

Department of the Army New York District Corps of Engineers Jacob K. Javits Federal Building 26 Federal Plaza New York, NY 10278-0090

# Week of January 20 - January 26, 2014

The following pages display the results from the USACE-NYD real-time website for the week of Monday, January 20, through Sunday, January 26, 2014.

There were five blasts this week in the S-AK-3 project area.

We recorded vibrations in the S-AK-3 project area. The maximum vibration recorded was 0.0381 in/s recorded at Elizabeth Marina on December 20. Table 1 summarizes the blasts this week.

Page 2 summarizes dredge locations for this week. The map shows the week's last dredge locations by colored symbols, connected by colored lines to the week's previous locations marked by gray symbols. Dredge Apache operated in S-AK-3 all week.

The remaining odd pages display the home page showing the maximum vibration measured in all of the stations for most recent event for each day:

January 20

January 21

January 22

January 23

January 24

January 25

January 26

The even pages show the maximum vibration observed at each station along easting for each event.

The results for this week show the measurements at the two active stations: New York Container Terminal (NYCT), and Elizabeth Marina. Elizabethport is down for maintenance this week. The station locations are on each page.

Ambient ground vibrations at NYCT were all below 0.0219 in/s. Ambient vibrations at Elizabeth Marina were all below 0.0381 in/s. All blast vibration measurements are below the contract vibration limits for this site.

Table 1. S-AK-3 Blast Summary for this week

| Blast  | Date & Time      | Distance from blast    | e4s Max. vibration |
|--------|------------------|------------------------|--------------------|
|        | EST/EDT of blast | to e4s stations (feet) | (in/s)             |
| AK-184 | 2014-01-21 09:20 | 1,760 - 3,170          | 0.00687            |
| AK-185 | 2014-01-21 15:00 | 1,920 - 3,330          | 0.0187             |
| AK-186 | 2014-01-22 13:31 | 2,080 - 3,460          | 0.0206             |
| AK-187 | 2014-01-24 13:57 | 2,410 - 3,720          | 0.0306             |
| AK-188 | 2014-01-25 09:13 | 2,080 - 3,460          | 0.0381             |



**Event Summary** Dredges Links

# **Dredge Position Summary**

This page summarizes dredge positions for the week. The Arthur Kill contract area is mapped with a top-of-rock map. The navigation grid is superimposed. The map shows dredge locations by colored symbols, connected by colored lines to the week's past locations marked by gray symbols. The map resets beginning the Monday of each week.

Mousing over a dredge location produces a pop-up text box giving dredge name, date of location, and easting and northing coordinates of the location in the NAD83 New Jersey State Plane coordinate system.

Click on a station for station information.



**Todays Dredge Position** 

Latest Week's **Dredge Position Summary** 

**Project** History List

The table below lists the date, name, easting, northing, and notes for the week's dredge positions. The position is the last reported dredge position

#### Dredge Location Table

| Date   | Dredge Name   | Easting  | Northing Notes   |
|--|---|--|--|
| 2014-01-26 Sun<br>2014-01-25 Sat<br>2014-01-24 Fri<br>2014-01-23 Thu<br>2014-01-22 Wed<br>2014-01-21 Tue | Drillboat Apache Drillboat Apache Drillboat Apache Drillboat Apache Drillboat Apache Drillboat Apache | <ul> <li>► 577746</li> <li>► 577613</li> <li>► 577428</li> <li>► 577558</li> <li>► 577569</li> <li>► 577829</li> </ul> | 658967<br>658715<br>658452<br>658635<br>658584<br>658934 |
| 2014-01-20 Mon   | Drillboat Apache  | <b>■</b> 577640  | 658941   |





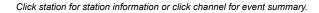
Dredges

#### **Arthur Kill Blast Vibration Summary**

This site summarizes the measured ground vibrations in northwest Staten Island, from rock blasting in the Arthur Kill and other possible sources. The site is updated daily. The data are intended for the sole use of the US Army Corps of Engineers - New York District, for managing and monitoring the performance of NYNJ Harbor Deepening Project Contract in Arthur Kill starting 25 July 2011.

This page represents the most recent observations.

