and toxicological
- Waterway conditions
- Weather conditions

# Investigation (cont'd)

- *Caribbean Sea* propulsion, steering, communications, navigation equipment
- *DUKW 34* mechanical systems

# Safety Issues

- Vehicle maintenance
- Maintaining an effective lookout
- Use of cell phones by crewmembers on duty
- Response to the emergency by Ride The Ducks, International personnel

# Parties to the Investigation

- U.S. Coast Guard
- K-Sea Transportation Partners, LP
- Ride The Ducks International, LLC

# Staff

Rob Henry

Tom Roth-Roffy

Larry Bowling

Liam LaRue

Monica Mitchell

Keith Holloway

Max Green

Jim LeBerte

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Alice Park

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Steve Prouty

# Staff Presentations

- Tom Roth-Roffy – engineering factors
- Larry Bowling – operations
- Liam LaRue – survival factors



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