# TECHNICAL REPORT
# ENVIRONMENTAL DREDGING AND SEDIMENT DECONTAMINATION TECHNOLOGY DEMONSTRATION PILOT STUDY
# LOWER PASSAIC RIVER RESTORATION PROJECT

**Hydrographic Survey**
**Side Scan Sonar Survey**

**SPONSOR**

**NEW JERSEY DEPARTMENT OF TRANSPORTATION-OMR**
**OFFICE OF MARITIME RESOURCES**
**1035 Parkway Avenue, E&O Building**
**Trenton, NJ 08625-0837**

**SPONSOR REPRESENTATIVE**

**TAMS Consultants, Inc.**
**300 Broadacres Drive**
**Bloomfield, NJ 07003**

**NJDOT Agreement No. 2001-NJMR02**
**Task Order #OMR-03-6**

**April 21, 2004 Draft**
**May 25, 2004 Final**

**ASI Job No. 24-011**

623710

## Table of Contents

**Signature Page** ..... 1

**I. Introduction** ..... 2
- A. Project Overview ..... 2

**II. Test Administration** ..... 2
- A. Sponsor ..... 2
- B. Sponsor Representative ..... 2
- C. Survey Company ..... 2
- D. Dates of Field Surveys ..... 2

**III. Materials and Methods** ..... 3
- A. Hydrographic Survey ..... 3
- B. Side Scan Sonar Survey ..... 3

Table 1 Pilot Study Grab Sample Coordinates ..... 5
Table 2 Pilot Study Area Coordinates ..... 5
Table 3 Side Scan Sonar Target File ..... 6

## MAPS, DRAWINGS and ENCLOSURES

Figure 1a Base Map (scale 1” = 50’) 2 copies ..... Enclosed
Figure 1b Sonar Targets Map (scale 1” = 50’) 2 copies ..... Enclosed
Figure 1c Sonar Mosaic Map (scale 1” = 50’) 2 copies ..... Enclosed
Figure 1d Hydrographic Survey Map (scale 1” = 50’) 2 copies ..... Enclosed

Figure 2a Base Map (scale 1” = 100’) 2 copies ..... Enclosed
Figure 2b Sonar Targets Map (scale 1” = 100’) 2 copies ..... Enclosed
Figure 2c Sonar Mosaic Map (scale 1” = 100’) 2 copies ..... Enclosed
Figure 2d Hydrographic Survey Map (scale 1” = 100’) 2 copies ..... Enclosed

**APPENDIX**


**A.** Data CD ..... Enclosed
**B.** Equipment Specifications ..... 8
**C.** PENZD File ..... **13**

## SIGNATURE PAGE

## TECHNICAL REPORT
## ENVIRONMENTAL DREDGING AND SEDIMENT DECONTAMINATION TECHNOLOGY DEMONSTRATION PILOT STUDY
## LOWER PASSAIC RIVER RESTORATION PROJECT

This report as well as all records and raw data were audited and found to be an accurate reflection of the study. Copies of raw data will be maintained by Aqua Survey, Inc, 469 Point Breeze Road, Flemington, New Jersey, 08822.

_____

James A. Nickels Date
Vice President and Field Project Manager

_____

James M. Todd Date
Executive Vice President

# I. INTRODUCTION

## A. Project Overview

The objective of this study was to perform hydrographic and side-scan sonar surveys of an approximate 1000-foot section of the Lower Passaic River within the Harrison Reach. This information will be used, in conjunction with subsequent sediment chemistry data, to accurately characterize the site. ASI performed the Hydrographic Survey and Side Scan Sonar Survey.

# II. TEST ADMINISTRATION

## A. Sponsor

New Jersey Department of Transportation-OMR
Office of Maritime Resources
1035 Parkway Avenue, E&O Building
Trenton, NJ 08625-0837

## B. Sponsor Representative

TAMS Consultants, Inc.
300 Broadacres Drive
Bloomfield, NJ 07003

## C. Survey Company

Aqua Survey, Inc.
469 Point Breeze Road
Flemington, New Jersey 08822

## D. Dates of Surveys

Date of Survey Initiation: March 17, 2004
Date of Survey Completion: March 18, 2004
Date of Draft Report : April 21, 2004

## III. MATERIALS AND METHODS

The hydrographic and side-scan sonar surveys were conducted in a section of the Lower Passaic River within the Harrison Reach using the R/V Delaware, a 21-foot survey vessel. The vessel was equipped with a real-time kinematic (RTK) system for positioning. Hypack Max survey management software was used for survey control and ship track recording. An Innerspace 455 survey grade fathometer was used to collect the water depth data. The RTK system used was a Trimble 5700. Specification for both pieces of equipment can be found in the Appendix Section of this report.

### A. Hydrographic Survey

The hydrographic survey encompassed the entire river bottom to the mean low water (MLW) line along each shoreline. The survey work area extended for 1000 feet along the river from bank to bank. The survey was conducted using 25-foot lanes and single beam acoustical survey techniques to acquire depth soundings. Horizontal positioning of the depth soundings was obtained using a differential global positioning (DGPS) system with real time kinematic (RTK) correction applied to data. The survey was conducted in horizontal datum NAD 83 and NJ State Plane feet and vertical datum NGVD 1929.

The survey drawings show shoreline features in the vicinity of the Site that were supplied by TAMS consultants as geo-referenced base maps. The geo-referenced shoreline features are shown for more than 1000 feet along the riverbank. The features shown are limited to the horizontal position of the furthest riverward project of bulkhead walls and piers and the horizontal position of the highest elevation of earthen/rip-rap slopes

### B. Side Scan Sonar Survey

A side scan survey was conducted in the same 1000-foot section of the river where the hydrographic survey was done. This survey was conducted using a Marine Sonic System running at 600 KHz frequency. RTK was used for positioning and Hypack Max survey management software was used for survey control and ship track recording. This survey was conducted by running lines parallel to the shoreline spaced 50-feet apart. Thirteen lines were run resulting in greater than 150% coverage.

A mosaic of the riverbed in the study area was created, accompanied by annotation of individual objects in a target file. All of the individual survey maps were plotted on Mylar and presented on the same scale to enable them to be combined using overlays. This enables the data to be layered together forming a composite picture of the project area. The sonar mosaic was plotted on bright white paper, as the image was nearly opaque and lost significant detail when plotted on Mylar.

As part of the side-scan sonar survey, sediment samples at 30 locations were to be selected from the top 2 inches for ground truthing to help characterize the side-scan sonar results. A total of 7 samples were actually collected (Table 1). A field geologist classified the samples. The locations were selected in the field, based on the side-scan sonar images and the need to verify signal/sediment types.

Table 1

## PILOT STUDY SAMPLE COORDINATES

| | | | Coordinates | | |
|---|---|---|---|---|---|
| **Sample #** | **Depth (feet)** | **Time (PM)** | **Latitude** | **Longitude** | **Description** |
| PR GS - 1 | 2.2 | 12:56 | 40°44.481N | 74°.07.954W | Brown fine silt/clay |
| PR GS - 2 | 1.5 | 1:06 | 40°44.481N | 74°.07.915 W | Brown/black silt/clay/sand |
| PR GS - 3 | < 2 | 1:15 | 40°44.487N | 74°.07.821 W | Black/green/fine sand/silt/shells/oil sheen |
| PR GS - 4 | < 2 | 1:20 | 40°44.407N | 74°.07.776 W | Brown/silt/fine clay/organic detritus |
| PR GS - 5 | 4.5 | 1:35 | 40°44.510N | 74°.07.650 W | Brown/black/detritus/ fine silt/clay/oil sheen |
| PR GS - 6 | 6.3 | 1:42 | 40°44.513N | 74°.07.649 W | Brown / mixed with some black/ silty |
| PR GS - 7 | < 2 | 1:48 | 40°44.494N | 74°.07.731 W | Brown sediments coating 90-95% black/ fine silt |
| PR GS - 8 | | 1:58 | 40°44.490N | 74°.07.850 W | |

Table 2

## Pilot Study Area Coordinates

| COORD_ID | X_NJSP83 (ft) | Y_NJSP83 (ft) | LAT | LONG |
|---|---|---|---|---|
| NW | 593836.83218 | 695636.70265 | 40.74260 | -74.13291 |
| SW | 593930.30747 | 695090.48985 | 40.74110 | -74.13258 |
| NE | 594901.58273 | 695775.31583 | 40.74297 | -74.12907 |
| SE | 594957.17076 | 695100.14481 | 40.74111 | -74.12888 |

**Table 1**

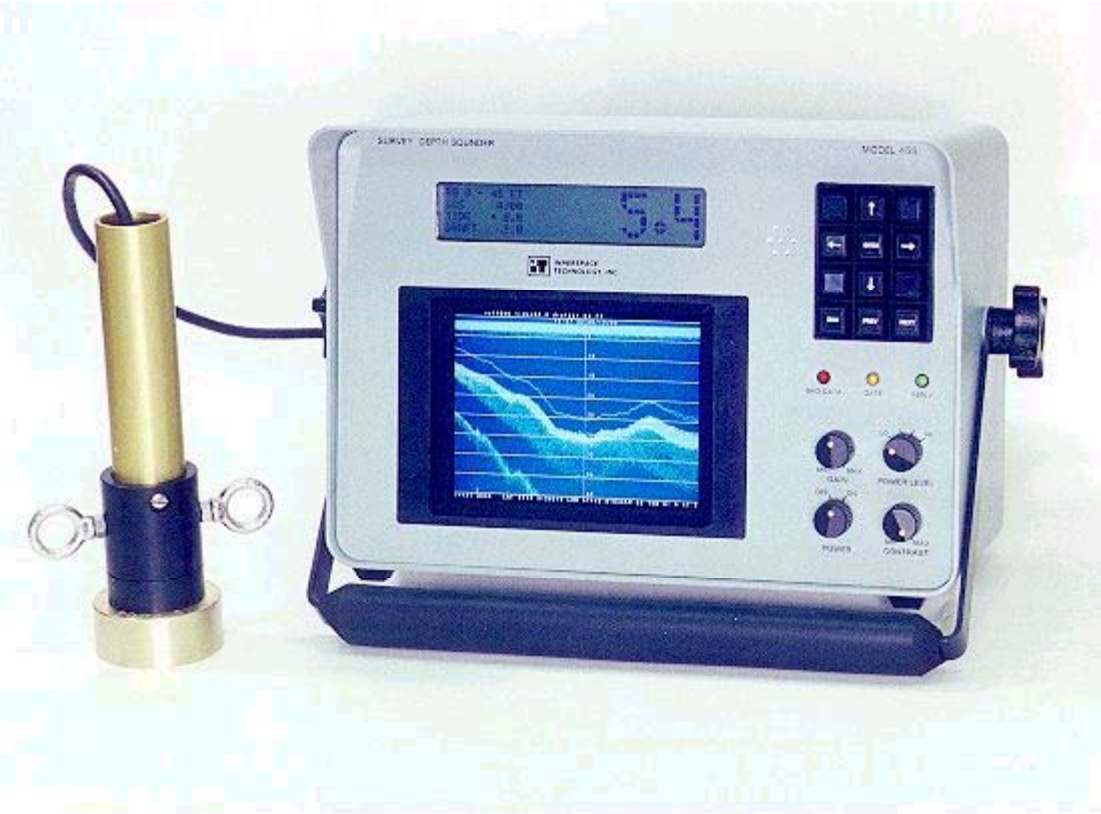
# Sidescan Survey Target File

| Designator | Easting | Northing | Description |
|---|---|---|---|
| Area 1 | Entire length of North side of the survey area | | Debris including tires, rocks, poles and other objects extend approx. 20 feet into the river from the sea wall along the North side of the survey area. |
| Target 1 | 594933.5 | 695720.1 | Tree 15 feet long projecting 3' into the water column |
| Target 2 | 594644.3 | 695687.7 | Probable 26 foot long piling laying on surface |
| Target 3 | 594363.6 | 695664.0 | Probable 37 foot long piling laying on surface |
| Area 2 | Entire length of survey area parallel with seawall | | Parallel lines in the sediment extending between 100 and 200 feet off of the seawall along the Northern bank of the survey area. They are fairly shallow ridges probably caused by barges touching bottom or dragging ropes or chains while transiting the area. |
| Target 4 | 594297.3 | 695434.6 | 1420 square foot. area of probable differential bottom composition. Possibly organic debris. |
| Target 5 | 594776.9 | 695355.3 | Propeller mark in sediment extending 78 feet to the South West |
| Target 6 | 594258.8 | 695228.5 | 250 square foot. area of probable differential bottom composition. Possibly organic debris. |
| Target 7 | 594181.0 | 695184.9 | Propeller mark in sediment extending 36 feet to the South East |
| Area 3 | Southwest area of survey area | | Scattered debris over an approximately 30 foot wide area extending from the Western edge of the survey area about 500 feet to the East, about 90 feet from the Southern shore. |

# APPENDIX

# INNERSPACE

## SURVEY DEPTH SOUNDER
## MODEL 455



## DESCRIPTION

The Innerspace Technology Model 455 Survey Depth Sounder provides analog and digital depth on high resolution LCD display screens. The small, lightweight unit is ideal for use on small boats for hydrographic and GIS surveys, and also has applications on general purpose workboats and Corps of Engineers reconnaissance vessels. The 455 has most of the capabilities of Innerspace's legendary thermal printing depth sounder recorders, except for the thermal chart recording, plus it has many new features. Designed with the operator in mind, the easy-to-use menu is controlled via up / down, left / right arrows; no numerical entries are required and, when power is turned off, all entries are saved for next power on. In the operation mode, operator entries are always in view on the LCD display screen, along with the large numeral, digitized depth. The 455's analog display provides a continuous, high resolution bottom profile with alphanumerical annotation of pertinent information including: Speed-of-Sound, Tide, Draft, Time and Fix Number. For a hard copy, a screen print of the analog data may be sent to a standard computer printer or it can be stored internally on a 24 or 48 mb integrated circuit for later recall.

# SPECIFICATIONS

**GRAPHIC DISPLAY**
- 640 x 480 Pixel Monochrome Transflective LCD with Backlight and Contrast Control
- 5 ¾ in. x 4 ¾ in. viewing area
- Emulates paper chart recorder

**NUMERIC DISPLAY**
- 4 lines x 40 characters with large 1 in. high numerics and Backlight

**OPERATION**
- Menu driven parameter selection on alphanumeric display

**PARAMETER SELECTION**
- Speed-of-Sound, Tide, Draft, Gate Width, Scale, Backlight, Com Ports and many more

**RESOLUTION**
- .1 Unit graphic and numeric

**DEPTH RANGES**
- 0-45, 40-85, 80-125, 120-165, 160-205 Feet or Meters (dm and cm selection)
- Multipliers: 1, 2, 10
- Auto Ranging

**ANNOTATION**
- LCD graphic display numerically displays Speed-of-Sound, Tide, Draft, Date, Time, Depth, Fix number and GPS Data

**TRANSMITTER**
- Front panel switch selectable power levels: 250 watts to 10 watts in 4 levels

**RECEIVER**
- Time varied automatic gain adjustment under microprocessor control 20 or 30 Log
- Front panel manual gain control 20db
- Adjustable Blanking

**DIGITIZER**
- Range Gated (selectable widths)
- Initial Depth Entry
- 4 Modes of Operation
- Gate Mark on Graphic Display

**UTILITIES**
- Depth Simulator
- Chart Speed
- Screen capture to memory

**INPUTS/OUTPUTS**
- RS232 Port A
- RS232 Port B
- RS232 Port C
- Parallel Port
- Keyboard and VGA Port
- GPS Antenna with GPS option
- Floppy Port

**TRANSDUCER**
- 200kHz 8°
- Optional: 200kHz 3°

**POWER**
- 12VDC, 2½ Amp

**ENCLOSURE**
- Drawn aluminum case
- Aluminum panel painted to resist corrosion.
- Removable handle and soft carry bag included.

