



Pre-Permitting Environmental/ Socio-Economic Data Report Series

Report Series A: Meteorology — Overview

Since 2005, the Pebble Partnership has retained Hoefler Consulting Group – an independent, Anchorage-based, native-owned environmental consulting firm – to manage an ongoing program of meteorological data collection at key Pebble Project sites.

The meteorological monitoring program collects data related to wind speed, wind direction, temperature, solar radiation, precipitation, evaporation, relative humidity and barometric pressure. This data is continuously collected as one-hour averages of one-second observations, and are downloaded daily to a central server in Anchorage.

All data collected for project air permitting purposes meet federal Prevention of Significant Deterioration (PSD) quality meteorological monitoring standards.

Federal and state regulatory agencies require the Pebble Partnership to collect and submit meteorological data as part of an Environmental Baseline Document (EBD) and project permit application process, in part to assess the project's potential effects on air quality. Meteorological data will also be used by project engineers to help site and design project facilities, and to manage site conditions.

Complete copies of the meteorological data reports released as part of the *Pebble Partnership's Pre-Permitting Environmental & Socio-Economic Data Report Series* are available on-line at www.pebblepartnership.com.

Program Overview

- Hoefler currently maintains seven meteorological stations collecting Prevention of Significant Deterioration (PSD) quality data in the Pebble Project area, as well as two stations collecting non-PSD quality data. Data collected at non-PSD stations will help inform project design at Pebble, and will be submitted to federal and state agencies as an appendix to the project's Environmental Baseline Document (EBD).

Six meteorological stations are near the Pebble deposit, approximately 19 miles northwest of Iliamna/Newhalen, and another three stations are at potential port sites on Cook Inlet. (See inset map and table for location of PSD and non-PSD meteorological stations.)

- As part of its *Pre-Permitting Environmental & Socio-Economic Data Report Series*, the Pebble Partnership is releasing data reports for three of seven PSD-quality meteorological stations in May 2008. These include Pebble 1, Pebble 4 and Pebble Port.

Data for meteorological stations established in 2007 – including Pebble 5, Pebble 6, Williamsport and North Head – will be released in spring 2009, along with the 2008 data collected at Pebble 1, Pebble 4 and Pebble Port. Data for Pebble 3 and Pebble 5A have not yet undergone quality assurance and control procedures, and will be released at a later date.

- Meteorological data indicates the climate in the area of the Pebble deposit is transitional, being more continental in winter because of the influence of frozen water bodies and more maritime in summer because of the influence of open water. The climate in the port study area is also transitional, but with a stronger maritime influence because of its proximity to Cook Inlet.
- Approximately 3.5 million meteorological data points have been collected since the meteorological monitoring program began in 2005.

Points of Interest

- Maximum recorded hourly wind speed at the Pebble deposit site: **89.5 miles per hour**
- Maximum recorded wind gust at the Pebble deposit site: **137.1 miles per hour**
- Maximum recorded temperature at the Pebble deposit site: **73.4 degrees Fahrenheit**
- Minimum recorded temperature at the Pebble deposit site: **-28.8 degrees Fahrenheit**
- Maximum recorded hourly wind speed at potential port site: **45.6 miles per hour**
- Maximum recorded wind gust at potential port site: **88.4 miles per hour**
- Maximum recorded temperature at potential port site: **77.3 degrees Fahrenheit**
- Minimum recorded temperature at potential port site: **-11.4 degrees Fahrenheit**

Pebble Meteorological Stations General Information

| Station ID | Function | Installed | Begin Validated Data | Completion Date | Comments |
|----------------------|----------|----------------|----------------------|-----------------|---------------------------------------|
| <i>Pebble 1</i> | ED | October 2004 | - | June 2005 | Changed to PSD June 2005 |
| <i>Pebble 1</i> | PSD | June 2005 | August 2005 | Ongoing | |
| <i>Pebble 2</i> | ED | October 2004 | - | November 2005 | Relocated 0.6 mi. north, now Pebble 3 |
| <i>Pebble 3</i> | ED | November 2005 | - | Ongoing | |
| <i>Pebble 4</i> | PSD | June 2006 | January 2007 | Ongoing | Established at old Pebble 2 location |
| <i>Pebble 5</i> | PSD | June 2007 | January 2008 | Ongoing | |
| <i>Pebble 5A</i> | ED | June 2007 | - | Ongoing | |
| <i>Pebble 6</i> | PSD | August 2007 | January 2008 | Ongoing | |
| <i>Pebble Port 1</i> | PSD | June 2005 | August 2005 | Ongoing | |
| <i>North Head</i> | PSD | September 2007 | January 2008 | Ongoing | |
| <i>Williamsport</i> | PSD | July 2007 | January 2008 | Ongoing | |

ED - Engineering Design

PSD - Prevention of Significant Deterioration

