National Tsunami Warning Center

Dr. James Gridley,
Dr. Summer Ohlendorf,
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NTWC: Mission

Provide reliable tsunami detection, forecasts, and warnings.

Promote community resilience through collaboration, education, & research.

5 minute mandate for Bulletin #1

- 24 x 7 Operations, 2 Duty Scientists always on duty
- 10 total Duty Scientists (Physical Scientists)
- Management
- IT Support Staff
- IT Security
- Admin
- Electronics/Field

Palmer, Alaska

Remote Stations
Like a Weather Forecast Office, but **NOT**.
Learned 3 important things this year:

1. “Tsunami” is a verb.
2. If is says “Tsunami”, sooner or later it ends up at the Center.
3. The importance of Bulletin #1, and what it means to EM’s, WFO’s etc.
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Challenges

1. New Management/Leadership Team
   24x7 Rotating Staff
2. COVID Operations
3. Critically under resourced
4. Synchronization between the TWCs
5. Messaging
6. Barry Arm - Landslide
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What are we doing about these challenges and changes? NTWC Strategic Plan for FY21

**Theme:** Reducing mission risk by continuous improvement through employee involvement.
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What are we doing about these challenges and changes? NTWC Strategic Plan for FY21

**Theme:** Reducing mission risk by continuous improvement through employee involvement.

**Timely, Accurate, Actionable, and Predictable**
NTWC adds Science Officer & Warning Coordinator

Dr. Summer Ohlendorf, NTWC Science Officer
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Dave Snider, Tsunami Warning Coordinator
david.snider@noaa.gov

- Observations
- Data Analyses
- Forecast Modeling
- Hazard Procedures & Alerts

- Product Generation
- Dissemination
- Procedures
- Impact-based Decision Support

YOU
What does the Science Officer do?

Quality control:
timely and accurate alerts

Identify & implement improvements to procedures and analysis

Staff training

Increase the breadth and depth of our team members

Ensure readiness
Improve coordination & consistency with PTWC
*Staff collaboration, training, approach*

Science intra/interagency coordination
*Strengthen relationships with NTHMP partners, USGS, PMEL, NCEI, NOS, others*

Research to operations
*Stronger ties with academic community*
*Eye to the future*

YOU are on Team Tsunami
Barry Arm Landslide Tsunami Hazard

Want to know more?
AGU Poster: Dec. 9, NH014-0004
Decision and information timeline

Earthquake

Seismic event occurs
Earthquake

Seismic event occurs

5-min mandate:
- WARNING
- ADVISORY
- WATCH
- INFORMATION STATEMENT

THIS MAY BECOME MESSAGE #1 of MANY
Seismic event occurs

Earthquake

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- WARNING
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THIS MAY BECOME MESSAGE #1 of MANY

NTWC Procedural Decision Point

Observation & Detection

Monitor tide gauges & buoys for a tsunami.

Obs used to create initial forecast.

Forecast is added to next message.
Seismic event occurs

Earthquake

NTWC Procedural Decision Point

5 min mandate:
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Observation & Detection

Monitor tide gauges & buoys for a tsunami.
Obs used to create initial forecast.
Forecast is added to next message.

1st Conference Call

Decision-makers get first briefing from NTWC
Earthquake

Seismic event occurs

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5 min

NTWC Procedural Decision Point

5-min mandate:
- WARNING
- ADVISORY
- WATCH
- INFORMATION STATEMENT

THIS MAY BECOME MESSAGE #1 of MANY

30 to 60 min

Observation & Detection

Monitor tide gauges & buoys for a tsunami.

Obs used to create initial forecast.

Forecast is added to next message.

30 to 60 min

1st Conference Call

Decision-makers get first briefing from NTWC

COULD GO ON FOR HOURS OR DAYS

30 to 90 min

Observation & updates

Observations incorporated into event alert and forecast

Every 30 to 60 min

Next conference call

Repeat the cycle until threat ends
The tsunami warning coordinator will

Elevate & amplify the NTWC message

- Work to improve Tsunami Warning Center information for partners and publics

- Encourage the nation’s atmospheric science agency in supporting a surface hazard / young seismic science to warning process.

- Reduce confusion and improve action from any message sent across the Tsunami Warning system
Listen, Learn, & Understand
your group’s decision

- triggers,
- thoughts,
- actions,
- and consequences
to make the total
warning process better.
The same things that worry you worry us

- Will the system work?
- Do we have enough information to make the right decision?
- Are we alerting too many people- or not enough?
- Are we communicating effectively?
  - (NTWC = AK, BC, Lower 48)
  - (PTWC = HI and Pacific Islands, CNMI, Caribbean).
Be advised: Conditions are changing.

The National Tsunami Warning Center and Tsunami Warning systems of the past are in flux.

Be ready for change.