**OVERALL SIZE**
- 13 in. Wide x 9 in. High x 9 in. Deep
- 38.1 cm Wide x 22.86 High x 22.86 Deep

**WEIGHT**
- 15 lb.
- 6.8 kg

**OPTIONS:**
- Heave sensor
- Remote VGA display
- Tabletop / overhead mounting bracket
- Custom annotation (1 Line 40 Characters)
- Remote readout (large numeric)
- Continuous analog storage, 48mb
- AC power supply
- Portable transducer mounts
- Floppy Disk Drive in travel case
- Mini keyboard (89 key) and adapter cable
- 125 kHz transceiver and transducer 125kHz 7º
- Laplink software
- Color graphic display

# Trimble 5700 Receiver

*Advanced Dual Frequency GPS and WAAS/EGNOS receiver system with integrated UHF radio modem.*

### GENERAL

- Tough, lightweight magnesium alloy casing
- Fully integrated internal radio modem fully sealed
- Compact flash data storage expandable up to 96MB
- Integral USB (Universal Serial Bus) for ultra fast download
- Up to 10 hours continuous receiver operation on 2 internal miniature camcorder batteries
- Tripod clip or integrated base case
- Mount rover on-the-pole, in a belt pouch or in a backpack
- Front panel for control of power, data logging& formatting of compact flash cards, ephemeris and application file deletion and restoring default controls. Panel indicators for satellite tracking, radio link operation data logging and power monitoring
- Low power consumption

### PERFORMANCE SPECIFICATIONS

*Measurements*

- Advanced Maxwell 4 Custom Survey GPS Chip
- High precision multiple correlator L1 and L2 pseudorange measurements
- Unfiltered, unsmoothed pseudorange measurements data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise L1 and L2 carrier phase measurements with <1mm precision in a 1Hz bandwidth
- L1 and L2 Signal-to-Noise ratios reported in dB-Hz
- Proven Trimble low elevation tracking technology
- 24 Channels L1 C/A Code, L1/L2 Full Cycle Carrier, WAAS/EGNOS.

*Code Differential GPS Positioning* [7]

**Horizontal:** 0.25m + 1ppm RMS
**Vertical:** 0.50m + 1ppm RMS
WAAS differential positioning accuracy typically <5m 3DRMS[1]

*Static and Fast Static GPS Surveying* [7]

**Horizontal:** ±5mm + 0.5ppm RMS **Vertical:** ±5mm + 1ppm RMS

*Kinematic Surveying* [7]

Real Time and Post-Processed Kinematic Surveys.
**Horizontal:** 10mm + 1ppm RMS
**Vertical:** 20mm + 1ppm RMS
0.02 seconds (20 millisecond) latency **Initialization Time:** Single / Multi-Base eRTK™ min 10 secs + 0.5 times baseline length in km, up to 30km
VRS initialization time <30 seconds typical any where within coverage area

**Initialization Reliability:** Typically >99.9%[2]

*eRTK Wide Area Coverage*

- Conventional RTK typical coverage 300sq km (115 sq mi) per base
- Single Base eRTK up to 1,250 sq km (500 sq mi)[3]
- Multiple Base eRTK up to 3,750 sq km (1500 sq mi)3, [4]
- Virtual Reference Station eRTK 8500+ sq km (3300 sq mi)3, [5]

### HARDWARE

*Physical*

**Casing:** Tough, lightweight fully sealed magnesium alloy IPX7 for submersion to depth of 1 meter
**Waterproof:** Will survive a 1 meter drop onto concrete; shock and vibration tested to 40G random,
**Shock:** passes testing per MIL-STD-810F, FIG. 514.5C-17
**Weight:** With internal batteries, internal radio, internal battery charger, standard UHF antenna: 3 lb. (1.4kg)
As entire RTK Rover with batteries for 7 hours, less than 4kg (8.8lb)

*Electrical*

**Power:** DC input 10.5 to 28V with over voltage protection
**Power Consumption:** 2.5 Watts receiver only, 3.75 Watts including internal radio
**Battery:** Approximately 10 hours postprocessed, 7 hours RTK (with two internal miniature batteries)
**Battery weight:** 0.1kg (1.6oz)
**Battery charger:** Internal with external AC power adapter; no requirement for external charger
**Power output:** 10.5V - 20V (Port 1), 10.5V - 27.5V (Port 3)
**Certification:** Class B Part 15 FCC certification and CE Mark approved Environmental
**Operating Temp:** -40° to +65° C[6] (-40° to +149° F) **Storage Temp:** -40° to +80° C (-40° to +176° F) **Humidity:** 100%, condensing

### COMMUNICATIONS AND DATA STORAGE

- 2 external power ports, 2 internal battery ports, 3 serial ports, 1 USB
- Integrated USB for data download speeds in excess of 1 megabit per second (10 times faster than even the fastest serial port)
- Compact Flash - advanced lightweight and compact removable data storage. Options of 48Mb or 96Mb from Trimble
- More than 2,500 hours continuous L1+L2 logging at 15 seconds with 6 satellites typical. (96Mb)
- Fully integrated, fully sealed internal UHF radio modem option
- GSM, Cell Phone and CDPD modem support for eRTK and VRS operation
- Range pole antenna for eRTK Wide Area Real Time Kinematic. For long range UHF communications without interference to GPS antenna phase center
- Dual event marker inputs
- 1Hz, 2Hz, 5Hz and 10Hz Positioning and Data Logging
- 1 Pulse Per Second Output
- CMRII, CMR+, RTCM 2.1 Input and Output Standard
- 10 NMEA outputs

**Trimble.**

# Marine Sonic Technology, Ltd.

## New Product
## "CENTURION"
## Side Scan Sonar System

Click for a larger version.

Small, compact and rugged, the NEW "**Centurion**" Sea Scan® PC Splash Proof Computer System sets the industry standard for a high resolution, portable, self-contained, low cost sonar system. Designed with the Search and Recovery Community in mind, the system can be operational within minutes and only needs a 12 VDC power source. The software is user friendly and the daylight readable screen allows for easy target detection and identification. Incorporating many of the proven features found in the previous splash proof, the NEW "**Centurion**" has been updated to provide state of the art electronics and connectivity.

**New Features**

- Computer is **13"x11"x6"** and weighs only **12 pounds**
- High-Bright, daylight readable, 10.4" color flat screen display
- Increased connectivity, network and USB compatible
- 300 MHz Processor and 20 GB Hard Drive
- Operates on a 12 VDC power source
- Case and connectors are fully waterproof and designed for increased durability and shock resistance
- Fully compatible with all previous MSTL towfish and cables

**Standard Components**

- External R/W CD ROM Drive
- 2 USB ports and 100 base-T Ethernet connection
- JRC Self Contained DGPS, Garmin eTrex Legend GPS, keyboard and waterproof mouse
- Connection for standard keyboards and pointing devices

**Complete "Centurion" System Includes**

Single Frequency Towfish (150, 300, 600, 900 or 1200 kHz), 100 & 30 Meter Tow Cables, 1 Set of Line Weights, Rugged Shipping Containers, Tool Kit, Factory Training, Operator's Manual, 24/7 Technical Support and a One-Year Limited Warranty