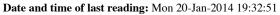
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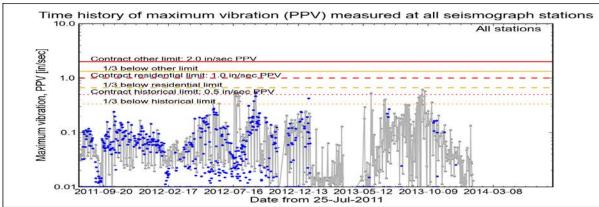




Latest Event Summary

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(Click on graph or here for larger view)

| Blast ID | Date  | Time     | Max PPV (in / second) | Max PPV<br>Station |
|----------|---|----------|-----------------------|--------------------|
| Ambient  | Mon 20-Jan-2014   | 19:32:51 | 0.0131                | Elizabeth Marina   |
| Ambient  | Sun 19-Jan-2014   | 20:17:37 | 0.0069                | Elizabeth Marina   |
| Ambient  | Sat 18-Jan-2014   | 17:37:45 | 0.0169                | NYCT               |
| Ambient  | Fri 17-Jan-2014   | 14:17:36 | 0.0269                | Elizabeth Marina   |
| Ambient  | Thu 16-Jan-2014   | 14:47:36 | 0.0294                | Elizabeth Marina   |
| Ambient  | Wed 15-Jan-2014   | 18:07:44 | 0.1340                | Elizabeth Marina   |
|          | 11 Section |          |                       |                    |



## **Arthur Kill Blasting Event Summary**

This page summarizes measurements of ground vibrations for the selected event. This page displays the maximum vibration recorded at each and every seismograph station during this event.

The Arthur Kill contract area is mapped below with a top-of-rock map. Today's dredge locations are marked by colored symbols, connected by colored lines to this week's past locations marked by gray symbols. The drilling and blasting barge location is marked in red. The easting and northing map coordinates in the New Jersey State Plane coordinate system are in yellow. The locations of active seismograph stations are marked by yellow station symbols. (e4sciences stations are circles. CDB stations are triangles.) Selecting a station activates its station page.

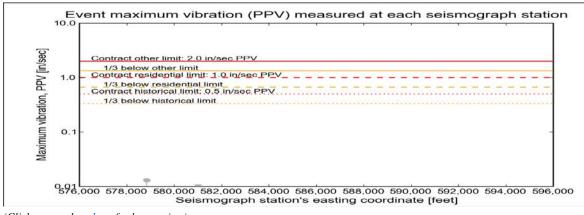
Click station for more information about the station.



Selected Event Summary

The graph below plots the maximum vibration during the selected event period (blast or ambient) recorded at each and every seismograph station along the easting positions. The vertical axis gives the maximum vibration in peak particle velocity (PPV) in units of inches per second (in/sec). If the maximum vibration level at a station is below 0.01 in/sec, the marker is a v-shaped triangle at 0.01 in/sec. (Light-gray stems indicate ambient-vibration level. Black stems indicate blast-vibration level. Dark-gray stems indicate predicted blast-vibration level.)

Date of reading: Mon 20-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV<br>(in / second) | Vibration Type |
|------------------------------|-----------------|----------|--------------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Mon 20-Jan-2014 | 19:32:51 | 0.0131                   | Ambient        |
| NYCT - e4s008                | Mon 20-Jan-2014 | 16:22:45 | 0.00875                  | Ambient        |

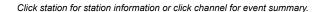


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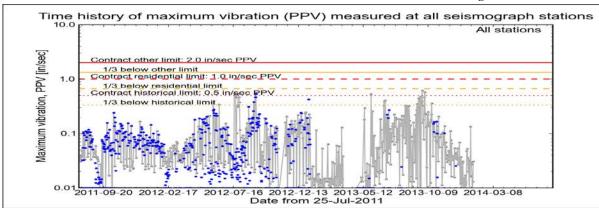




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Date and time of last reading: Tue 21-Jan-2014 14:17:36



