

Product/Service Description Document: Experimental Enhanced Data Display (EDD), National Weather Service Headquarters

Part I - Mission Connection

a. Product/Service Description - The National Weather Service's (NWS) Experimental Enhanced Data Display (EDD) fills an extreme void that currently exists in the NWS. It provides our partners and customers a single, elegant interface to access all things GIS related in the NWS. EDD is an extremely powerful and flexible GIS web application. Before the development of EDD, users had to navigate to countless web pages to get at the information they desired. EDD puts this information in one place making it very easy to display and manipulate this data. EDD is hosted on the National Internet Dissemination System (NIDS) and was developed by the Weather Ready Nation Pilot Project in Charleston, WV.

b. Product Type - Experimental from the present time through October 2013. The EDD will then be evaluated for implementation as a national operational product/service.

c. Purpose - The purpose of this experimental website is to provide our partners and customers with a single comprehensive web-based interface to access both forecasts and observations of any nature (public, fire, marine, aviation, hydrologic, climate, etc.). The multitude of layers available within EDD will provide a one-stop shop for all users. EDD leverages the work that many projects have spent years developing and formats it nicely into one interface giving our users the best possible experience with the minimum amount of clicks.

EDD incorporates an array of valuable tools that will assist our users in a variety of tasks. Whether it be measuring the area of a hazardous event, calculating the population affected by a warning, using the drawing tools to illustrate on the map, quickly getting the coordinates of an event (even the USNG system is included for search and rescue parties) or the distance from a storm, EDD can help our users. In fact, EDD could also generate an impacts catalog based on requests from targeted groups such as EMS. They can supply the "Area of Concern" and weather element thresholds that they are interested in, EDD can transform to meet their needs. EDD can also notify the WFOs involved (if requested) and alert the EM if the thresholds are met or exceeded by a forecast or observation. This is a win-win scenario for everyone involved.

A critical advantage of EDD is its ability to assimilate the work of others as plugins. For example, the Hurricane Center comes out with a new way to view storm surge data. EDD can ingest this new data and display it with minimal effort. The platform is flexible and can instantly leverage emerging technologies to keep the data and interface relevant to the rapidly changing web environment.

By employing the latest advancements in web technology, EDD's framework is very versatile and can be "fine-tuned" to certain user groups. The interface can transform into different "flavors" targeted at a certain audience. For example, an EM in southern Florida is concerned about the tides and storm surge with an approaching hurricane. EDD can be tailored to fit that need, either programmatically via a url that the local WFO generates and shares with the user, or by the user themselves. The resultant interface could focus on marine and coastal elements associated with a hurricane and leave out the irrelevant content. In fact, the Marine Weather Portal which is currently an Experimental product, is just a derivative of EDD and does exactly this. In addition, the flexible nature of EDD will allow the developer to add further information as the NWS expands its decision support services to include more refined information and both increased time and spatial resolution.

The EDD supports NOAA's Mission Goals by:

- Serving Society's Needs for Weather and Water Information
- Supporting the Nation's Commerce with Information for Safe, Efficient, and Environmentally Sound Transportation
- Fully integrating with the Weather Ready Nation initiative.

d. Audience - The target audiences for this experimental product are emergency and safety officials, forecasters and the general public, but the user interface is so adaptable that it can meet the needs of any group.

e. Presentation Format - Figure 1 shows the presentation format of the current version of the Enhanced Data Display. The user interface uses Open Source Libraries to present a web-based GIS interface that allows the user to pan and zoom to their location and then interact with multiple layers: Current observations (from both ship and land - including those from buoys, ships, tide gages), hazards, radar and satellite imagery, currents, webcams to name a few. EDD also has multiple methods to obtain forecasts in a variety of formats. Map overlays, which can be toggled on/off and can fade in and out, provide users with additional information and are incorporated in the display for each of the layers.

f. Feedback Method - A web survey will be used to obtain user feedback. The survey is available at the following link:

www.nws.noaa.gov/survey/web-survey.php?code=EDD

Technical comments for the Experimental Enhanced Data Display (EDD) developer may be addressed to:

Jonathan Wolfe
Emergency Response Specialist
National Weather Service WFO Charleston
400 Parkway Drive, Charleston, WV 25309
304-746-0188

E-mail comments can be sent to Jonathan.Wolfe@noaa.gov

The comment period runs through October 1 2013.

Part II - Technical Description

a. Format and Science Basis - See Figure 1 for description of the format and web user interface.

b. Availability - The website will run 24 hours per day and be monitored by NWS staff. The website will be made available to all WFO's.

c. Additional Information -

- 1) National Weather Service Instruction (NWSI) 10-506, Digital Data Products/Services Specification provides detailed information on both experimental and operational elements in NDFD.

Figure 1 - Enhanced Data Display Interface