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 1 | 594363.8 | 695127.0 | 0 | Southern shoreline |
| 2 | 594367.9 | 695127.4 | 0 | Southern shoreline |
| 3 | 594368.7 | 695105.8 | 0 | Southern shoreline |
| 4 | 594387.7 | 695106.4 | 0 | Southern shoreline |
| 5 | 594398.2 | 695115.6 | 0 | Southern shoreline |
| 6 | 594419.3 | 695128.7 | 0 | Southern shoreline |
| 7 | 594428.3 | 695133.7 | 0 | Southern shoreline |
| 8 | 594437.2 | 695138.6 | 0 | Southern shoreline |
| 9 | 594448.8 | 695145.3 | 0 | Southern shoreline |
| 10 | 594463.5 | 695147.5 | 0 | Southern shoreline |
| 11 | 594472.9 | 695147.8 | 0 | Southern shoreline |
| 12 | 594490.8 | 695145.5 | 0 | Southern shoreline |
| 13 | 594524.3 | 695136.8 | 0 | Southern shoreline |
| 14 | 594561.1 | 695128.4 | 0 | Southern shoreline |
| 15 | 594578.4 | 695124.8 | 0 | Southern shoreline |
| 16 | 594596.7 | 695118.5 | 0 | Southern shoreline |
| 17 | 594633.3 | 695112.1 | 0 | Southern shoreline |
| 18 | 594669.9 | 695105.7 | 0 | Southern shoreline |
| 19 | 594704.3 | 695114.7 | 0 | Southern shoreline |
| 20 | 594722.5 | 695122.0 | 0 | Southern shoreline |
| 21 | 594754.8 | 695130.8 | 0 | Southern shoreline |
| 22 | 594776.8 | 695134.4 | 0 | Southern shoreline |
| 23 | 594791.7 | 695134.6 | 0 | Southern shoreline |
| 24 | 594816.6 | 695130.4 | 0 | Southern shoreline |
| 25 | 594841.3 | 695127.5 | 0 | Southern shoreline |
| 26 | 594846.9 | 695128.6 | 0 | Southern shoreline |
| 27 | 594866.0 | 695124.7 | 0 | Southern shoreline |
| 28 | 594890.6 | 695123.1 | 0 | Southern shoreline |
| 29 | 594913.7 | 695122.8 | 0 | Southern shoreline |
| 30 | 594942.3 | 695121.7 | 0 | Southern shoreline |
| 31 | 594979.0 | 695121.4 | 0 | Southern shoreline |
| 32 | 594990.3 | 695117.2 | 0 | Southern shoreline |
| 33 | 595015.1 | 695112.9 | 0 | Southern shoreline |
| 34 | 595023.4 | 695111.8 | 0 | Southern shoreline |
| 35 | 595039.7 | 695111.4 | 0 | Southern shoreline |
| 36 | 595065.2 | 695114.1 | 0 | Southern shoreline |
| 37 | 595084.6 | 695122.8 | 0 | Southern shoreline |
| 38 | 595095.7 | 695133.5 | 0 | Southern shoreline |
| 39 | 595113.8 | 695155.7 | 0 | Southern shoreline |
| 40 | 595133.5 | 695181.5 | 0 | Southern shoreline |
| 41 | 595151.2 | 695200.3 | 0 | Southern shoreline |
| 42 | 595170.4 | 695211.8 | 0 | Southern shoreline |
| 43 | 595183.7 | 695214.5 | 0 | Southern shoreline |
| 44 | 595195.0 | 695223.1 | 0 | Southern shoreline |
| 45 | 595230.9 | 695243.8 | 0 | Southern shoreline |
| 46 | 595234.3 | 695243.5 | 0 | Southern shoreline |
| 47 | 595241.9 | 695240.6 | 0 | Southern shoreline |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 48 | 594490.8 | 695145.5 | 0 | Southern shoreline |
| 49 | 594524.3 | 695136.8 | 0 | Southern shoreline |
| 50 | 594561.1 | 695128.4 | 0 | Southern shoreline |
| 51 | 594578.4 | 695124.8 | 0 | Southern shoreline |
| 52 | 594596.7 | 695118.5 | 0 | Southern shoreline |
| 53 | 594633.3 | 695112.1 | 0 | Southern shoreline |
| 54 | 594669.9 | 695105.7 | 0 | Southern shoreline |
| 55 | 594704.3 | 695114.7 | 0 | Southern shoreline |
| 56 | 594722.5 | 695122.0 | 0 | Southern shoreline |
| 57 | 594754.8 | 695130.8 | 0 | Southern shoreline |
| 58 | 594767.4 | 695133.5 | 0 | Southern shoreline |
| 59 | 594776.8 | 695134.4 | 0 | Southern shoreline |
| 60 | 594791.7 | 695134.6 | 0 | Southern shoreline |
| 61 | 594816.6 | 695130.4 | 0 | Southern shoreline |
| 62 | 594841.3 | 695127.5 | 0 | Southern shoreline |
| 63 | 594846.9 | 695128.6 | 0 | Southern shoreline |
| 64 | 594866.0 | 695124.7 | 0 | Southern shoreline |
| 65 | 594890.6 | 695123.1 | 0 | Southern shoreline |
| 66 | 594913.7 | 695122.8 | 0 | Southern shoreline |
| 67 | 594942.3 | 695121.7 | 0 | Southern shoreline |
| 68 | 594979.0 | 695121.4 | 0 | Southern shoreline |
| 69 | 594990.3 | 695117.2 | 0 | Southern shoreline |
| 70 | 595015.1 | 695112.9 | 0 | Southern shoreline |
| 71 | 595023.4 | 695111.8 | 0 | Southern shoreline |
| 72 | 595039.7 | 695111.4 | 0 | Southern shoreline |
| 73 | 595065.2 | 695114.1 | 0 | Southern shoreline |
| 74 | 595084.6 | 695122.8 | 0 | Southern shoreline |
| 75 | 595095.7 | 695133.5 | 0 | Southern shoreline |
| 76 | 595113.8 | 695155.7 | 0 | Southern shoreline |
| 77 | 595133.5 | 695181.5 | 0 | Southern shoreline |
| 78 | 595151.2 | 695200.3 | 0 | Southern shoreline |
| 79 | 595170.4 | 695211.8 | 0 | Southern shoreline |
| 80 | 595183.7 | 695214.5 | 0 | Southern shoreline |
| 81 | 595195.0 | 695223.1 | 0 | Southern shoreline |
| 82 | 595230.9 | 695243.8 | 0 | Southern shoreline |
| 83 | 595234.3 | 695243.5 | 0 | Southern shoreline |
| 84 | 595241.9 | 695240.6 | 0 | Southern shoreline |
| 85 | 595231.1 | 695819.0 | 0 | Northern shoreline |
| 86 | 595186.8 | 695814.4 | 0 | Northern shoreline |
| 87 | 595149.2 | 695810.6 | 0 | Northern shoreline |
| 88 | 595097.1 | 695802.5 | 0 | Northern shoreline |
| 89 | 595069.1 | 695798.2 | 0 | Northern shoreline |
| 90 | 595055.0 | 695796.7 | 0 | Northern shoreline |
| 91 | 595012.1 | 695791.6 | 0 | Northern shoreline |
| 92 | 594984.6 | 695788.1 | 0 | Northern shoreline |
| 93 | 594943.8 | 695782.5 | 0 | Northern shoreline |
| 94 | 594913.0 | 695779.3 | 0 | Northern shoreline |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 95 | 594900.2 | 695778.0 | 0 | Northern shoreline |
| 96 | 594848.7 | 695770.7 | 0 | Northern shoreline |
| 97 | 594810.6 | 695766.0 | 0 | Northern shoreline |
| 98 | 594780.5 | 695761.6 | 0 | Northern shoreline |
| 99 | 594751.9 | 695755.9 | 0 | Northern shoreline |
| 100 | 594715.2 | 695750.1 | 0 | Northern shoreline |
| 101 | 594653.0 | 695741.6 | 0 | Northern shoreline |
| 102 | 594595.6 | 695733.0 | 0 | Northern shoreline |
| 103 | 594553.9 | 695728.6 | 0 | Northern shoreline |
| 104 | 594516.9 | 695726.2 | 0 | Northern shoreline |
| 105 | 594454.5 | 695719.7 | 0 | Northern shoreline |
| 106 | 594417.5 | 695716.6 | 0 | Northern shoreline |
| 107 | 594392.5 | 695716.0 | 0 | Northern shoreline |
| 108 | 594324.1 | 695707.6 | 0 | Northern shoreline |
| 109 | 594299.8 | 695706.4 | 0 | Northern shoreline |
| 110 | 594280.2 | 695705.8 | 0 | Northern shoreline |
| 111 | 594255.3 | 695704.5 | 0 | Northern shoreline |
| 112 | 594188.8 | 695697.7 | 0 | Northern shoreline |
| 113 | 594121.0 | 695690.7 | 0 | Northern shoreline |
| 114 | 594076.6 | 695687.4 | 0 | Northern shoreline |
| 115 | 594005.6 | 695678.7 | 0 | Northern shoreline |
| 116 | 593957.0 | 695676.4 | 0 | Northern shoreline |
| 117 | 593907.6 | 695668.6 | 0 | Northern shoreline |
| 118 | 593862.4 | 695659.8 | 0 | Northern shoreline |
| 119 | 593835.6 | 695656.4 | 0 | Northern shoreline |
| 120 | 593820.1 | 695655.5 | 0 | Northern shoreline |
| 121 | 593783.6 | 695647.6 | 0 | Northern shoreline |
| 122 | 593764.8 | 695645.7 | 0 | Northern shoreline |
| 123 | 593735.6 | 695639.9 | 0 | Northern shoreline |
| 124 | 593719.5 | 695638.3 | 0 | Northern shoreline |
| 125 | 593692.9 | 695632.8 | 0 | Northern shoreline |
| 126 | 593682.2 | 695631.7 | 0 | Northern shoreline |
| 127 | 593659.5 | 695628.0 | 0 | Northern shoreline |
| 128 | 593641.4 | 695625.5 | 0 | Northern shoreline |
| 129 | 593627.3 | 695624.0 | 0 | Northern shoreline |
| 130 | 593611.3 | 695621.7 | 0 | Northern shoreline |
| 131 | 594914.1 | 695739.8 | -5.54 | Elevation in NGVD29 |
| 132 | 594907.8 | 695736.7 | -5.94 | Elevation in NGVD29 |
| 133 | 594901.9 | 695732.4 | -6.54 | Elevation in NGVD29 |
| 134 | 594897.2 | 695727.0 | -7.35 | Elevation in NGVD29 |
| 135 | 594893.8 | 695720.4 | -8.46 | Elevation in NGVD29 |
| 136 | 594892.5 | 695713.5 | -9.36 | Elevation in NGVD29 |
| 137 | 594892.7 | 695706.5 | -10.2 | Elevation in NGVD29 |
| 138 | 594893.7 | 695699.5 | -11.1 | Elevation in NGVD29 |
| 139 | 594895.4 | 695691.4 | -11.4 | Elevation in NGVD29 |
| 140 | 594897.0 | 695683.4 | -12.1 | Elevation in NGVD29 |
| 141 | 594899.2 | 695673.6 | -12.6 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 142 | 594901.7 | 695660.2 | -12.9 | Elevation in NGVD29 |
| 143 | 594902.7 | 695652.9 | -12.8 | Elevation in NGVD29 |
| 144 | 594903.3 | 695645.8 | -12.8 | Elevation in NGVD29 |
| 145 | 594903.7 | 695635.6 | -12.7 | Elevation in NGVD29 |
| 146 | 594903.8 | 695628.3 | -12.9 | Elevation in NGVD29 |
| 147 | 594903.7 | 695618.8 | -12.7 | Elevation in NGVD29 |
| 148 | 594903.5 | 695609.5 | -12.9 | Elevation in NGVD29 |
| 149 | 594903.3 | 695598.7 | -12.8 | Elevation in NGVD29 |
| 150 | 594903.3 | 695591.5 | -13.2 | Elevation in NGVD29 |
| 151 | 594903.2 | 695582.8 | -12.9 | Elevation in NGVD29 |
| 152 | 594903.6 | 695573.4 | -13.1 | Elevation in NGVD29 |
| 153 | 594904.2 | 695564.6 | -13 | Elevation in NGVD29 |
| 154 | 594906.1 | 695553.4 | -13 | Elevation in NGVD29 |
| 155 | 594908.0 | 695543.4 | -13 | Elevation in NGVD29 |
| 156 | 594910.3 | 695533.4 | -12.7 | Elevation in NGVD29 |
| 157 | 594912.7 | 695524.6 | -12.6 | Elevation in NGVD29 |
| 158 | 594914.6 | 695517.0 | -12.2 | Elevation in NGVD29 |
| 159 | 594916.4 | 695509.3 | -12 | Elevation in NGVD29 |
| 160 | 594917.9 | 695502.3 | -11.7 | Elevation in NGVD29 |
| 161 | 594919.4 | 695495.3 | -11.2 | Elevation in NGVD29 |
| 162 | 594921.2 | 695486.9 | -10.8 | Elevation in NGVD29 |
| 163 | 594922.6 | 695479.8 | -10.3 | Elevation in NGVD29 |
| 164 | 594925.0 | 695471.3 | -9.87 | Elevation in NGVD29 |
| 165 | 594926.9 | 695463.1 | -9.57 | Elevation in NGVD29 |
| 166 | 594928.4 | 695455.4 | -9.27 | Elevation in NGVD29 |
| 167 | 594929.9 | 695446.7 | -8.97 | Elevation in NGVD29 |
| 168 | 594931.1 | 695437.5 | -8.57 | Elevation in NGVD29 |
| 169 | 594932.2 | 695430.4 | -8.27 | Elevation in NGVD29 |
| 170 | 594933.0 | 695423.0 | -7.97 | Elevation in NGVD29 |
| 171 | 594933.1 | 695414.6 | -7.67 | Elevation in NGVD29 |
| 172 | 594932.6 | 695407.5 | -7.17 | Elevation in NGVD29 |
| 173 | 594932.1 | 695399.8 | -6.97 | Elevation in NGVD29 |
| 174 | 594931.3 | 695392.4 | -6.37 | Elevation in NGVD29 |
| 175 | 594930.3 | 695384.9 | -5.97 | Elevation in NGVD29 |
| 176 | 594929.2 | 695377.5 | -5.87 | Elevation in NGVD29 |
| 177 | 594927.3 | 695369.9 | -5.47 | Elevation in NGVD29 |
| 178 | 594925.6 | 695363.1 | -5.08 | Elevation in NGVD29 |
| 179 | 594923.6 | 695354.3 | -4.78 | Elevation in NGVD29 |
| 180 | 594922.1 | 695347.0 | -4.38 | Elevation in NGVD29 |
| 181 | 594920.7 | 695338.6 | -4.08 | Elevation in NGVD29 |
| 182 | 594920.0 | 695331.1 | -3.68 | Elevation in NGVD29 |
| 183 | 594919.6 | 695323.6 | -3.48 | Elevation in NGVD29 |
| 184 | 594919.6 | 695316.5 | -2.98 | Elevation in NGVD29 |
| 185 | 594921.0 | 695301.7 | -3.17 | Elevation in NGVD29 |
| 186 | 594922.2 | 695293.0 | -2.97 | Elevation in NGVD29 |
| 187 | 594800.6 | 695738.3 | -3.6 | Elevation in NGVD29 |
| 188 | 594794.6 | 695734.4 | -4.4 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 189 | 594790.5 | 695728.0 | -5.2 | Elevation in NGVD29 |
| 190 | 594789.4 | 695720.4 | -6.41 | Elevation in NGVD29 |
| 191 | 594790.1 | 695713.2 | -7.72 | Elevation in NGVD29 |
| 192 | 594791.1 | 695705.7 | -8.82 | Elevation in NGVD29 |
| 193 | 594792.2 | 695698.7 | -9.83 | Elevation in NGVD29 |
| 194 | 594793.5 | 695691.7 | -10.6 | Elevation in NGVD29 |
| 195 | 594795.3 | 695684.4 | -11.3 | Elevation in NGVD29 |
| 196 | 594796.8 | 695677.4 | -11.8 | Elevation in NGVD29 |
| 197 | 594798.3 | 695670.5 | -12.2 | Elevation in NGVD29 |
| 198 | 594800.6 | 695659.3 | -12.4 | Elevation in NGVD29 |
| 199 | 594801.6 | 695652.3 | -12.8 | Elevation in NGVD29 |
| 200 | 594802.6 | 695644.2 | -13.2 | Elevation in NGVD29 |
| 201 | 594803.1 | 695637.2 | -12.8 | Elevation in NGVD29 |
| 202 | 594803.8 | 695629.1 | -12.7 | Elevation in NGVD29 |
| 203 | 594804.3 | 695619.8 | -12.7 | Elevation in NGVD29 |
| 204 | 594804.8 | 695611.8 | -12.9 | Elevation in NGVD29 |
| 205 | 594805.1 | 695604.8 | -12.8 | Elevation in NGVD29 |
| 206 | 594805.6 | 695597.7 | -13.1 | Elevation in NGVD29 |
| 207 | 594806.1 | 695590.6 | -12.7 | Elevation in NGVD29 |
| 208 | 594807.4 | 695578.3 | -12.8 | Elevation in NGVD29 |
| 209 | 594808.2 | 695570.2 | -13 | Elevation in NGVD29 |
| 210 | 594809.3 | 695559.7 | -12.8 | Elevation in NGVD29 |
| 211 | 594810.7 | 695546.6 | -12.7 | Elevation in NGVD29 |
| 212 | 594812.1 | 695533.7 | -12.9 | Elevation in NGVD29 |
| 213 | 594813.4 | 695521.8 | -12.3 | Elevation in NGVD29 |
| 214 | 594814.4 | 695514.5 | -12.6 | Elevation in NGVD29 |
| 215 | 594815.6 | 695503.2 | -12 | Elevation in NGVD29 |
| 216 | 594816.0 | 695493.1 | -11.5 | Elevation in NGVD29 |
| 217 | 594815.9 | 695480.9 | -11.1 | Elevation in NGVD29 |
| 218 | 594815.8 | 695473.1 | -10.7 | Elevation in NGVD29 |
| 219 | 594815.5 | 695465.3 | -10.2 | Elevation in NGVD29 |
| 220 | 594815.3 | 695456.3 | -9.83 | Elevation in NGVD29 |
| 221 | 594815.1 | 695445.9 | -9.53 | Elevation in NGVD29 |
| 222 | 594815.4 | 695436.4 | -9.14 | Elevation in NGVD29 |
| 223 | 594816.1 | 695429.3 | -8.94 | Elevation in NGVD29 |
| 224 | 594817.5 | 695421.9 | -8.64 | Elevation in NGVD29 |
| 225 | 594819.0 | 695415.1 | -8.24 | Elevation in NGVD29 |