(Click on graph or here for larger view)

| Blast ID | Date                    | Time     | Max PPV (in / second) | Max PPV<br>Station |
|----------|-------------------------|----------|-----------------------|--------------------|
| Ambient  | Tue 21-Jan-2014         | 14:17:36 | 0.0306                | Elizabeth Marina   |
| Ambient  | Mon 20-Jan-2014         | 19:32:51 | 0.0131                | Elizabeth Marina   |
| Ambient  | Sun 19-Jan-2014         | 20:17:37 | 0.0069                | Elizabeth Marina   |
| Ambient  | Sat 18-Jan-2014         | 17:37:45 | 0.0169                | NYCT               |
| Ambient  | Fri 17-Jan-2014         | 14:17:36 | 0.0269                | Elizabeth Marina   |
| Amhient  | Thu 16-Jan-2014         | 14:47:36 | 0.0294                | Elizabeth Marina   |
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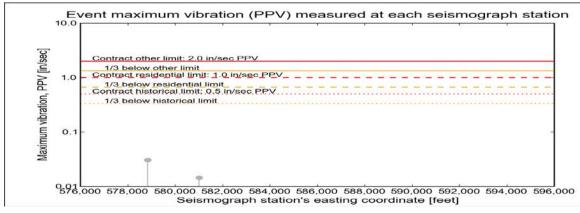
Click station for more information about the station.



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Date of reading: Tue 21-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV (in / second) | Vibration Type |
|------------------------------|-----------------|----------|-----------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Tue 21-Jan-2014 | 14:17:36 | 0.0306                | Ambient        |
| NYCT - e4s008                | Tue 21-Jan-2014 | 19:52:47 | 0.0144                | Ambient        |



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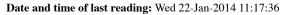
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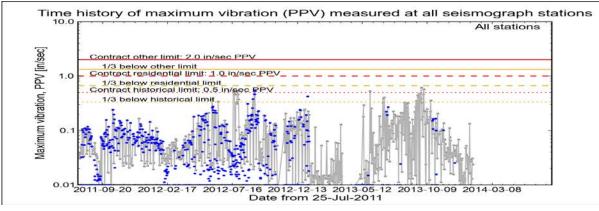
Click station for station information or click channel for event summary.



Latest Event Summary

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(Click on graph or here for larger view)

| Blast ID | Date                         | Time     | Max PPV (in / second) | Max PPV<br>Station |
|----------|------------------------------|----------|-----------------------|--------------------|
| Ambient  | Wed 22-Jan-2014              | 11:17:36 | 0.0237                | Elizabeth Marina   |
| Ambient  | Tue 21-Jan-2014              | 14:17:36 | 0.0306                | Elizabeth Marina   |
| Ambient  | Mon 20-Jan-2014              | 19:32:51 | 0.0131                | Elizabeth Marina   |
| Ambient  | Sun 19-Jan-2014              | 20:17:37 | 0.0069                | Elizabeth Marina   |
| Ambient  | Sat 18-Jan-2014              | 17:37:45 | 0.0169                | NYCT               |
| Ambient  | Fri 17-Jan-2014              | 14:17:36 | 0.0269                | Elizabeth Marina   |
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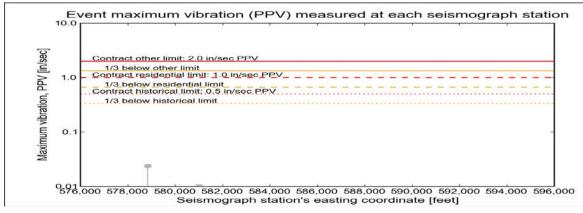
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Date of reading: Wed 22-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV<br>(in / second) | Vibration Type |
|------------------------------|-----------------|----------|--------------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Wed 22-Jan-2014 | 11:17:36 | 0.0237                   | Ambient        |
| NYCT - e4s008                | Wed 22-Jan-2014 | 18:22:46 | 0.00812                  | Ambient        |



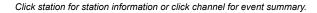
Dredges

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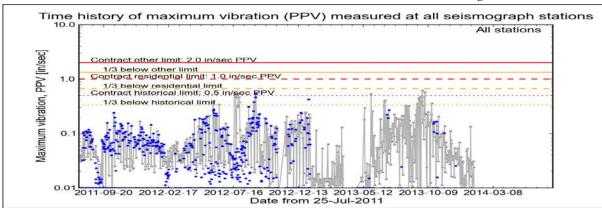




