



**LA JOLLA BAND
OF LUISEÑO INDIANS**

A Sovereign
Indian Nation

CWA 106 & DATA MANAGEMENT

Why and How Data is Important to a Successful 106 Program



WHAT DOES DATA EVEN MEAN?

- **The Merriam – Webster Dictionary defines data as:**

- **1. factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation**
- **2. information output by a sensing device or organ that includes both useful and irrelevant or redundant information and must be processed to be meaningful**
- **3. information in numerical form that can be digitally transmitted or processed**



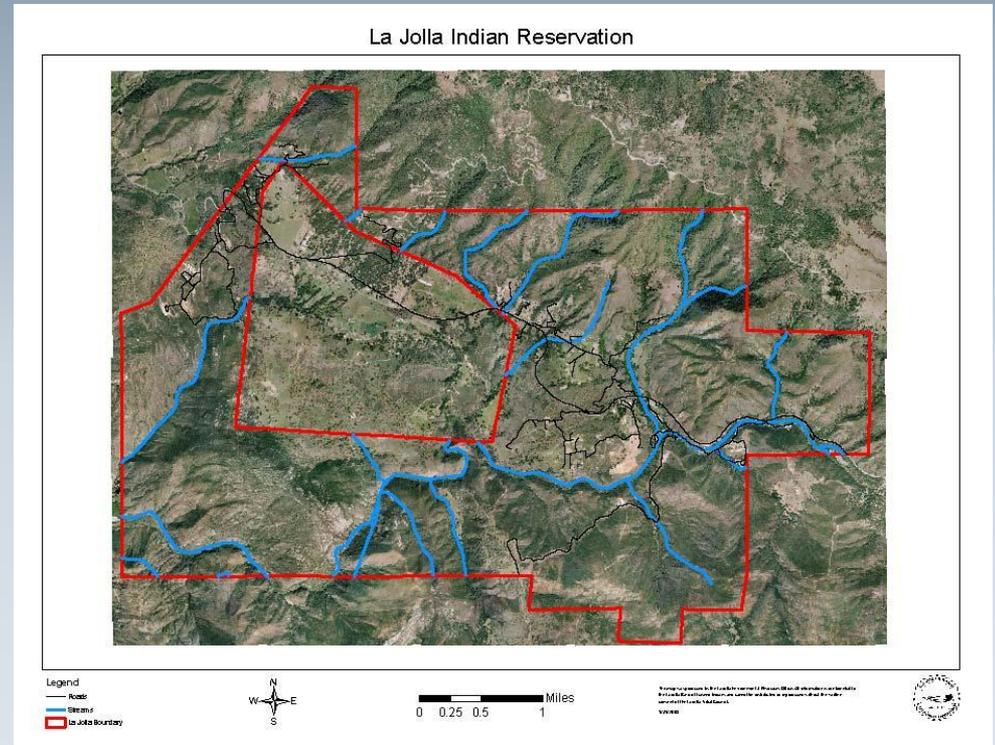
YESTERDAY WAS HOT!!!

- Yesterday had a high of 81 °F
- Today is suppose to have a high of 89 °F
- So...is August always this hot in San Francisco?
- OF COURSE NOT
- But did you know the average monthly temperature for San Francisco in the month of August is only 69.2 degrees!
- BUT DID WE SET A RECORD HIGH IN TEMPERATURE?
- Not even close; the highest recorded temperature for San Francisco at the official National Weather Service office was 103 °F on July 17, 1988, and June 14, 2000



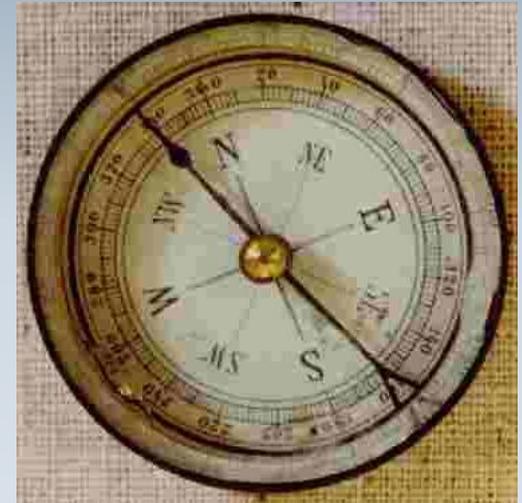
LA JOLLA RESERVATION

- The Reservation is 8,900 acres, with a large “donut hole” in the middle
- The average annual rainfall varies from about 20 inches to more than 40 inches making the Reservation one of the wettest areas in San Diego County
- Other named streams on the Reservation include Cedar Creek, JM Creek, Mendenhall Creek, Amago Creek and Yapicha Creek
- We sample at 13 sites on a monthly basis



WHY MONITOR WATER QUALITY?

- **Characterize water bodies**
- **Identify changes or trends over time**
- **Determine fate and transport pollutants**
- **Identify existing or emerging water quality problems**
- **Set program goals and objectives to improve water quality**
- **Determine compliance with regulations**
- **Support research and modeling efforts**
- **Ensure water quality is maintained/improved**
- **Water resource management**
- **Helps establish and create baseline data**
- **It is required in the 106 program**



EPA STRATEGIC PLAN 2006 – 2011

- **Objective 2.2: Protect Water Quality**

Protect the quality of rivers, lakes, and streams on a watershed basis and protect coastal and ocean waters.

- **Sub-objective 2.2.1: Improve Water Quality on a Watershed Basis**

By 2012, use pollution prevention and restoration approaches to protect the quality of rivers, lakes, and streams on a watershed basis.