| 226 | 594820.7 | 695407.5 | -7.94 | Elevation in NGVD29 |
| 227 | 594822.0 | 695400.2 | -7.53 | Elevation in NGVD29 |
| 228 | 594823.3 | 695393.2 | -7.23 | Elevation in NGVD29 |
| 229 | 594824.2 | 695386.0 | -6.83 | Elevation in NGVD29 |
| 230 | 594825.1 | 695377.4 | -6.33 | Elevation in NGVD29 |
| 231 | 594825.8 | 695368.1 | -5.92 | Elevation in NGVD29 |
| 232 | 594826.5 | 695358.8 | -5.42 | Elevation in NGVD29 |
| 233 | 594827.0 | 695349.6 | -5.11 | Elevation in NGVD29 |
| 234 | 594826.9 | 695342.5 | -4.71 | Elevation in NGVD29 |
| 235 | 594826.8 | 695335.4 | -4.42 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 236 | 594826.3 | 695327.4 | -4.13 | Elevation in NGVD29 |
| 237 | 594825.9 | 695319.7 | -3.83 | Elevation in NGVD29 |
| 238 | 594825.3 | 695310.2 | -3.34 | Elevation in NGVD29 |
| 239 | 594825.2 | 695302.9 | -3.04 | Elevation in NGVD29 |
| 240 | 594824.9 | 695295.6 | -3.54 | Elevation in NGVD29 |
| 241 | 594804.1 | 695310.4 | -3.33 | Elevation in NGVD29 |
| 242 | 594798.9 | 695316.7 | -3.63 | Elevation in NGVD29 |
| 243 | 594794.0 | 695322.0 | -3.82 | Elevation in NGVD29 |
| 244 | 594789.1 | 695327.4 | -4.01 | Elevation in NGVD29 |
| 245 | 594784.4 | 695332.8 | -4.39 | Elevation in NGVD29 |
| 246 | 594780.8 | 695339.4 | -4.68 | Elevation in NGVD29 |
| 247 | 594778.6 | 695346.7 | -4.98 | Elevation in NGVD29 |
| 248 | 594777.4 | 695353.8 | -5.38 | Elevation in NGVD29 |
| 249 | 594777.1 | 695362.0 | -5.78 | Elevation in NGVD29 |
| 250 | 594778.1 | 695369.9 | -6.18 | Elevation in NGVD29 |
| 251 | 594779.6 | 695377.4 | -6.48 | Elevation in NGVD29 |
| 252 | 594781.3 | 695384.5 | -6.68 | Elevation in NGVD29 |
| 253 | 594783.3 | 695392.1 | -7.08 | Elevation in NGVD29 |
| 254 | 594785.5 | 695401.1 | -7.38 | Elevation in NGVD29 |
| 255 | 594786.7 | 695408.5 | -7.78 | Elevation in NGVD29 |
| 256 | 594787.6 | 695416.1 | -8.08 | Elevation in NGVD29 |
| 257 | 594787.6 | 695423.1 | -8.38 | Elevation in NGVD29 |
| 258 | 594786.9 | 695430.8 | -8.68 | Elevation in NGVD29 |
| 259 | 594785.3 | 695439.6 | -8.98 | Elevation in NGVD29 |
| 260 | 594783.1 | 695446.8 | -9.28 | Elevation in NGVD29 |
| 261 | 594780.8 | 695453.5 | -9.58 | Elevation in NGVD29 |
| 262 | 594777.5 | 695462.9 | -10.1 | Elevation in NGVD29 |
| 263 | 594775.2 | 695469.9 | -10.4 | Elevation in NGVD29 |
| 264 | 594772.8 | 695477.8 | -10.8 | Elevation in NGVD29 |
| 265 | 594770.5 | 695484.7 | -11.1 | Elevation in NGVD29 |
| 266 | 594768.0 | 695492.3 | -11.5 | Elevation in NGVD29 |
| 267 | 594765.8 | 695499.2 | -11.7 | Elevation in NGVD29 |
| 268 | 594763.4 | 695507.3 | -11.9 | Elevation in NGVD29 |
| 269 | 594761.5 | 695514.2 | -12.4 | Elevation in NGVD29 |
| 270 | 594759.8 | 695521.0 | -12.9 | Elevation in NGVD29 |
| 271 | 594757.9 | 695528.9 | -13 | Elevation in NGVD29 |
| 272 | 594756.4 | 695536.6 | -12.8 | Elevation in NGVD29 |
| 273 | 594755.3 | 695546.7 | -12.9 | Elevation in NGVD29 |
| 274 | 594754.9 | 695554.1 | -13.4 | Elevation in NGVD29 |
| 275 | 594754.4 | 695561.5 | -12.9 | Elevation in NGVD29 |
| 276 | 594753.8 | 695569.3 | -12.5 | Elevation in NGVD29 |
| 277 | 594752.5 | 695579.6 | -12.7 | Elevation in NGVD29 |
| 278 | 594751.7 | 695587.0 | -12.4 | Elevation in NGVD29 |
| 279 | 594751.1 | 695594.3 | -12.6 | Elevation in NGVD29 |
| 280 | 594750.6 | 695605.7 | -12.5 | Elevation in NGVD29 |
| 281 | 594750.6 | 695613.3 | -12.5 | Elevation in NGVD29 |
| 282 | 594750.4 | 695620.8 | -12.4 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 283 | 594750.1 | 695627.9 | -12.4 | Elevation in NGVD29 |
| 284 | 594749.9 | 695638.1 | -12.8 | Elevation in NGVD29 |
| 285 | 594749.4 | 695648.9 | -12.7 | Elevation in NGVD29 |
| 286 | 594748.9 | 695658.3 | -12.6 | Elevation in NGVD29 |
| 287 | 594748.3 | 695665.9 | -12.5 | Elevation in NGVD29 |
| 288 | 594747.2 | 695675.4 | -11.5 | Elevation in NGVD29 |
| 289 | 594746.2 | 695682.6 | -11.1 | Elevation in NGVD29 |
| 290 | 594744.8 | 695690.2 | -10.4 | Elevation in NGVD29 |
| 291 | 594743.1 | 695697.2 | -9.47 | Elevation in NGVD29 |
| 292 | 594741.1 | 695704.2 | -8.46 | Elevation in NGVD29 |
| 293 | 594705.3 | 695726.9 | -3.85 | Elevation in NGVD29 |
| 294 | 594700.2 | 695722.0 | -4.45 | Elevation in NGVD29 |
| 295 | 594696.5 | 695715.9 | -5.26 | Elevation in NGVD29 |
| 296 | 594694.8 | 695708.9 | -6.07 | Elevation in NGVD29 |
| 297 | 594695.2 | 695701.5 | -7.58 | Elevation in NGVD29 |
| 298 | 594696.0 | 695693.6 | -8.68 | Elevation in NGVD29 |
| 299 | 594697.0 | 695686.4 | -9.58 | Elevation in NGVD29 |
| 300 | 594697.8 | 695679.2 | -10.5 | Elevation in NGVD29 |
| 301 | 594699.0 | 695672.1 | -11.1 | Elevation in NGVD29 |
| 302 | 594700.4 | 695664.2 | -11.7 | Elevation in NGVD29 |
| 303 | 594702.2 | 695651.9 | -12 | Elevation in NGVD29 |
| 304 | 594703.2 | 695643.6 | -12.5 | Elevation in NGVD29 |
| 305 | 594704.1 | 695634.4 | -12.9 | Elevation in NGVD29 |
| 306 | 594704.8 | 695623.9 | -12.6 | Elevation in NGVD29 |
| 307 | 594705.5 | 695614.7 | -12.5 | Elevation in NGVD29 |
| 308 | 594706.4 | 695601.3 | -12.4 | Elevation in NGVD29 |
| 309 | 594707.4 | 695589.0 | -12.5 | Elevation in NGVD29 |
| 310 | 594708.2 | 695581.8 | -12.5 | Elevation in NGVD29 |
| 311 | 594709.3 | 695572.7 | -12.4 | Elevation in NGVD29 |
| 312 | 594710.3 | 695565.2 | -12.8 | Elevation in NGVD29 |
| 313 | 594712.1 | 695553.6 | -12.7 | Elevation in NGVD29 |
| 314 | 594713.4 | 695545.6 | -12.8 | Elevation in NGVD29 |
| 315 | 594715.0 | 695535.3 | -12.6 | Elevation in NGVD29 |
| 316 | 594716.3 | 695525.5 | -12.8 | Elevation in NGVD29 |
| 317 | 594717.2 | 695518.0 | -12.4 | Elevation in NGVD29 |
| 318 | 594718.5 | 695505.5 | -12.4 | Elevation in NGVD29 |
| 319 | 594719.2 | 695493.8 | -12.2 | Elevation in NGVD29 |
| 320 | 594719.4 | 695486.6 | -11.8 | Elevation in NGVD29 |
| 321 | 594719.6 | 695478.9 | -11.3 | Elevation in NGVD29 |
| 322 | 594719.8 | 695467.7 | -10.8 | Elevation in NGVD29 |
| 323 | 594719.9 | 695458.7 | -10.5 | Elevation in NGVD29 |
| 324 | 594719.8 | 695448.2 | -10.1 | Elevation in NGVD29 |
| 325 | 594720.0 | 695440.8 | -9.82 | Elevation in NGVD29 |
| 326 | 594719.9 | 695433.1 | -9.52 | Elevation in NGVD29 |
| 327 | 594720.3 | 695423.7 | -9.23 | Elevation in NGVD29 |
| 328 | 594720.8 | 695416.3 | -8.93 | Elevation in NGVD29 |
| 329 | 594721.7 | 695408.5 | -8.43 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 330 | 594723.2 | 695399.9 | -8.04 | Elevation in NGVD29 |
| 331 | 594725.2 | 695392.1 | -7.74 | Elevation in NGVD29 |
| 332 | 594727.4 | 695384.5 | -7.43 | Elevation in NGVD29 |
| 333 | 594729.7 | 695377.2 | -7.13 | Elevation in NGVD29 |
| 334 | 594732.2 | 695369.6 | -6.63 | Elevation in NGVD29 |
| 335 | 594735.0 | 695361.8 | -6.23 | Elevation in NGVD29 |
| 336 | 594737.4 | 695355.0 | -5.83 | Elevation in NGVD29 |
| 337 | 594740.0 | 695347.1 | -5.43 | Elevation in NGVD29 |
| 338 | 594741.8 | 695340.3 | -5.23 | Elevation in NGVD29 |
| 339 | 594743.0 | 695332.7 | -4.93 | Elevation in NGVD29 |
| 340 | 594743.6 | 695324.2 | -4.42 | Elevation in NGVD29 |
| 341 | 594743.5 | 695316.6 | -4.12 | Elevation in NGVD29 |
| 342 | 594742.8 | 695309.4 | -3.92 | Elevation in NGVD29 |
| 343 | 594741.5 | 695301.5 | -3.62 | Elevation in NGVD29 |
| 344 | 594739.0 | 695291.6 | -3.23 | Elevation in NGVD29 |
| 345 | 594736.8 | 695283.6 | -3.04 | Elevation in NGVD29 |
| 346 | 594734.8 | 695276.1 | -3.44 | Elevation in NGVD29 |
| 347 | 594697.7 | 695252.8 | -3.19 | Elevation in NGVD29 |
| 348 | 594692.6 | 695258.5 | -3.19 | Elevation in NGVD29 |
| 349 | 594689.4 | 695265.9 | -3.18 | Elevation in NGVD29 |
| 350 | 594685.5 | 695280.7 | -3.18 | Elevation in NGVD29 |
| 351 | 594683.7 | 695287.7 | -3.38 | Elevation in NGVD29 |
| 352 | 594681.9 | 695294.4 | -3.68 | Elevation in NGVD29 |
| 353 | 594680.1 | 695302.1 | -3.97 | Elevation in NGVD29 |
| 354 | 594678.3 | 695310.4 | -4.17 | Elevation in NGVD29 |
| 355 | 594676.9 | 695318.1 | -4.57 | Elevation in NGVD29 |
| 356 | 594675.8 | 695326.4 | -4.87 | Elevation in NGVD29 |
| 357 | 594675.0 | 695333.7 | -5.17 | Elevation in NGVD29 |
| 358 | 594674.2 | 695341.3 | -5.57 | Elevation in NGVD29 |
| 359 | 594673.7 | 695348.4 | -5.87 | Elevation in NGVD29 |
| 360 | 594673.2 | 695355.6 | -6.27 | Elevation in NGVD29 |
| 361 | 594673.0 | 695363.8 | -6.57 | Elevation in NGVD29 |
| 362 | 594673.0 | 695371.2 | -7.07 | Elevation in NGVD29 |
| 363 | 594673.3 | 695379.9 | -7.47 | Elevation in NGVD29 |
| 364 | 594673.5 | 695388.5 | -7.77 | Elevation in NGVD29 |
| 365 | 594673.5 | 695397.5 | -8.17 | Elevation in NGVD29 |
| 366 | 594673.2 | 695405.2 | -8.67 | Elevation in NGVD29 |
| 367 | 594673.3 | 695413.1 | -8.87 | Elevation in NGVD29 |
| 368 | 594673.1 | 695423.7 | -9.27 | Elevation in NGVD29 |
| 369 | 594672.8 | 695432.1 | -9.47 | Elevation in NGVD29 |
| 370 | 594672.2 | 695440.7 | -9.88 | Elevation in NGVD29 |
| 371 | 594671.5 | 695448.8 | -10.2 | Elevation in NGVD29 |
| 372 | 594670.8 | 695455.8 | -10.5 | Elevation in NGVD29 |
| 373 | 594669.9 | 695463.5 | -10.9 | Elevation in NGVD29 |
| 374 | 594669.3 | 695470.7 | -11.2 | Elevation in NGVD29 |
| 375 | 594668.6 | 695477.9 | -11.7 | Elevation in NGVD29 |
| 376 | 594667.9 | 695485.5 | -12 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 377 | 594666.8 | 695498.8 | -12.2 | Elevation in NGVD29 |
| 378 | 594666.0 | 695506.3 | -12.8 | Elevation in NGVD29 |
| 379 | 594665.2 | 695517.2 | -12.7 | Elevation in NGVD29 |
| 380 | 594664.6 | 695524.8 | -12.9 | Elevation in NGVD29 |
| 381 | 594663.7 | 695536.1 | -12.7 | Elevation in NGVD29 |
| 382 | 594663.1 | 695544.1 | -13.2 | Elevation in NGVD29 |
| 383 | 594662.4 | 695551.7 | -12.6 | Elevation in NGVD29 |
| 384 | 594660.8 | 695563.5 | -12.4 | Elevation in NGVD29 |
| 385 | 594659.1 | 695575.2 | -12.5 | Elevation in NGVD29 |
| 386 | 594658.1 | 695582.7 | -12.5 | Elevation in NGVD29 |
| 387 | 594656.5 | 695594.3 | -12.5 | Elevation in NGVD29 |
| 388 | 594655.0 | 695603.7 | -12.5 | Elevation in NGVD29 |
| 389 | 594653.6 | 695612.0 | -12.6 | Elevation in NGVD29 |
| 390 | 594652.3 | 695619.1 | -12.8 | Elevation in NGVD29 |
| 391 | 594649.6 | 695633.1 | -12.2 | Elevation in NGVD29 |
| 392 | 594647.2 | 695645.0 | -12.7 | Elevation in NGVD29 |
| 393 | 594645.7 | 695652.6 | -12.3 | Elevation in NGVD29 |
| 394 | 594644.0 | 695659.8 | -11.9 | Elevation in NGVD29 |
| 395 | 594642.0 | 695666.7 | -11.5 | Elevation in NGVD29 |
| 396 | 594639.4 | 695674.8 | -10.8 | Elevation in NGVD29 |
| 397 | 594637.4 | 695681.7 | -9.78 | Elevation in NGVD29 |
| 398 | 594635.2 | 695688.4 | -8.88 | Elevation in NGVD29 |
| 399 | 594632.6 | 695695.9 | -7.88 | Elevation in NGVD29 |
| 400 | 594605.4 | 695715.4 | -4.1 | Elevation in NGVD29 |
| 401 | 594598.2 | 695712.8 | -4.31 | Elevation in NGVD29 |
| 402 | 594591.0 | 695707.5 | -4.7 | Elevation in NGVD29 |
| 403 | 594586.7 | 695701.8 | -5.71 | Elevation in NGVD29 |
| 404 | 594584.5 | 695695.1 | -6.81 | Elevation in NGVD29 |
| 405 | 594583.6 | 695688.0 | -7.82 | Elevation in NGVD29 |
| 406 | 594583.3 | 695680.9 | -8.82 | Elevation in NGVD29 |
| 407 | 594583.3 | 695672.2 | -9.72 | Elevation in NGVD29 |
| 408 | 594583.9 | 695664.6 | -10.5 | Elevation in NGVD29 |
| 409 | 594585.0 | 695657.2 | -11.1 | Elevation in NGVD29 |
| 410 | 594586.9 | 695650.3 | -11.7 | Elevation in NGVD29 |
| 411 | 594589.2 | 695643.4 | -12.1 | Elevation in NGVD29 |
| 412 | 594591.8 | 695636.2 | -12.4 | Elevation in NGVD29 |
| 413 | 594596.2 | 695625.7 | -12.8 | Elevation in NGVD29 |
| 414 | 594598.8 | 695619.1 | -12.9 | Elevation in NGVD29 |
| 415 | 594601.4 | 695612.3 | -12.9 | Elevation in NGVD29 |
| 416 | 594604.1 | 695605.4 | -12.5 | Elevation in NGVD29 |
| 417 | 594607.7 | 695596.8 | -12.5 | Elevation in NGVD29 |
| 418 | 594612.3 | 695586.1 | -12.5 | Elevation in NGVD29 |
| 419 | 594616.9 | 695575.5 | -12.5 | Elevation in NGVD29 |
| 420 | 594619.6 | 695568.8 | -12.6 | Elevation in NGVD29 |
| 421 | 594622.3 | 695561.8 | -12.4 | Elevation in NGVD29 |
| 422 | 594625.1 | 695554.6 | -12.7 | Elevation in NGVD29 |
| 423 | 594629.0 | 695541.9 | -12.7 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 424 | 594630.5 | 695534.0 | -13 | Elevation in NGVD29 |
| 425 | 594631.4 | 695524.4 | -12.8 | Elevation in NGVD29 |
| 426 | 594631.6 | 695516.5 | -13 | Elevation in NGVD29 |
| 427 | 594631.6 | 695508.7 | -13 | Elevation in NGVD29 |
| 428 | 594631.4 | 695501.7 | -12.8 | Elevation in NGVD29 |
| 429 | 594631.2 | 695490.5 | -12.6 | Elevation in NGVD29 |
| 430 | 594631.1 | 695481.3 | -12.4 | Elevation in NGVD29 |
| 431 | 594631.2 | 695473.6 | -12.1 | Elevation in NGVD29 |
| 432 | 594631.7 | 695465.6 | -11.7 | Elevation in NGVD29 |
| 433 | 594632.4 | 695457.5 | -11.3 | Elevation in NGVD29 |
| 434 | 594633.2 | 695450.0 | -10.8 | Elevation in NGVD29 |
| 435 | 594634.1 | 695442.0 | -10.5 | Elevation in NGVD29 |
| 436 | 594634.8 | 695434.0 | -10.1 | Elevation in NGVD29 |
| 437 | 594635.4 | 695426.1 | -9.85 | Elevation in NGVD29 |
| 438 | 594636.0 | 695417.7 | -9.54 | Elevation in NGVD29 |
| 439 | 594636.4 | 695410.6 | -9.24 | Elevation in NGVD29 |