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Date and time of last reading: Thu 23-Jan-2014 14:52:44



(Click on graph or here for larger view)

| Blast ID | Date   | Time     | Max PPV (in / second) | Max PPV<br>Station |
|----------|--|----------|-----------------------|--------------------|
| Ambient  | Thu 23-Jan-2014  | 14:52:44 | 0.0094                | NYCT               |
| Ambient  | Wed 22-Jan-2014  | 11:17:36 | 0.0237                | Elizabeth Marina   |
| Ambient  | Tue 21-Jan-2014  | 14:17:36 | 0.0306                | Elizabeth Marina   |
| Ambient  | Mon 20-Jan-2014  | 19:32:51 | 0.0131                | Elizabeth Marina   |
| Ambient  | Sun 19-Jan-2014  | 20:17:37 | 0.0069                | Elizabeth Marina   |
| Ambient  | Sat 18-Jan-2014  | 17:37:45 | 0.0169                | NYCT               |
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## **Arthur Kill Blasting Event Summary**

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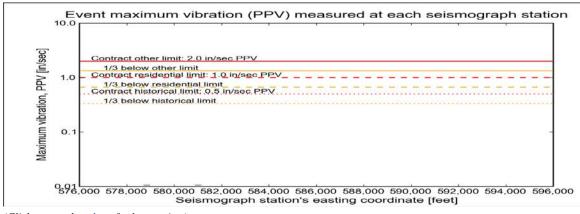
Click station for more information about the station.



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Date of reading: Thu 23-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV<br>(in / second) | Vibration Type |
|------------------------------|-----------------|----------|--------------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Thu 23-Jan-2014 | 17:47:52 | 0.00687                  | Ambient        |
| NYCT - e4s008                | Thu 23-Jan-2014 | 14:52:44 | 0.00937                  | Ambient        |

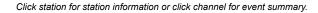


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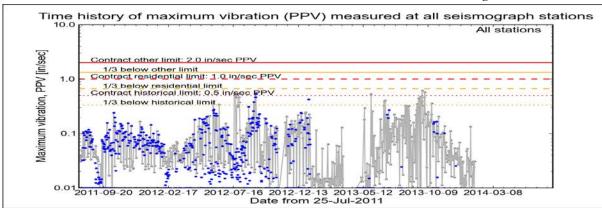




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Date and time of last reading: Fri 24-Jan-2014 18:47:37



(Click on graph or here for larger view)

| Blast ID | Date                     | Time     | Max PPV<br>(in / second) | Max PPV<br>Station |
|----------|--------------------------|----------|--------------------------|--------------------|
| Ambient  | Fri 24-Jan-2014          | 18:47:37 | 0.0306                   | Elizabeth Marina   |
| Ambient  | Thu 23-Jan-2014          | 14:52:44 | 0.0094                   | NYCT               |
| Ambient  | Wed 22-Jan-2014          | 11:17:36 | 0.0237                   | Elizabeth Marina   |
| Ambient  | Tue 21-Jan-2014          | 14:17:36 | 0.0306                   | Elizabeth Marina   |
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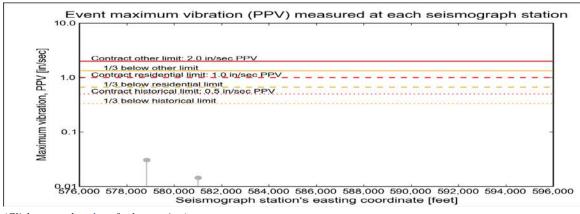
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Date of reading: Fri 24-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV<br>(in / second) | Vibration Type |
|------------------------------|-----------------|----------|--------------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Fri 24-Jan-2014 | 18:47:37 | 0.0306                   | Ambient        |
| NYCT - e4s008                | Fri 24-Jan-2014 | 18:52:46 | 0.0144                   | Ambient        |

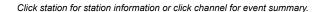


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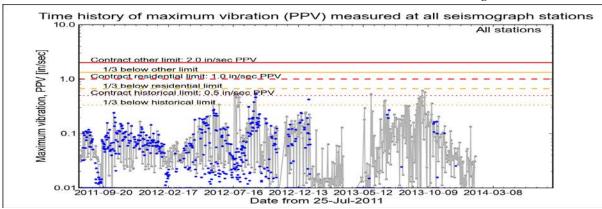