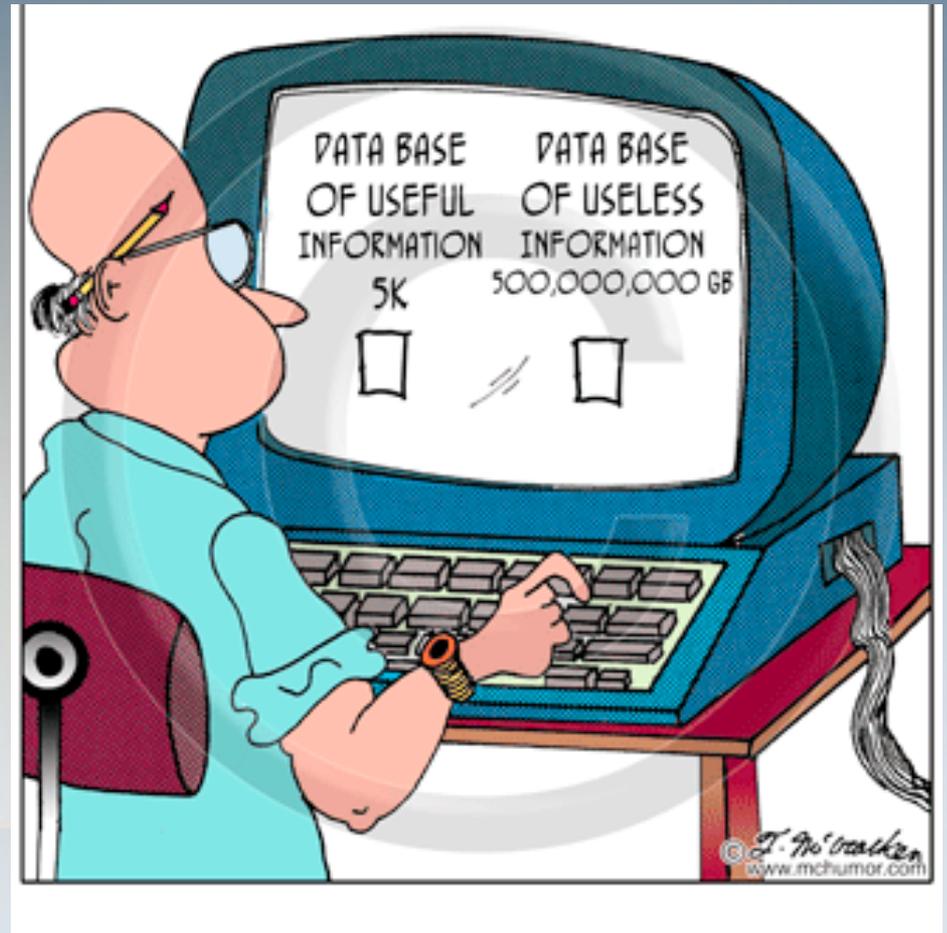


EPA STRATEGIC TARGET

- **EPA Strategic Target: By 2012, improve water quality in Indian country at not fewer than 50 baseline monitoring stations in tribal waters (cumulative) (i.e., show improvement in one or more of seven key parameters: DO, pH, water temperature, total nitrogen, total phosphorus, pathogen indicators, and turbidity).**
- **EPA Strategic Target: Through 2012, the condition of the nations wadeable streams does not degrade (i.e., there is no statistically significant increase in the percent of streams rated “poor” and no statistically significant decrease in the streams rated “good”). (2006 baseline: Wadeable Stream Survey identifies 28% of streams in good condition; 25% in fair condition; 42% in poor condition.)**



2. Information output by a sensing device or organ that includes both useful and irrelevant or redundant information and must be processed to be meaningful



TWO TYPES OF DATA: WATER QUALITY AND META-DATA

WATER QUALITY

- pH
- Temperature
- Dissolved Oxygen
- Turbidity
- Total nitrogen
- Total phosphorous
- E. Coli
- Macroinvertebrates

META DATA

- Location that sample was collected
- Date and time that sample was collected
- How the sample was collected
- Who collected the sample
- The type of instrument used
- Brief description of the collection environment/location



DATA – FIELD COLLECTION

- Are you going to collect all your data in one field book or are you going to have one field book per site?
- Organize your field book before you even step out of your office by writing down the parameters you are testing for before you go out into the field to collect data .
- Use your field book to log data gathered at monitoring site



After data is collected in the field, what do you do with it?



DATA STORAGE – ELECTRONIC

- **Definition #3: Information in numerical form that can be digitally transmitted or processed**
- **Compile data into an electronic spreadsheet (Excel)**
- **Benefits of storing data electronically include:**
 - **Backup copy available**
 - **Data is easily organized**
 - **Data can be summarized and manipulated**



DATA STORAGE - WQX

- The Water Quality Exchange (WQX) is a new framework that makes it easier for States, Tribes, and others to submit and share water quality monitoring data over the Internet. States, Tribes and other organizations can now submit data directly to the publicly-accessible STORET Data Warehouse using the WQX framework. The STORET Data Warehouse will continue to be the repository for all modern STORET data and will now also be the new home for data submitted through WQX.



BENEFITS OF DATA COLLECTION

- **Organized data helps to measure progress of environmental programs, and identify areas of improvement**
- **Useful when applying for potential sources of funding and other program grants (ex. 319, NRCS)**
- **Offer reassurance to the public that water quality is being monitored and data is available to support the quality of water**
- **Viable for protecting the tribe in any potential lawsuit**
- **Useful in reports or management plans (Watershed Management Plan, NPS Assessment & Management, Water Quality Report)**
- **TAS – Treatment as a State**



THANK YOU AND GOOD LUCK