| 440 | 594636.7 | 695403.1 | -8.93 | Elevation in NGVD29 |
| 441 | 594636.8 | 695395.6 | -8.73 | Elevation in NGVD29 |
| 442 | 594636.6 | 695388.4 | -8.33 | Elevation in NGVD29 |
| 443 | 594636.4 | 695381.3 | -8.03 | Elevation in NGVD29 |
| 444 | 594635.8 | 695372.5 | -7.62 | Elevation in NGVD29 |
| 445 | 594635.4 | 695364.5 | -7.22 | Elevation in NGVD29 |
| 446 | 594634.9 | 695357.3 | -6.92 | Elevation in NGVD29 |
| 447 | 594634.4 | 695350.1 | -6.62 | Elevation in NGVD29 |
| 448 | 594633.6 | 695342.6 | -6.22 | Elevation in NGVD29 |
| 449 | 594632.9 | 695334.9 | -5.82 | Elevation in NGVD29 |
| 450 | 594632.1 | 695327.3 | -5.42 | Elevation in NGVD29 |
| 451 | 594631.5 | 695319.6 | -5.12 | Elevation in NGVD29 |
| 452 | 594630.9 | 695311.6 | -4.92 | Elevation in NGVD29 |
| 453 | 594630.3 | 695303.9 | -4.52 | Elevation in NGVD29 |
| 454 | 594629.9 | 695296.1 | -4.21 | Elevation in NGVD29 |
| 455 | 594629.6 | 695289.1 | -3.91 | Elevation in NGVD29 |
| 456 | 594629.7 | 695281.3 | -3.61 | Elevation in NGVD29 |
| 457 | 594629.8 | 695274.0 | -3.31 | Elevation in NGVD29 |
| 458 | 594630.1 | 695265.5 | -3.11 | Elevation in NGVD29 |
| 459 | 594630.8 | 695240.2 | -3.4 | Elevation in NGVD29 |
| 460 | 594514.3 | 695704.6 | -3.85 | Elevation in NGVD29 |
| 461 | 594507.1 | 695703.0 | -4.86 | Elevation in NGVD29 |
| 462 | 594500.3 | 695699.6 | -5.17 | Elevation in NGVD29 |
| 463 | 594494.9 | 695694.6 | -5.57 | Elevation in NGVD29 |
| 464 | 594491.4 | 695688.5 | -6.48 | Elevation in NGVD29 |
| 465 | 594489.2 | 695681.5 | -7.28 | Elevation in NGVD29 |
| 466 | 594488.1 | 695674.4 | -8.18 | Elevation in NGVD29 |
| 467 | 594488.0 | 695666.8 | -9.09 | Elevation in NGVD29 |
| 468 | 594488.8 | 695659.5 | -9.79 | Elevation in NGVD29 |
| 469 | 594490.8 | 695652.6 | -10.3 | Elevation in NGVD29 |
| 470 | 594493.3 | 695645.5 | -10.9 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 471 | 594496.0 | 695638.2 | -11.4 | Elevation in NGVD29 |
| 472 | 594498.3 | 695631.2 | -11.8 | Elevation in NGVD29 |
| 473 | 594500.4 | 695623.7 | -12.2 | Elevation in NGVD29 |
| 474 | 594502.5 | 695616.0 | -12.6 | Elevation in NGVD29 |
| 475 | 594505.4 | 695605.1 | -12.6 | Elevation in NGVD29 |
| 476 | 594509.2 | 695592.4 | -12.1 | Elevation in NGVD29 |
| 477 | 594511.8 | 695584.4 | -12.2 | Elevation in NGVD29 |
| 478 | 594514.1 | 695577.4 | -12.2 | Elevation in NGVD29 |
| 479 | 594517.0 | 695567.2 | -12.1 | Elevation in NGVD29 |
| 480 | 594520.2 | 695554.7 | -12.2 | Elevation in NGVD29 |
| 481 | 594522.2 | 695545.6 | -12.4 | Elevation in NGVD29 |
| 482 | 594523.7 | 695535.8 | -12.7 | Elevation in NGVD29 |
| 483 | 594524.4 | 695523.6 | -12.3 | Elevation in NGVD29 |
| 484 | 594524.3 | 695516.4 | -12.9 | Elevation in NGVD29 |
| 485 | 594523.7 | 695507.0 | -12.7 | Elevation in NGVD29 |
| 486 | 594522.8 | 695499.8 | -12.9 | Elevation in NGVD29 |
| 487 | 594521.1 | 695490.3 | -12.5 | Elevation in NGVD29 |
| 488 | 594519.2 | 695481.4 | -12 | Elevation in NGVD29 |
| 489 | 594516.6 | 695469.0 | -12.2 | Elevation in NGVD29 |
| 490 | 594515.4 | 695461.9 | -12 | Elevation in NGVD29 |
| 491 | 594514.1 | 695452.8 | -11.9 | Elevation in NGVD29 |
| 492 | 594512.8 | 695444.4 | -11.7 | Elevation in NGVD29 |
| 493 | 594511.9 | 695437.4 | -11.1 | Elevation in NGVD29 |
| 494 | 594511.1 | 695430.0 | -10.7 | Elevation in NGVD29 |
| 495 | 594510.6 | 695421.5 | -10.2 | Elevation in NGVD29 |
| 496 | 594510.4 | 695413.1 | -9.96 | Elevation in NGVD29 |
| 497 | 594510.2 | 695405.7 | -9.56 | Elevation in NGVD29 |
| 498 | 594510.1 | 695396.3 | -9.26 | Elevation in NGVD29 |
| 499 | 594510.1 | 695388.1 | -8.86 | Elevation in NGVD29 |
| 500 | 594510.6 | 695375.2 | -8.56 | Elevation in NGVD29 |
| 501 | 594511.0 | 695367.8 | -8.16 | Elevation in NGVD29 |
| 502 | 594511.4 | 695360.4 | -7.96 | Elevation in NGVD29 |
| 503 | 594511.8 | 695353.1 | -7.46 | Elevation in NGVD29 |
| 504 | 594512.5 | 695345.8 | -7.26 | Elevation in NGVD29 |
| 505 | 594513.0 | 695338.6 | -6.86 | Elevation in NGVD29 |
| 506 | 594513.7 | 695331.3 | -6.55 | Elevation in NGVD29 |
| 507 | 594514.4 | 695323.7 | -6.25 | Elevation in NGVD29 |
| 508 | 594515.0 | 695316.1 | -5.85 | Elevation in NGVD29 |
| 509 | 594515.6 | 695307.3 | -5.46 | Elevation in NGVD29 |
| 510 | 594516.2 | 695298.1 | -5.05 | Elevation in NGVD29 |
| 511 | 594516.5 | 695290.2 | -4.65 | Elevation in NGVD29 |
| 512 | 594516.8 | 695282.1 | -4.35 | Elevation in NGVD29 |
| 513 | 594516.9 | 695274.5 | -4.05 | Elevation in NGVD29 |
| 514 | 594517.1 | 695265.5 | -3.75 | Elevation in NGVD29 |
| 515 | 594517.2 | 695257.5 | -3.35 | Elevation in NGVD29 |
| 516 | 594517.3 | 695249.6 | -3.15 | Elevation in NGVD29 |
| 517 | 594509.9 | 695218.1 | -3.14 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 518 | 594503.0 | 695220.0 | -3.21 | Elevation in NGVD29 |
| 519 | 594497.0 | 695225.8 | -3.26 | Elevation in NGVD29 |
| 520 | 594492.8 | 695231.4 | -3.31 | Elevation in NGVD29 |
| 521 | 594489.5 | 695238.7 | -3.36 | Elevation in NGVD29 |
| 522 | 594487.5 | 695246.0 | -3.4 | Elevation in NGVD29 |
| 523 | 594486.3 | 695254.2 | -3.45 | Elevation in NGVD29 |
| 524 | 594486.0 | 695261.7 | -3.49 | Elevation in NGVD29 |
| 525 | 594486.2 | 695269.5 | -3.81 | Elevation in NGVD29 |
| 526 | 594486.9 | 695276.6 | -4.11 | Elevation in NGVD29 |
| 527 | 594487.8 | 695285.2 | -4.51 | Elevation in NGVD29 |
| 528 | 594488.7 | 695292.4 | -4.71 | Elevation in NGVD29 |
| 529 | 594489.3 | 695300.1 | -5.01 | Elevation in NGVD29 |
| 530 | 594489.6 | 695307.5 | -5.31 | Elevation in NGVD29 |
| 531 | 594489.3 | 695314.5 | -5.71 | Elevation in NGVD29 |
| 532 | 594489.0 | 695321.7 | -6.01 | Elevation in NGVD29 |
| 533 | 594488.3 | 695329.0 | -6.41 | Elevation in NGVD29 |
| 534 | 594487.0 | 695337.8 | -6.81 | Elevation in NGVD29 |
| 535 | 594485.3 | 695345.2 | -7.01 | Elevation in NGVD29 |
| 536 | 594483.1 | 695352.4 | -7.41 | Elevation in NGVD29 |
| 537 | 594480.0 | 695360.8 | -7.81 | Elevation in NGVD29 |
| 538 | 594477.5 | 695367.5 | -8.11 | Elevation in NGVD29 |
| 539 | 594474.5 | 695375.0 | -8.5 | Elevation in NGVD29 |
| 540 | 594472.2 | 695381.8 | -8.8 | Elevation in NGVD29 |
| 541 | 594470.4 | 695388.9 | -9.1 | Elevation in NGVD29 |
| 542 | 594469.2 | 695397.5 | -9.3 | Elevation in NGVD29 |
| 543 | 594468.1 | 695404.4 | -9.5 | Elevation in NGVD29 |
| 544 | 594467.6 | 695411.7 | -9.71 | Elevation in NGVD29 |
| 545 | 594467.3 | 695421.3 | -10.2 | Elevation in NGVD29 |
| 546 | 594467.5 | 695428.4 | -10.5 | Elevation in NGVD29 |
| 547 | 594467.7 | 695435.6 | -10.9 | Elevation in NGVD29 |
| 548 | 594467.8 | 695445.2 | -11.2 | Elevation in NGVD29 |
| 549 | 594467.9 | 695456.8 | -11.5 | Elevation in NGVD29 |
| 550 | 594467.8 | 695464.4 | -11.5 | Elevation in NGVD29 |
| 551 | 594467.8 | 695471.5 | -12 | Elevation in NGVD29 |
| 552 | 594467.3 | 695479.1 | -12.3 | Elevation in NGVD29 |
| 553 | 594466.8 | 695486.4 | -12.6 | Elevation in NGVD29 |
| 554 | 594465.8 | 695499.6 | -12.5 | Elevation in NGVD29 |
| 555 | 594465.0 | 695506.7 | -12.4 | Elevation in NGVD29 |
| 556 | 594463.2 | 695519.0 | -12.1 | Elevation in NGVD29 |
| 557 | 594461.9 | 695526.9 | -12.4 | Elevation in NGVD29 |
| 558 | 594460.6 | 695534.4 | -12 | Elevation in NGVD29 |
| 559 | 594459.0 | 695541.8 | -12.6 | Elevation in NGVD29 |
| 560 | 594457.6 | 695548.7 | -12.2 | Elevation in NGVD29 |
| 561 | 594456.1 | 695557.1 | -12.1 | Elevation in NGVD29 |
| 562 | 594454.1 | 695568.2 | -12.1 | Elevation in NGVD29 |
| 563 | 594452.9 | 695577.3 | -12 | Elevation in NGVD29 |
| 564 | 594451.8 | 695589.6 | -12 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 565 | 594451.5 | 695596.9 | -12.2 | Elevation in NGVD29 |
| 566 | 594451.1 | 695604.1 | -13 | Elevation in NGVD29 |
| 567 | 594450.9 | 695611.8 | -12.5 | Elevation in NGVD29 |
| 568 | 594450.4 | 695619.1 | -12.7 | Elevation in NGVD29 |
| 569 | 594449.6 | 695626.2 | -11.8 | Elevation in NGVD29 |
| 570 | 594448.1 | 695634.8 | -10.6 | Elevation in NGVD29 |
| 571 | 594445.1 | 695645.8 | -10.6 | Elevation in NGVD29 |
| 572 | 594442.2 | 695654.2 | -10 | Elevation in NGVD29 |
| 573 | 594439.0 | 695661.8 | -9.4 | Elevation in NGVD29 |
| 574 | 594435.5 | 695669.0 | -8.69 | Elevation in NGVD29 |
| 575 | 594413.4 | 695691.6 | -4.27 | Elevation in NGVD29 |
| 576 | 594403.8 | 695692.1 | -4.38 | Elevation in NGVD29 |
| 577 | 594396.6 | 695690.3 | -4.69 | Elevation in NGVD29 |
| 578 | 594389.9 | 695686.1 | -5.29 | Elevation in NGVD29 |
| 579 | 594385.3 | 695680.4 | -5.89 | Elevation in NGVD29 |
| 580 | 594382.9 | 695673.6 | -7.19 | Elevation in NGVD29 |
| 581 | 594381.9 | 695662.8 | -7.6 | Elevation in NGVD29 |
| 582 | 594382.7 | 695655.4 | -8.7 | Elevation in NGVD29 |
| 583 | 594385.0 | 695648.5 | -9.5 | Elevation in NGVD29 |
| 584 | 594388.1 | 695641.8 | -10 | Elevation in NGVD29 |
| 585 | 594390.8 | 695635.1 | -10.3 | Elevation in NGVD29 |
| 586 | 594393.5 | 695628.4 | -10.9 | Elevation in NGVD29 |
| 587 | 594395.7 | 695621.7 | -11.3 | Elevation in NGVD29 |
| 588 | 594398.3 | 695614.3 | -11.9 | Elevation in NGVD29 |
| 589 | 594400.8 | 695607.3 | -12.3 | Elevation in NGVD29 |
| 590 | 594403.6 | 695599.7 | -12.6 | Elevation in NGVD29 |
| 591 | 594406.3 | 695591.6 | -12.6 | Elevation in NGVD29 |
| 592 | 594408.6 | 695584.0 | -12.1 | Elevation in NGVD29 |
| 593 | 594410.8 | 695575.9 | -12 | Elevation in NGVD29 |
| 594 | 594413.7 | 695564.8 | -12.1 | Elevation in NGVD29 |
| 595 | 594415.1 | 695557.7 | -12 | Elevation in NGVD29 |
| 596 | 594416.3 | 695548.9 | -12.1 | Elevation in NGVD29 |
| 597 | 594417.6 | 695537.8 | -12.2 | Elevation in NGVD29 |
| 598 | 594418.7 | 695525.4 | -12.1 | Elevation in NGVD29 |
| 599 | 594419.5 | 695518.0 | -12.3 | Elevation in NGVD29 |
| 600 | 594420.5 | 695509.4 | -12.5 | Elevation in NGVD29 |
| 601 | 594421.0 | 695501.9 | -12.4 | Elevation in NGVD29 |
| 602 | 594421.6 | 695494.0 | -12.5 | Elevation in NGVD29 |
| 603 | 594422.0 | 695486.8 | -12.5 | Elevation in NGVD29 |
| 604 | 594422.7 | 695476.9 | -12.4 | Elevation in NGVD29 |
| 605 | 594423.1 | 695468.5 | -12 | Elevation in NGVD29 |
| 606 | 594423.2 | 695459.8 | -12.1 | Elevation in NGVD29 |
| 607 | 594423.3 | 695448.7 | -11.9 | Elevation in NGVD29 |
| 608 | 594423.4 | 695441.5 | -11.7 | Elevation in NGVD29 |
| 609 | 594423.3 | 695433.8 | -11.5 | Elevation in NGVD29 |
| 610 | 594423.2 | 695425.2 | -11 | Elevation in NGVD29 |
| 611 | 594423.2 | 695417.1 | -10.6 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 612 | 594423.3 | 695409.2 | -10.2 | Elevation in NGVD29 |
| 613 | 594423.5 | 695401.5 | -9.72 | Elevation in NGVD29 |
| 614 | 594424.1 | 695393.8 | -9.12 | Elevation in NGVD29 |
| 615 | 594424.9 | 695385.3 | -9.11 | Elevation in NGVD29 |
| 616 | 594425.7 | 695377.7 | -9.01 | Elevation in NGVD29 |
| 617 | 594426.8 | 695367.1 | -8.71 | Elevation in NGVD29 |
| 618 | 594427.5 | 695359.1 | -8.21 | Elevation in NGVD29 |
| 619 | 594428.2 | 695351.9 | -8.01 | Elevation in NGVD29 |
| 620 | 594428.8 | 695344.6 | -7.7 | Elevation in NGVD29 |
| 621 | 594429.6 | 695337.4 | -7.4 | Elevation in NGVD29 |
| 622 | 594430.4 | 695328.8 | -7 | Elevation in NGVD29 |
| 623 | 594431.2 | 695321.6 | -6.7 | Elevation in NGVD29 |
| 624 | 594432.2 | 695313.1 | -6.3 | Elevation in NGVD29 |
| 625 | 594433.1 | 695305.5 | -5.9 | Elevation in NGVD29 |
| 626 | 594434.0 | 695297.9 | -5.6 | Elevation in NGVD29 |
| 627 | 594434.8 | 695290.6 | -5.2 | Elevation in NGVD29 |
| 628 | 594435.8 | 695282.3 | -4.9 | Elevation in NGVD29 |
| 629 | 594436.5 | 695274.7 | -4.5 | Elevation in NGVD29 |
| 630 | 594437.4 | 695266.3 | -4.1 | Elevation in NGVD29 |
| 631 | 594438.2 | 695258.3 | -3.8 | Elevation in NGVD29 |
| 632 | 594439.2 | 695250.2 | -3.51 | Elevation in NGVD29 |
| 633 | 594440.0 | 695242.5 | -3.11 | Elevation in NGVD29 |
| 634 | 594441.4 | 695230.6 | -3.5 | Elevation in NGVD29 |
| 635 | 594411.2 | 695211.4 | -3.35 | Elevation in NGVD29 |
| 636 | 594406.7 | 695219.7 | -3.32 | Elevation in NGVD29 |
| 637 | 594404.9 | 695226.6 | -3.3 | Elevation in NGVD29 |
| 638 | 594403.3 | 695234.5 | -3.28 | Elevation in NGVD29 |
| 639 | 594401.9 | 695242.7 | -3.26 | Elevation in NGVD29 |
| 640 | 594400.1 | 695249.8 | -3.56 | Elevation in NGVD29 |
| 641 | 594398.2 | 695257.1 | -3.76 | Elevation in NGVD29 |
| 642 | 594396.0 | 695263.9 | -4.16 | Elevation in NGVD29 |
| 643 | 594393.1 | 695271.7 | -4.56 | Elevation in NGVD29 |
| 644 | 594390.3 | 695278.6 | -4.86 | Elevation in NGVD29 |
| 645 | 594387.2 | 695286.0 | -5.26 | Elevation in NGVD29 |
| 646 | 594384.6 | 695292.7 | -5.55 | Elevation in NGVD29 |
| 647 | 594381.6 | 695300.7 | -5.95 | Elevation in NGVD29 |
| 648 | 594379.1 | 695307.4 | -6.25 | Elevation in NGVD29 |
| 649 | 594376.7 | 695314.3 | -6.55 | Elevation in NGVD29 |
| 650 | 594374.1 | 695322.0 | -6.95 | Elevation in NGVD29 |
| 651 | 594371.9 | 695329.4 | -7.35 | Elevation in NGVD29 |
| 652 | 594370.4 | 695337.6 | -7.66 | Elevation in NGVD29 |
| 653 | 594369.7 | 695344.8 | -7.96 | Elevation in NGVD29 |
| 654 | 594369.5 | 695351.8 | -8.26 | Elevation in NGVD29 |