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Date and time of last reading: Sat 25-Jan-2014 14:02:35



(Click on graph or here for larger view)

| Blast ID | Date                    | Time                 | Max PPV (in / second) | Max PPV<br>Station    |
|----------|-------------------------|----------------------|-----------------------|-----------------------|
| Ambient  | Sat 25-Jan-2014         | 14:02:35             | 0.0381                | Elizabeth Marina      |
| Ambient  | Fri 24-Jan-2014         | 18:47:37             | 0.0306                | Elizabeth Marina      |
| Ambient  | Thu 23-Jan-2014         | 14:52:44             | 0.0094                | NYCT                  |
| Ambient  | Wed 22-Jan-2014         | 11:17:36             | 0.0237                | Elizabeth Marina      |
| Ambient  | Tue 21-Jan-2014         | 14:17:36             | 0.0306                | Elizabeth Marina      |
| Ambient  | Mon 20-Jan-2014         | 19:32:51             | 0.0131                | Elizabeth Marina      |
| _e       | 4sciences   Earthworks, | LLC 27 Glen Road, Sa | ndy Hook, CT 064      | 82 www.e4sciences.com |



## **Arthur Kill Blasting Event Summary**

This page summarizes measurements of ground vibrations for the selected event. This page displays the maximum vibration recorded at each and every seismograph station during this event.

The Arthur Kill contract area is mapped below with a top-of-rock map. Today's dredge locations are marked by colored symbols, connected by colored lines to this week's past locations marked by gray symbols. The drilling and blasting barge location is marked in red. The easting and northing map coordinates in the New Jersey State Plane coordinate system are in yellow. The locations of active seismograph stations are marked by yellow station symbols. (e4sciences stations are circles. CDB stations are triangles.) Selecting a station activates its station page.

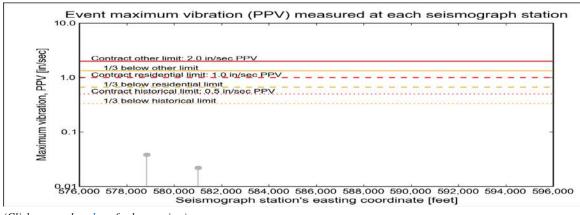
Click station for more information about the station.



Selected Event Summary

The graph below plots the maximum vibration during the selected event period (blast or ambient) recorded at each and every seismograph station along the easting positions. The vertical axis gives the maximum vibration in peak particle velocity (PPV) in units of inches per second (in/sec). If the maximum vibration level at a station is below 0.01 in/sec, the marker is a v-shaped triangle at 0.01 in/sec. (Light-gray stems indicate ambient-vibration level. Black stems indicate blast-vibration level. Dark-gray stems indicate predicted blast-vibration level.)

Date of reading: Sat 25-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV (in / second) | Vibration Type |
|------------------------------|-----------------|----------|-----------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Sat 25-Jan-2014 | 14:02:35 | 0.0381                | Ambient        |
| NYCT - e4s008                | Sat 25-Jan-2014 | 14:07:45 | 0.0219                | Ambient        |



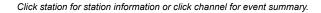
Dredges

#### **Arthur Kill Blast Vibration Summary**

This site summarizes the measured ground vibrations in northwest Staten Island, from rock blasting in the Arthur Kill and other possible sources. The site is updated daily. The data are intended for the sole use of the US Army Corps of Engineers - New York District, for managing and monitoring the performance of NYNJ Harbor Deepening Project Contract in Arthur Kill starting 25 July 2011.

This page represents the most recent observations.

The Arthur Kill contract area is mapped below in light gray. The navigation grid is superimposed. Today's dredge locations are marked by colored symbols, connected by colored lines to this week's past locations marked by gray symbols. The drilling and blasting barge is marked in red. The easting and northing map coordinates in the New Jersey State Plane coordinate system are in yellow. The locations of active seismograph stations are marked by yellow station symbols. (e4sciences stations are circles. CDB stations are triangles.) Selecting a station activates its station page.

