

# **Experimental Google Map Display Service of NWS Weather Data**

## **Product Description Document (PDD)**

NWS WRH MSD – Salt Lake City, UT

### **Part I - Mission Connection**

#### 1. Product Description:

Utilization of Google Maps across National Weather Service (NWS) web pages has proven very popular for both users and NWS webmasters and Information Technology Officers (ITO). As is common across the industry overall, an increasing number of NWS webmasters and ITOs are creating diverse Google Map service applications to display various existing NWS data sets in a more convenient manner for web users. It is impossible to issue individual PDDs for the large number of experimental Google Map applications being developed across Western Region (WR). This umbrella PDD, as defined in NWSI 10-102, allows WR webmaster and ITO creativity in producing experimental Google Map applications, while managing implementation and project tracking and information sharing per the following requirements.

Prior to public access, all WR Google Map web page applications must include:

- All requirements as noted in Appendix E, “Dissemination and Feedback”, in NWSI 10-102;
- The following technical attributes: an alternate method for accessing displayed information to maintain Section 508 compliance; a map legend if unique icons are used; a downloadable KML; any future national guidance;
- Providing initial internal review of the application on the WRH developmental server, in coordination with WRH SOD;
- Submission of a one page summary “Information Sheet” of the experimental application as described in NWSI 10-102, including a proposed user feedback period NTE 90 days, to WRH SOD and WRH MSD;
- Approval for experimental implementation by WRH SOD and WRH MSD;
- At the close of the experimental period and based on user response, the MIC/HIC will recommend to WRH SOD and WRH MSD that the application be made official or stopped. At that time, the Information Sheet maintained at WRH MSD for that application will be updated;

Additionally, it is highly recommended that technical guidance and code found in the WR Google Map API be used in developing all applications. Information on this API is available from WRH SOD.

#### 2. Purpose/Intended Use:

Experimental Google Map applications all use Google Map backgrounds overlaid with various existing NWS meteorological data. No new data sets are required. Resulting products are

intended to help users visualize the data geographically, especially over the complex terrain that exists across much of WR.

### 3. Audience:

All users who access NWS information via the Internet comprise the audience for the experimental applications. Operational NWS staff may also use the Google Map interface to assist with monitoring and quality control of weather data and forecasts.

### 4. Presentation Format:

WR experimental Google Map applications will be displayed as standard Google Map web images already in use across much of the NWS.

Examples of experimental Google Map applications include:

Regional Temperature and Precipitation (LAXRTPSGX):

<http://www.wrh.noaa.gov/sgx/kml/rtp.php>

Forecast Weather Table Interface:

<http://www.wrh.noaa.gov/forecast/wxtables/index.php?wfo=slc>

Precipitation Summary Interface: [http://www.cnrfc.noaa.gov/google\\_precip.php](http://www.cnrfc.noaa.gov/google_precip.php)

### 5. Feedback Method:

User comments will be gathered mainly from e-mails to the WFO webmaster and through contact (e-mail, phone, in person) with specific user groups including emergency managers, media and the fire weather community. The user comment period will normally not exceed 90 days for each application. The feedback period for this umbrella PDD will extend from January 15, 2009 through January 15, 2010.

### 6. Example:

See links above in Section 4.

## **Part II - Technical Description**

### 1. Format and Science Basis:

Experimental Google Map applications normally maintain the three primary Google Map background options: standard map, satellite (for earth images, not clouds) and terrain. Point data is overlaid on top of these images. The point data come from current NWS products, from ALERT and RAWS precipitation data, or from individual observations such as Mesonet data. Any NWS product that contains meteorological point data can be plotted on a Google Map web image.

For example, local NWS text products are generated either manually or automatically locally, the experimental Google Map applications are then run automatically on LDAD to convert the products to KML format. The KML files are then sent to the web to be displayed on the maps. From the web interface Google map, the user can toggle on and off various parameters, such as the weather element (if multiple elements are available), time interval, or shape files (such as fire burn areas). All data are plotted to within 0.005 degrees latitude and longitude on a map (about 500 meters), but exact locations are not represented to protect private property or other sensitive locations.

Because most Google Map applications are automated, little to no workload impact is expected among operational staff at the local level. Initial programming to convert the data to KML format and the creation of the webpage is performed by the local webmaster and/or ITO.

## 2. Product Availability:

Google Map based services using data from regularly scheduled products, such as the RTP, will be updated regularly and automatically as new data become available. Map products using data from non-scheduled products, such as Storm Data, will be created as needed.

All WR WFO web pages have available the following experimental Google Map application for user comment: <http://www.wrh.noaa.gov/forecast/wxtables/index.php?wfo=XXX>, where XXX is the WFO 3 letter identification (i.e. SLC).

The list of additional WR Google Map experimental applications can be found here: <http://dev.wrh.noaa.gov/wrh/maps.php> and currently include WFOs San Diego, Phoenix, Pocatello, Billings, Tucson and the California-Nevada River Forecast Center. General guidance for WR WFOs is found here: <http://ww2.wrh.noaa.gov/projects/googleMapsApi/>.