| 655 | 594369.2 | 695360.3 | -8.46 | Elevation in NGVD29 |
| 656 | 594369.0 | 695368.1 | -8.76 | Elevation in NGVD29 |
| 657 | 594368.8 | 695376.1 | -9.16 | Elevation in NGVD29 |
| 658 | 594368.3 | 695383.7 | -9.26 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 659 | 594367.7 | 695393.1 | -9.46 | Elevation in NGVD29 |
| 660 | 594366.5 | 695402.5 | -9.96 | Elevation in NGVD29 |
| 661 | 594365.7 | 695409.5 | -10.4 | Elevation in NGVD29 |
| 662 | 594365.1 | 695418.8 | -11 | Elevation in NGVD29 |
| 663 | 594364.6 | 695426.9 | -11.4 | Elevation in NGVD29 |
| 664 | 594363.9 | 695437.3 | -11.7 | Elevation in NGVD29 |
| 665 | 594363.4 | 695445.6 | -11.9 | Elevation in NGVD29 |
| 666 | 594362.8 | 695454.3 | -11.8 | Elevation in NGVD29 |
| 667 | 594362.7 | 695461.4 | -12.1 | Elevation in NGVD29 |
| 668 | 594362.6 | 695471.1 | -12.3 | Elevation in NGVD29 |
| 669 | 594362.4 | 695478.6 | -12.2 | Elevation in NGVD29 |
| 670 | 594362.2 | 695486.9 | -12.1 | Elevation in NGVD29 |
| 671 | 594361.7 | 695494.2 | -12.4 | Elevation in NGVD29 |
| 672 | 594361.4 | 695501.3 | -12.4 | Elevation in NGVD29 |
| 673 | 594360.6 | 695513.2 | -12.2 | Elevation in NGVD29 |
| 674 | 594359.8 | 695521.8 | -12.2 | Elevation in NGVD29 |
| 675 | 594358.3 | 695532.4 | -12.1 | Elevation in NGVD29 |
| 676 | 594357.1 | 695539.8 | -12 | Elevation in NGVD29 |
| 677 | 594354.3 | 695551.2 | -12 | Elevation in NGVD29 |
| 678 | 594350.6 | 695563.9 | -11.9 | Elevation in NGVD29 |
| 679 | 594347.9 | 695571.8 | -12 | Elevation in NGVD29 |
| 680 | 594345.8 | 695579.4 | -12 | Elevation in NGVD29 |
| 681 | 594344.3 | 695588.2 | -12.7 | Elevation in NGVD29 |
| 682 | 594343.1 | 695595.5 | -12.4 | Elevation in NGVD29 |
| 683 | 594342.4 | 695602.7 | -12.3 | Elevation in NGVD29 |
| 684 | 594342.3 | 695610.8 | -11.9 | Elevation in NGVD29 |
| 685 | 594342.6 | 695618.2 | -11.5 | Elevation in NGVD29 |
| 686 | 594343.1 | 695626.5 | -11 | Elevation in NGVD29 |
| 687 | 594343.3 | 695634.1 | -10.3 | Elevation in NGVD29 |
| 688 | 594343.2 | 695641.4 | -9.74 | Elevation in NGVD29 |
| 689 | 594342.3 | 695652.0 | -9.24 | Elevation in NGVD29 |
| 690 | 594340.9 | 695659.5 | -8.74 | Elevation in NGVD29 |
| 691 | 594339.0 | 695666.6 | -7.64 | Elevation in NGVD29 |
| 692 | 594306.3 | 695688.0 | -3.66 | Elevation in NGVD29 |
| 693 | 594298.2 | 695685.7 | -3.77 | Elevation in NGVD29 |
| 694 | 594291.7 | 695681.8 | -4.28 | Elevation in NGVD29 |
| 695 | 594286.7 | 695676.7 | -4.98 | Elevation in NGVD29 |
| 696 | 594283.0 | 695669.8 | -5.78 | Elevation in NGVD29 |
| 697 | 594281.2 | 695662.9 | -6.59 | Elevation in NGVD29 |
| 698 | 594280.3 | 695655.8 | -7.39 | Elevation in NGVD29 |
| 699 | 594279.4 | 695648.6 | -8.4 | Elevation in NGVD29 |
| 700 | 594279.6 | 695641.4 | -9.2 | Elevation in NGVD29 |
| 701 | 594280.5 | 695634.1 | -9.7 | Elevation in NGVD29 |
| 702 | 594282.1 | 695625.6 | -10.2 | Elevation in NGVD29 |
| 703 | 594283.9 | 695618.4 | -10.6 | Elevation in NGVD29 |
| 704 | 594286.0 | 695611.1 | -11.2 | Elevation in NGVD29 |
| 705 | 594288.1 | 695604.0 | -11.6 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 706 | 594290.4 | 695596.7 | -12.2 | Elevation in NGVD29 |
| 707 | 594292.7 | 695590.0 | -12.4 | Elevation in NGVD29 |
| 708 | 594296.2 | 695579.7 | -12.5 | Elevation in NGVD29 |
| 709 | 594299.8 | 695569.9 | -12 | Elevation in NGVD29 |
| 710 | 594302.2 | 695563.3 | -12 | Elevation in NGVD29 |
| 711 | 594305.4 | 695553.4 | -12.1 | Elevation in NGVD29 |
| 712 | 594308.5 | 695540.4 | -12.1 | Elevation in NGVD29 |
| 713 | 594310.0 | 695533.0 | -12.1 | Elevation in NGVD29 |
| 714 | 594311.7 | 695525.2 | -12.2 | Elevation in NGVD29 |
| 715 | 594313.0 | 695517.6 | -12.4 | Elevation in NGVD29 |
| 716 | 594314.1 | 695509.4 | -12.3 | Elevation in NGVD29 |
| 717 | 594315.4 | 695499.4 | -12.3 | Elevation in NGVD29 |
| 718 | 594317.4 | 695486.4 | -12.4 | Elevation in NGVD29 |
| 719 | 594319.0 | 695472.3 | -12.4 | Elevation in NGVD29 |
| 720 | 594319.7 | 695464.4 | -12.5 | Elevation in NGVD29 |
| 721 | 594320.5 | 695457.0 | -12.3 | Elevation in NGVD29 |
| 722 | 594321.5 | 695449.8 | -12.3 | Elevation in NGVD29 |
| 723 | 594322.5 | 695441.6 | -12.1 | Elevation in NGVD29 |
| 724 | 594323.6 | 695433.9 | -11.9 | Elevation in NGVD29 |
| 725 | 594325.1 | 695420.2 | -11.5 | Elevation in NGVD29 |
| 726 | 594326.3 | 695412.6 | -11.2 | Elevation in NGVD29 |
| 727 | 594327.4 | 695404.7 | -10.7 | Elevation in NGVD29 |
| 728 | 594328.6 | 695396.2 | -10.3 | Elevation in NGVD29 |
| 729 | 594329.2 | 695388.9 | -9.88 | Elevation in NGVD29 |
| 730 | 594329.9 | 695381.1 | -9.58 | Elevation in NGVD29 |
| 731 | 594330.6 | 695373.7 | -9.28 | Elevation in NGVD29 |
| 732 | 594331.6 | 695363.7 | -8.88 | Elevation in NGVD29 |
| 733 | 594332.6 | 695356.5 | -8.78 | Elevation in NGVD29 |
| 734 | 594333.6 | 695349.4 | -8.58 | Elevation in NGVD29 |
| 735 | 594334.7 | 695341.8 | -8.18 | Elevation in NGVD29 |
| 736 | 594335.6 | 695334.1 | -7.88 | Elevation in NGVD29 |
| 737 | 594336.7 | 695325.9 | -7.58 | Elevation in NGVD29 |
| 738 | 594337.8 | 695317.6 | -7.17 | Elevation in NGVD29 |
| 739 | 594339.4 | 695308.7 | -6.77 | Elevation in NGVD29 |
| 740 | 594340.7 | 695301.7 | -6.47 | Elevation in NGVD29 |
| 741 | 594342.1 | 695294.4 | -5.87 | Elevation in NGVD29 |
| 742 | 594343.9 | 695284.0 | -5.57 | Elevation in NGVD29 |
| 743 | 594344.9 | 695277.0 | -5.27 | Elevation in NGVD29 |
| 744 | 594345.6 | 695269.5 | -4.97 | Elevation in NGVD29 |
| 745 | 594346.2 | 695262.4 | -4.47 | Elevation in NGVD29 |
| 746 | 594347.0 | 695254.6 | -4.27 | Elevation in NGVD29 |
| 747 | 594347.3 | 695246.7 | -3.86 | Elevation in NGVD29 |
| 748 | 594347.7 | 695239.4 | -3.56 | Elevation in NGVD29 |
| 749 | 594347.7 | 695231.8 | -3.16 | Elevation in NGVD29 |
| 750 | 594347.3 | 695210.7 | -3.56 | Elevation in NGVD29 |
| 751 | 594347.2 | 695202.9 | -3.36 | Elevation in NGVD29 |
| 752 | 594201.2 | 695664.6 | -5.29 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 753 | 594195.6 | 695660.4 | -5.59 | Elevation in NGVD29 |
| 754 | 594191.3 | 695654.6 | -6.1 | Elevation in NGVD29 |
| 755 | 594189.6 | 695647.3 | -7.3 | Elevation in NGVD29 |
| 756 | 594189.5 | 695639.7 | -8.41 | Elevation in NGVD29 |
| 757 | 594190.3 | 695632.4 | -9.02 | Elevation in NGVD29 |
| 758 | 594192.5 | 695625.4 | -9.72 | Elevation in NGVD29 |
| 759 | 594195.0 | 695618.1 | -10.3 | Elevation in NGVD29 |
| 760 | 594197.9 | 695610.0 | -10.8 | Elevation in NGVD29 |
| 761 | 594200.3 | 695603.1 | -11.4 | Elevation in NGVD29 |
| 762 | 594202.7 | 695594.9 | -11.8 | Elevation in NGVD29 |
| 763 | 594204.8 | 695587.5 | -12.5 | Elevation in NGVD29 |
| 764 | 594207.5 | 695577.5 | -12.6 | Elevation in NGVD29 |
| 765 | 594209.5 | 695570.8 | -12.5 | Elevation in NGVD29 |
| 766 | 594211.7 | 695562.9 | -12.5 | Elevation in NGVD29 |
| 767 | 594213.8 | 695555.3 | -12.3 | Elevation in NGVD29 |
| 768 | 594216.2 | 695543.1 | -12.2 | Elevation in NGVD29 |
| 769 | 594217.5 | 695532.6 | -12.2 | Elevation in NGVD29 |
| 770 | 594218.3 | 695523.3 | -12.3 | Elevation in NGVD29 |
| 771 | 594218.7 | 695513.4 | -12.3 | Elevation in NGVD29 |
| 772 | 594218.7 | 695502.9 | -12.5 | Elevation in NGVD29 |
| 773 | 594218.6 | 695494.1 | -12.5 | Elevation in NGVD29 |
| 774 | 594218.5 | 695484.7 | -12.6 | Elevation in NGVD29 |
| 775 | 594218.8 | 695472.9 | -12.5 | Elevation in NGVD29 |
| 776 | 594218.9 | 695464.9 | -12.6 | Elevation in NGVD29 |
| 777 | 594218.9 | 695457.7 | -12.9 | Elevation in NGVD29 |
| 778 | 594219.0 | 695450.0 | -12.6 | Elevation in NGVD29 |
| 779 | 594219.2 | 695442.7 | -12.4 | Elevation in NGVD29 |
| 780 | 594219.6 | 695434.2 | -11.9 | Elevation in NGVD29 |
| 781 | 594220.5 | 695424.0 | -11.7 | Elevation in NGVD29 |
| 782 | 594221.2 | 695415.9 | -11.9 | Elevation in NGVD29 |
| 783 | 594221.8 | 695408.3 | -11.6 | Elevation in NGVD29 |
| 784 | 594222.5 | 695400.1 | -11.2 | Elevation in NGVD29 |
| 785 | 594223.2 | 695392.9 | -10.8 | Elevation in NGVD29 |
| 786 | 594224.5 | 695384.0 | -10.3 | Elevation in NGVD29 |
| 787 | 594225.7 | 695376.1 | -9.94 | Elevation in NGVD29 |
| 788 | 594226.9 | 695369.1 | -9.64 | Elevation in NGVD29 |
| 789 | 594228.0 | 695361.5 | -9.24 | Elevation in NGVD29 |
| 790 | 594229.3 | 695353.6 | -9.04 | Elevation in NGVD29 |
| 791 | 594230.5 | 695346.0 | -8.84 | Elevation in NGVD29 |
| 792 | 594231.8 | 695338.4 | -8.54 | Elevation in NGVD29 |
| 793 | 594233.3 | 695329.1 | -8.34 | Elevation in NGVD29 |
| 794 | 594234.4 | 695322.0 | -7.94 | Elevation in NGVD29 |
| 795 | 594235.7 | 695313.7 | -7.54 | Elevation in NGVD29 |
| 796 | 594237.0 | 695304.6 | -7.13 | Elevation in NGVD29 |
| 797 | 594237.8 | 695297.4 | -6.83 | Elevation in NGVD29 |
| 798 | 594238.1 | 695289.2 | -6.43 | Elevation in NGVD29 |
| 799 | 594238.0 | 695281.4 | -6.02 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 800 | 594237.8 | 695274.1 | -5.72 | Elevation in NGVD29 |
| 801 | 594237.5 | 695266.9 | -5.43 | Elevation in NGVD29 |
| 802 | 594236.5 | 695258.8 | -5.03 | Elevation in NGVD29 |
| 803 | 594235.3 | 695251.0 | -4.63 | Elevation in NGVD29 |
| 804 | 594234.0 | 695243.7 | -4.43 | Elevation in NGVD29 |
| 805 | 594232.7 | 695236.2 | -4.03 | Elevation in NGVD29 |
| 806 | 594231.2 | 695226.9 | -3.63 | Elevation in NGVD29 |
| 807 | 594230.5 | 695219.8 | -3.23 | Elevation in NGVD29 |
| 808 | 594230.2 | 695207.0 | -3.33 | Elevation in NGVD29 |
| 809 | 594232.3 | 695190.8 | -3.23 | Elevation in NGVD29 |
| 810 | 594233.8 | 695183.0 | -4.22 | Elevation in NGVD29 |
| 811 | 594192.2 | 695179.8 | -3.58 | Elevation in NGVD29 |
| 812 | 594188.4 | 695185.9 | -3.55 | Elevation in NGVD29 |
| 813 | 594185.2 | 695192.5 | -3.51 | Elevation in NGVD29 |
| 814 | 594182.7 | 695201.2 | -3.48 | Elevation in NGVD29 |
| 815 | 594180.5 | 695209.5 | -3.45 | Elevation in NGVD29 |
| 816 | 594179.4 | 695218.9 | -3.42 | Elevation in NGVD29 |
| 817 | 594179.8 | 695226.7 | -3.62 | Elevation in NGVD29 |
| 818 | 594180.8 | 695235.3 | -4.02 | Elevation in NGVD29 |
| 819 | 594182.3 | 695242.6 | -4.32 | Elevation in NGVD29 |
| 820 | 594184.9 | 695251.3 | -4.72 | Elevation in NGVD29 |
| 821 | 594186.9 | 695258.1 | -4.92 | Elevation in NGVD29 |
| 822 | 594189.1 | 695265.9 | -5.22 | Elevation in NGVD29 |
| 823 | 594190.3 | 695273.2 | -5.62 | Elevation in NGVD29 |
| 824 | 594191.2 | 695281.0 | -5.92 | Elevation in NGVD29 |
| 825 | 594191.6 | 695288.3 | -6.32 | Elevation in NGVD29 |
| 826 | 594191.4 | 695295.8 | -6.62 | Elevation in NGVD29 |
| 827 | 594190.7 | 695302.8 | -6.92 | Elevation in NGVD29 |
| 828 | 594189.1 | 695310.6 | -7.42 | Elevation in NGVD29 |
| 829 | 594186.9 | 695317.7 | -7.72 | Elevation in NGVD29 |
| 830 | 594184.6 | 695324.4 | -8.12 | Elevation in NGVD29 |
| 831 | 594182.1 | 695330.9 | -8.32 | Elevation in NGVD29 |
| 832 | 594179.2 | 695338.6 | -8.61 | Elevation in NGVD29 |
| 833 | 594176.4 | 695345.8 | -8.82 | Elevation in NGVD29 |
| 834 | 594174.0 | 695352.6 | -9.12 | Elevation in NGVD29 |
| 835 | 594171.7 | 695359.6 | -9.33 | Elevation in NGVD29 |
| 836 | 594169.7 | 695366.3 | -9.63 | Elevation in NGVD29 |
| 837 | 594168.1 | 695373.7 | -9.93 | Elevation in NGVD29 |
| 838 | 594166.9 | 695381.5 | -10.3 | Elevation in NGVD29 |
| 839 | 594166.2 | 695388.8 | -10.7 | Elevation in NGVD29 |
| 840 | 594165.7 | 695397.3 | -11.2 | Elevation in NGVD29 |
| 841 | 594165.8 | 695404.8 | -11.4 | Elevation in NGVD29 |
| 842 | 594166.0 | 695414.2 | -11.7 | Elevation in NGVD29 |
| 843 | 594166.5 | 695421.8 | -12 | Elevation in NGVD29 |
| 844 | 594167.0 | 695428.8 | -12.2 | Elevation in NGVD29 |
| 845 | 594167.8 | 695441.5 | -12.2 | Elevation in NGVD29 |
| 846 | 594168.2 | 695453.4 | -11.7 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 847 | 594168.1 | 695462.3 | -12.4 | Elevation in NGVD29 |
| 848 | 594167.8 | 695469.3 | -12.4 | Elevation in NGVD29 |
| 849 | 594166.9 | 695481.6 | -12.5 | Elevation in NGVD29 |
| 850 | 594165.4 | 695491.8 | -12.3 | Elevation in NGVD29 |
| 851 | 594164.2 | 695498.8 | -12.4 | Elevation in NGVD29 |
| 852 | 594162.5 | 695507.4 | -12.2 | Elevation in NGVD29 |
| 853 | 594160.5 | 695516.8 | -12.2 | Elevation in NGVD29 |
| 854 | 594158.3 | 695527.2 | -12.1 | Elevation in NGVD29 |
| 855 | 594156.3 | 695538.9 | -12.1 | Elevation in NGVD29 |
| 856 | 594155.1 | 695549.8 | -12.2 | Elevation in NGVD29 |
| 857 | 594154.8 | 695556.9 | -12.3 | Elevation in NGVD29 |
| 858 | 594155.2 | 695564.8 | -12.5 | Elevation in NGVD29 |
| 859 | 594155.9 | 695578.8 | -12.3 | Elevation in NGVD29 |
| 860 | 594155.9 | 695592.6 | -11.9 | Elevation in NGVD29 |
| 861 | 594155.5 | 695599.9 | -11.5 | Elevation in NGVD29 |
| 862 | 594154.5 | 695607.6 | -11 | Elevation in NGVD29 |
| 863 | 594153.1 | 695615.0 | -10.7 | Elevation in NGVD29 |
| 864 | 594151.0 | 695622.9 | -9.9 | Elevation in NGVD29 |
| 865 | 594148.5 | 695630.3 | -9.3 | Elevation in NGVD29 |
| 866 | 594145.5 | 695637.5 | -8.4 | Elevation in NGVD29 |
| 867 | 594142.3 | 695644.1 | -7.69 | Elevation in NGVD29 |
| 868 | 594110.0 | 695663.9 | -3.24 | Elevation in NGVD29 |