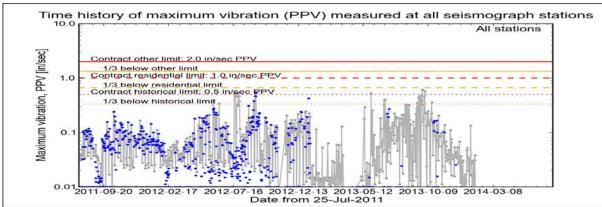




Latest Event Summary

The graph below is a plot of the maximum vibration recorded by any and all of the numerous seismograph stations during the current observation event (ambient or blast). The horizontal axis gives the date from the start of the project on 25 July 2011. The vertical axis gives the maximum vibration in peak particle velocity (PPV) in units of inches per second (in/sec). The red curves show the project's contract limits; the orange curves show one-third (1/3) below these contract limits. (The light gray curve is ambient-vibration level. The blue dots are blast-vibration levels. The dark gray dots are predicted blast-vibration levels.)

Date and time of last reading: Sun 26-Jan-2014 00:32:37



(Click on graph or here for larger view)

| no ovem page.                 |  |  |                                      |  |
|-------------------------------|--|--|--------------------------------------|--|
| Blast ID                      | Date   | Time   | Max PPV (in / second)                | Max PPV<br>Station   |
| Ambient<br>Ambient<br>Ambient | Sun 26-Jan-2014<br>Sat 25-Jan-2014<br>Fri 24-Jan-2014<br>Thu 23-Jan-2014 | 00:32:37<br>14:02:35<br>18:47:37<br>14:52:44 | 0.0069<br>0.0381<br>0.0306<br>0.0094 | Elizabeth Marina<br>Elizabeth Marina<br>Elizabeth Marina<br>NYCT |
| Ambient<br>Ambient            | Wed 22-Jan-2014<br>Tue 21-Jan-2014                                       | 11:17:36<br>14:17:36                         | 0.0237<br>0.0306                     | Elizabeth Marina<br>Elizabeth Marina                             |



## **Arthur Kill Blasting Event Summary**

This page summarizes measurements of ground vibrations for the selected event. This page displays the maximum vibration recorded at each and every seismograph station during this event.

The Arthur Kill contract area is mapped below with a top-of-rock map. Today's dredge locations are marked by colored symbols, connected by colored lines to this week's past locations marked by gray symbols. The drilling and blasting barge location is marked in red. The easting and northing map coordinates in the New Jersey State Plane coordinate system are in yellow. The locations of active seismograph stations are marked by yellow station symbols. (e4sciences stations are circles. CDB stations are triangles.) Selecting a station activates its station page.

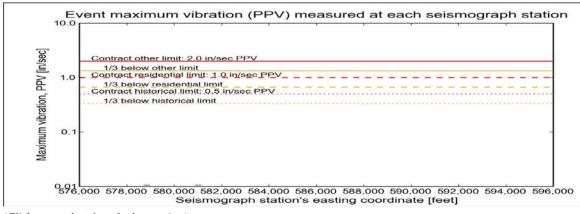
Click station for more information about the station.



Selected Event Summary

The graph below plots the maximum vibration during the selected event period (blast or ambient) recorded at each and every seismograph station along the easting positions. The vertical axis gives the maximum vibration in peak particle velocity (PPV) in units of inches per second (in/sec). If the maximum vibration level at a station is below 0.01 in/sec, the marker is a v-shaped triangle at 0.01 in/sec. (Light-gray stems indicate ambient-vibration level. Black stems indicate blast-vibration level. Dark-gray stems indicate predicted blast-vibration level.)

Date of reading: Sun 26-Jan-2014



(Click on graph or here for larger view)

| Station                      | Date            | Time     | Max PPV (in / second) | Vibration Type |
|------------------------------|-----------------|----------|-----------------------|----------------|
| Elizabeth Marina -<br>e4s010 | Sun 26-Jan-2014 | 00:32:37 | 0.00687               | Ambient        |
| NYCT - e4s008                | Sun 26-Jan-2014 | 14:37:45 | 0.00437               | Ambient        |