| 869 | 594102.9 | 695662.2 | -3.75 | Elevation in NGVD29 |
| 870 | 594096.5 | 695659.1 | -3.84 | Elevation in NGVD29 |
| 871 | 594090.9 | 695654.5 | -4.34 | Elevation in NGVD29 |
| 872 | 594086.8 | 695648.5 | -5.34 | Elevation in NGVD29 |
| 873 | 594084.2 | 695641.7 | -6.64 | Elevation in NGVD29 |
| 874 | 594082.6 | 695634.5 | -7.74 | Elevation in NGVD29 |
| 875 | 594081.6 | 695626.2 | -8.64 | Elevation in NGVD29 |
| 876 | 594081.5 | 695618.8 | -9.34 | Elevation in NGVD29 |
| 877 | 594082.2 | 695611.7 | -10.1 | Elevation in NGVD29 |
| 878 | 594083.6 | 695604.5 | -10.6 | Elevation in NGVD29 |
| 879 | 594084.9 | 695597.3 | -11.1 | Elevation in NGVD29 |
| 880 | 594086.3 | 695590.1 | -11.6 | Elevation in NGVD29 |
| 881 | 594088.2 | 695581.0 | -12 | Elevation in NGVD29 |
| 882 | 594090.0 | 695573.9 | -12.6 | Elevation in NGVD29 |
| 883 | 594092.9 | 695563.3 | -12.6 | Elevation in NGVD29 |
| 884 | 594095.0 | 695556.6 | -12.8 | Elevation in NGVD29 |
| 885 | 594097.4 | 695548.5 | -12.7 | Elevation in NGVD29 |
| 886 | 594099.6 | 695541.7 | -12.5 | Elevation in NGVD29 |
| 887 | 594103.1 | 695530.6 | -12.3 | Elevation in NGVD29 |
| 888 | 594107.3 | 695517.6 | -12.3 | Elevation in NGVD29 |
| 889 | 594109.0 | 695510.6 | -12.4 | Elevation in NGVD29 |
| 890 | 594110.7 | 695503.1 | -12.4 | Elevation in NGVD29 |
| 891 | 594113.0 | 695491.9 | -12.4 | Elevation in NGVD29 |
| 892 | 594114.5 | 695484.2 | -12.5 | Elevation in NGVD29 |
| 893 | 594117.3 | 695470.3 | -12.6 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 894 | 594120.3 | 695456.3 | -12.6 | Elevation in NGVD29 |
| 895 | 594122.1 | 695447.8 | -12.6 | Elevation in NGVD29 |
| 896 | 594123.7 | 695440.7 | -12.7 | Elevation in NGVD29 |
| 897 | 594125.3 | 695431.7 | -12.5 | Elevation in NGVD29 |
| 898 | 594126.8 | 695422.6 | -12.4 | Elevation in NGVD29 |
| 899 | 594128.0 | 695414.9 | -12.1 | Elevation in NGVD29 |
| 900 | 594129.2 | 695406.6 | -12 | Elevation in NGVD29 |
| 901 | 594130.3 | 695398.9 | -11.7 | Elevation in NGVD29 |
| 902 | 594131.3 | 695391.6 | -11.4 | Elevation in NGVD29 |
| 903 | 594132.5 | 695383.8 | -11 | Elevation in NGVD29 |
| 904 | 594133.7 | 695375.2 | -10.5 | Elevation in NGVD29 |
| 905 | 594134.8 | 695367.4 | -10.1 | Elevation in NGVD29 |
| 906 | 594136.0 | 695358.9 | -9.68 | Elevation in NGVD29 |
| 907 | 594137.0 | 695351.8 | -9.38 | Elevation in NGVD29 |
| 908 | 594137.8 | 695342.8 | -9.08 | Elevation in NGVD29 |
| 909 | 594138.2 | 695335.2 | -8.87 | Elevation in NGVD29 |
| 910 | 594138.4 | 695326.7 | -8.47 | Elevation in NGVD29 |
| 911 | 594138.5 | 695319.6 | -8.37 | Elevation in NGVD29 |
| 912 | 594138.1 | 695312.4 | -7.97 | Elevation in NGVD29 |
| 913 | 594137.7 | 695304.8 | -7.67 | Elevation in NGVD29 |
| 914 | 594137.0 | 695297.6 | -7.36 | Elevation in NGVD29 |
| 915 | 594136.2 | 695289.5 | -7.06 | Elevation in NGVD29 |
| 916 | 594135.3 | 695281.8 | -6.66 | Elevation in NGVD29 |
| 917 | 594134.6 | 695274.1 | -6.26 | Elevation in NGVD29 |
| 918 | 594133.9 | 695266.2 | -5.96 | Elevation in NGVD29 |
| 919 | 594133.4 | 695259.2 | -5.56 | Elevation in NGVD29 |
| 920 | 594133.2 | 695252.1 | -5.26 | Elevation in NGVD29 |
| 921 | 594133.4 | 695243.7 | -4.76 | Elevation in NGVD29 |
| 922 | 594134.2 | 695235.5 | -4.36 | Elevation in NGVD29 |
| 923 | 594135.4 | 695228.2 | -4.06 | Elevation in NGVD29 |
| 924 | 594137.0 | 695221.3 | -3.55 | Elevation in NGVD29 |
| 925 | 594139.9 | 695209.6 | -3.25 | Elevation in NGVD29 |
| 926 | 594142.7 | 695197.6 | -3.64 | Elevation in NGVD29 |
| 927 | 594144.4 | 695190.2 | -3.54 | Elevation in NGVD29 |
| 928 | 594146.1 | 695181.5 | -3.33 | Elevation in NGVD29 |
| 929 | 594005.6 | 695650.3 | -3.72 | Elevation in NGVD29 |
| 930 | 593998.5 | 695647.9 | -4.03 | Elevation in NGVD29 |
| 931 | 593990.7 | 695642.9 | -4.43 | Elevation in NGVD29 |
| 932 | 593985.8 | 695637.0 | -5.14 | Elevation in NGVD29 |
| 933 | 593982.8 | 695630.6 | -6.04 | Elevation in NGVD29 |
| 934 | 593981.6 | 695622.4 | -6.65 | Elevation in NGVD29 |
| 935 | 593982.5 | 695615.4 | -8.26 | Elevation in NGVD29 |
| 936 | 593984.8 | 695608.8 | -9.37 | Elevation in NGVD29 |
| 937 | 593987.5 | 695602.1 | -10.2 | Elevation in NGVD29 |
| 938 | 593990.6 | 695595.1 | -10.8 | Elevation in NGVD29 |
| 939 | 593993.9 | 695587.6 | -11.1 | Elevation in NGVD29 |
| 940 | 593997.3 | 695580.5 | -11.5 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 941 | 594000.3 | 695573.8 | -11.9 | Elevation in NGVD29 |
| 942 | 594003.5 | 695566.7 | -12.4 | Elevation in NGVD29 |
| 943 | 594006.3 | 695560.0 | -12.6 | Elevation in NGVD29 |
| 944 | 594009.0 | 695553.5 | -12.7 | Elevation in NGVD29 |
| 945 | 594011.9 | 695545.5 | -12.7 | Elevation in NGVD29 |
| 946 | 594014.9 | 695535.4 | -12.7 | Elevation in NGVD29 |
| 947 | 594017.4 | 695522.5 | -12.7 | Elevation in NGVD29 |
| 948 | 594018.3 | 695514.8 | -12.6 | Elevation in NGVD29 |
| 949 | 594018.6 | 695506.9 | -12.6 | Elevation in NGVD29 |
| 950 | 594019.0 | 695495.8 | -12.5 | Elevation in NGVD29 |
| 951 | 594019.2 | 695483.4 | -12.6 | Elevation in NGVD29 |
| 952 | 594018.9 | 695473.5 | -12.7 | Elevation in NGVD29 |
| 953 | 594018.7 | 695464.3 | -12.8 | Elevation in NGVD29 |
| 954 | 594018.6 | 695455.5 | -12.8 | Elevation in NGVD29 |
| 955 | 594018.7 | 695445.8 | -12.7 | Elevation in NGVD29 |
| 956 | 594019.1 | 695435.5 | -12.7 | Elevation in NGVD29 |
| 957 | 594020.1 | 695423.9 | -12.6 | Elevation in NGVD29 |
| 958 | 594022.1 | 695410.8 | -12.4 | Elevation in NGVD29 |
| 959 | 594024.0 | 695401.4 | -12.1 | Elevation in NGVD29 |
| 960 | 594026.2 | 695392.1 | -11.9 | Elevation in NGVD29 |
| 961 | 594028.2 | 695383.7 | -11.6 | Elevation in NGVD29 |
| 962 | 594030.1 | 695376.2 | -11.2 | Elevation in NGVD29 |
| 963 | 594032.1 | 695368.9 | -10.9 | Elevation in NGVD29 |
| 964 | 594034.4 | 695360.2 | -10.5 | Elevation in NGVD29 |
| 965 | 594036.0 | 695353.3 | -10 | Elevation in NGVD29 |
| 966 | 594037.8 | 695345.2 | -9.59 | Elevation in NGVD29 |
| 967 | 594039.3 | 695336.7 | -9.29 | Elevation in NGVD29 |
| 968 | 594040.0 | 695329.4 | -9.08 | Elevation in NGVD29 |
| 969 | 594040.2 | 695320.9 | -8.78 | Elevation in NGVD29 |
| 970 | 594040.0 | 695313.2 | -8.48 | Elevation in NGVD29 |
| 971 | 594039.4 | 695305.0 | -8.18 | Elevation in NGVD29 |
| 972 | 594038.3 | 695295.9 | -7.68 | Elevation in NGVD29 |
| 973 | 594037.1 | 695287.3 | -7.38 | Elevation in NGVD29 |
| 974 | 594036.0 | 695280.3 | -7.08 | Elevation in NGVD29 |
| 975 | 594034.5 | 695272.1 | -6.57 | Elevation in NGVD29 |
| 976 | 594033.1 | 695265.2 | -6.37 | Elevation in NGVD29 |
| 977 | 594031.2 | 695256.1 | -5.87 | Elevation in NGVD29 |
| 978 | 594029.5 | 695249.2 | -5.57 | Elevation in NGVD29 |
| 979 | 594027.5 | 695241.3 | -5.27 | Elevation in NGVD29 |
| 980 | 594025.7 | 695233.8 | -4.87 | Elevation in NGVD29 |
| 981 | 594024.3 | 695226.8 | -4.57 | Elevation in NGVD29 |
| 982 | 594022.9 | 695219.0 | -4.27 | Elevation in NGVD29 |
| 983 | 594021.6 | 695211.5 | -3.97 | Elevation in NGVD29 |
| 984 | 594020.6 | 695203.7 | -3.47 | Elevation in NGVD29 |
| 985 | 594019.7 | 695195.7 | -3.26 | Elevation in NGVD29 |
| 986 | 594019.0 | 695188.5 | -3.46 | Elevation in NGVD29 |
| 987 | 594018.4 | 695180.6 | -3.56 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 988 | 594007.1 | 695188.2 | -4.02 | Elevation in NGVD29 |
| 989 | 594001.4 | 695197.6 | -3.32 | Elevation in NGVD29 |
| 990 | 593998.5 | 695205.1 | -3.72 | Elevation in NGVD29 |
| 991 | 593996.3 | 695212.2 | -3.92 | Elevation in NGVD29 |
| 992 | 593994.3 | 695219.0 | -4.21 | Elevation in NGVD29 |
| 993 | 593992.4 | 695226.1 | -4.61 | Elevation in NGVD29 |
| 994 | 593990.4 | 695234.3 | -5.01 | Elevation in NGVD29 |
| 995 | 593988.8 | 695241.7 | -5.31 | Elevation in NGVD29 |
| 996 | 593987.3 | 695248.6 | -5.61 | Elevation in NGVD29 |
| 997 | 593986.0 | 695256.4 | -5.91 | Elevation in NGVD29 |
| 998 | 593984.7 | 695265.1 | -6.31 | Elevation in NGVD29 |
| 999 | 593983.6 | 695272.6 | -6.71 | Elevation in NGVD29 |
| 1000 | 593982.4 | 695280.5 | -7.01 | Elevation in NGVD29 |
| 1001 | 593981.2 | 695288.1 | -7.41 | Elevation in NGVD29 |
| 1002 | 593979.8 | 695296.3 | -7.7 | Elevation in NGVD29 |
| 1003 | 593978.5 | 695303.4 | -8.2 | Elevation in NGVD29 |
| 1004 | 593977.2 | 695310.6 | -8.4 | Elevation in NGVD29 |
| 1005 | 593975.8 | 695318.9 | -8.69 | Elevation in NGVD29 |
| 1006 | 593974.5 | 695326.8 | -8.99 | Elevation in NGVD29 |
| 1007 | 593973.3 | 695335.2 | -9.39 | Elevation in NGVD29 |
| 1008 | 593972.3 | 695343.2 | -9.69 | Elevation in NGVD29 |
| 1009 | 593971.5 | 695350.6 | -9.99 | Elevation in NGVD29 |
| 1010 | 593970.9 | 695359.1 | -10.4 | Elevation in NGVD29 |
| 1011 | 593970.5 | 695367.5 | -10.9 | Elevation in NGVD29 |
| 1012 | 593970.3 | 695375.1 | -11.3 | Elevation in NGVD29 |
| 1013 | 593970.0 | 695382.4 | -11.6 | Elevation in NGVD29 |
| 1014 | 593969.8 | 695389.7 | -11.9 | Elevation in NGVD29 |
| 1015 | 593969.2 | 695400.0 | -12 | Elevation in NGVD29 |
| 1016 | 593968.6 | 695408.3 | -12.3 | Elevation in NGVD29 |
| 1017 | 593967.9 | 695415.8 | -12.6 | Elevation in NGVD29 |
| 1018 | 593967.0 | 695424.7 | -12.6 | Elevation in NGVD29 |
| 1019 | 593966.2 | 695432.3 | -12.7 | Elevation in NGVD29 |
| 1020 | 593965.0 | 695442.6 | -12.8 | Elevation in NGVD29 |
| 1021 | 593964.1 | 695452.6 | -12.9 | Elevation in NGVD29 |
| 1022 | 593963.1 | 695462.7 | -12.8 | Elevation in NGVD29 |
| 1023 | 593962.1 | 695471.7 | -12.8 | Elevation in NGVD29 |
| 1024 | 593960.5 | 695484.7 | -12.8 | Elevation in NGVD29 |
| 1025 | 593959.2 | 695493.6 | -12.7 | Elevation in NGVD29 |
| 1026 | 593957.9 | 695502.5 | -12.7 | Elevation in NGVD29 |
| 1027 | 593956.6 | 695510.1 | -12.7 | Elevation in NGVD29 |
| 1028 | 593955.4 | 695517.9 | -12.8 | Elevation in NGVD29 |
| 1029 | 593954.1 | 695525.9 | -12.8 | Elevation in NGVD29 |
| 1030 | 593952.9 | 695533.4 | -12.9 | Elevation in NGVD29 |
| 1031 | 593951.6 | 695542.1 | -12.9 | Elevation in NGVD29 |
| 1032 | 593950.1 | 695555.9 | -12.5 | Elevation in NGVD29 |
| 1033 | 593949.3 | 695563.1 | -12.5 | Elevation in NGVD29 |
| 1034 | 593948.3 | 695570.2 | -12 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 1035 | 593946.9 | 695577.5 | -11.6 | Elevation in NGVD29 |
| 1036 | 593945.5 | 695585.0 | -11.2 | Elevation in NGVD29 |
| 1037 | 593943.9 | 695592.2 | -11 | Elevation in NGVD29 |
| 1038 | 593942.4 | 695599.2 | -10.3 | Elevation in NGVD29 |
| 1039 | 593941.0 | 695606.6 | -9.72 | Elevation in NGVD29 |
| 1040 | 593939.7 | 695613.5 | -8.92 | Elevation in NGVD29 |
| 1041 | 593938.2 | 695620.4 | -7.82 | Elevation in NGVD29 |
| 1042 | 593907.2 | 695185.2 | -4.11 | Elevation in NGVD29 |
| 1043 | 593906.1 | 695192.4 | -3.92 | Elevation in NGVD29 |
| 1044 | 593904.9 | 695200.3 | -3.73 | Elevation in NGVD29 |
| 1045 | 593903.8 | 695207.5 | -4.03 | Elevation in NGVD29 |
| 1046 | 593902.4 | 695214.8 | -4.43 | Elevation in NGVD29 |
| 1047 | 593900.8 | 695223.2 | -4.93 | Elevation in NGVD29 |
| 1048 | 593899.3 | 695230.5 | -5.13 | Elevation in NGVD29 |
| 1049 | 593897.7 | 695238.4 | -5.53 | Elevation in NGVD29 |
| 1050 | 593895.8 | 695246.8 | -5.93 | Elevation in NGVD29 |
| 1051 | 593894.3 | 695254.0 | -6.22 | Elevation in NGVD29 |
| 1052 | 593892.4 | 695262.4 | -6.62 | Elevation in NGVD29 |
| 1053 | 593890.8 | 695270.2 | -7.02 | Elevation in NGVD29 |
| 1054 | 593889.3 | 695277.9 | -7.41 | Elevation in NGVD29 |
| 1055 | 593888.2 | 695285.1 | -7.71 | Elevation in NGVD29 |
| 1056 | 593886.6 | 695296.1 | -8.21 | Elevation in NGVD29 |
| 1057 | 593885.1 | 695306.3 | -8.61 | Elevation in NGVD29 |
| 1058 | 593884.0 | 695313.5 | -8.91 | Elevation in NGVD29 |
| 1059 | 593882.8 | 695320.6 | -9.31 | Elevation in NGVD29 |
| 1060 | 593881.7 | 695327.6 | -9.52 | Elevation in NGVD29 |
| 1061 | 593880.7 | 695335.1 | -9.92 | Elevation in NGVD29 |
| 1062 | 593879.9 | 695343.6 | -10.3 | Elevation in NGVD29 |
| 1063 | 593879.5 | 695351.4 | -10.5 | Elevation in NGVD29 |
| 1064 | 593879.2 | 695358.9 | -11.1 | Elevation in NGVD29 |
| 1065 | 593878.8 | 695366.3 | -11.4 | Elevation in NGVD29 |
| 1066 | 593878.3 | 695373.8 | -11.8 | Elevation in NGVD29 |
| 1067 | 593877.5 | 695382.1 | -12 | Elevation in NGVD29 |
| 1068 | 593876.1 | 695390.5 | -12.2 | Elevation in NGVD29 |
| 1069 | 593874.5 | 695397.8 | -12.5 | Elevation in NGVD29 |
| 1070 | 593872.4 | 695406.2 | -12.7 | Elevation in NGVD29 |
| 1071 | 593869.6 | 695417.8 | -12.8 | Elevation in NGVD29 |
| 1072 | 593867.1 | 695428.7 | -13 | Elevation in NGVD29 |
| 1073 | 593865.7 | 695437.1 | -13.1 | Elevation in NGVD29 |
| 1074 | 593864.0 | 695449.5 | -13 | Elevation in NGVD29 |
| 1075 | 593862.6 | 695459.1 | -13 | Elevation in NGVD29 |
| 1076 | 593861.3 | 695469.6 | -13.1 | Elevation in NGVD29 |
| 1077 | 593860.7 | 695477.3 | -13.2 | Elevation in NGVD29 |
| 1078 | 593860.6 | 695484.4 | -13 | Elevation in NGVD29 |
| 1079 | 593860.4 | 695491.9 | -12.9 | Elevation in NGVD29 |
| 1080 | 593860.0 | 695503.3 | -13 | Elevation in NGVD29 |
| 1081 | 593859.4 | 695510.4 | -13.2 | Elevation in NGVD29 |

# Points, Eastings, Northings, Elevation, Description

## PENZD of Hydrographic Data

| Point | Easting | Northing | Z | Description |
|---|---|---|---|---|
| 1082 | 593858.8 | 695518.1 | -13 | Elevation in NGVD29 |
| 1083 | 593857.8 | 695529.1 | -13 | Elevation in NGVD29 |
| 1084 | 593857.3 | 695536.3 | -12.9 | Elevation in NGVD29 |
| 1085 | 593856.1 | 695546.4 | -12.7 | Elevation in NGVD29 |
| 1086 | 593854.8 | 695554.6 | -12.5 | Elevation in NGVD29 |
| 1087 | 593853.4 | 695562.3 | -12 | Elevation in NGVD29 |
| 1088 | 593851.6 | 695570.9 | -11.6 | Elevation in NGVD29 |
| 1089 | 593850.0 | 695578.3 | -11.2 | Elevation in NGVD29 |
| 1090 | 593847.7 | 695587.5 | -10.4 | Elevation in NGVD29 |
| 1091 | 593845.7 | 695594.9 | -9.72 | Elevation in NGVD29 |
| 1092 | 593843.4 | 695602.4 | -8.82 | Elevation in NGVD29 |
| 1093 | 593841.2 | 695609.7 | -7.91 | Elevation in NGVD29 |