HydroBase Menu Options

---**File** Menu----------

Preferences

- Use to set default Fields and Sort at startup; enter a station ID to examine

---**Location** Menu----------

Add Location

- Requires specific fields to be filled in for a new station
  - See HPM Course Job Sheets at end of course
- Use Modify Location > Copy to New Location to either...
  - create a new similar station (i.e., river or precip)
  - create a Test station for drills, testing s/w changes, etc.
  - see steps below under Copy to New Location
  - then change metadata as required for a New station, etc.

Modify Location

- Use to update lots of station-specific data, including ...
  - horizontal datum (lat/lon), reference (NAD 83), date, etc.
  - vertical datum (elevation in ft above MSL), ref (NAVD 88), date

Geophysical page (default)

- Use to update any metadata on this page
- Toggle Inactive flag ON to keep bad data from being shared with WHFS Applications
- Click Revise to update revision date
- Edit Basin name shown in HydroBase
- Update station Detail info
- Update Lat/Lon (i.e., Horizontal Datum value)
- Update Network (station classification)
- Update RFC responsible for station
- Update gauge elevation (top of rain or staff, wire wt check bar) in ft MSL
- Update Station Number, County/State, Time Zone, HSA and WFO
- Add any pertinent Remarks
- View Station Characteristics at the bottom that must be changed elsewhere
- Use to create a new (similar) or duplicate (test) station with Copy to New Location

Additional Info page

- Update Description or Information info boxes
- List Horizontal Reference Datum used for Lat/Lon (e.g. NAD 83)
- Update HUC (Hydrologic Unit Code)
- Update Station Begin Date
- Update Station Type (R / P / O / U for River / Precip / Observer / Unknown)

- Toggle Post Observed Values flag - default is ON
    - toggle OFF to prevent data posting to hydro DB; will NOT be used by WHFS Apps
- Setup + Apply Cooperating Agencies/Offices - update appropriate info here using GUI
- Copy to New Location button - opens a GUI to copy existing station to a New ID

==========

Copy to New Location

To make a **New Station**, once you have requested and received a valid location ID and expect to receive data soon or have the new DCP now sending data under this ID...

1. Select a similar station to copy, then select Modify Location
2. Click the Copy to New Location button
3. In the Copy to New Location GUI,
    a. change ID to new LID
    b. select Copy Reference Data Only (not ALL Data)
4. Change appropriate metadata - lat/lon, datum, elevation, etc.
    a. all the metadata for the new site on both Geophysical and Additional Info pages
5. Apply and OK on Additional Info & Geophysical pages
6. Go into other Location menus and update other metadata
7. Still need to update with a new rating curve (and UH if Site Specific location)

To create a **TEST Station**

1. Select the station you want to duplicate for testing (could be to test software, could be on-site training, etc.), then select Modify Location
2. Click the Copy to New Location button
3. In the Copy to New Location GUI,
    a. change ID to new LID (an ID NOT in your Location table and that will NOT get sent to AHPS)
    b. select Copy Reference Data Only (or ALL Data to copy data as well)
        i. ALL Data takes longer
4. Go to other Location menus and update other metadata
    a. if needed - perhaps NOT - may want to alter the Lat/Lon so it won't plot on top of the real station
5. Check to see if UH, and rating curve if an SSHP site, are copied correctly
6. Apply and OK on Additional Info & Geophysical pages

=========

---**Location** Menu continued ----------

Contacts

- Update contact info for this location.
- Make sure there are NO Soc Sec #s stored anywhere as you check a station

County/Zone UGC

- Make any change to County or Zone for this location

Gage History

- Update any gauge history or type changes for this location

Data Sources

- Update any gauge source info for this location (DCP, Observer, Telemetry tabs)

---**RiverGage** Menu----------

River Gage (Geophysical page)

Update river station info including the following on Geophysical page...

- **Stream** (name)
- **Revise** (revision date)
- **Lat/Lon** (decimal degrees, horizontal datum value, same as on Modify Location (Geophysical page)
- **Drainage Area** (square miles)
- **River Mile** (gauge location from upstream point in miles)
- **Flood Stage** - should match Minor category value in River Gage > Flood Category
- **Flow** - flood flow in CFS at Flood Stage
- **Action Stage** - stage at which WFO staff or users take Action
    - May be the same as Issuance Stage
- **Flow** - flow value (CFS) at Action Stage
- **Zero Datum** - a.k.a. - "gauge zero" - elevation, usually in ft MSL, where river gauge reads 0.00. Usually below stream bed to avoid negative stages.
    - Critical - document Zero Datum reference (e.g., NAVD 88) on Additional Info page under Vertical Datum
- **Issuance Stage** - NEW! - Stage at which RFC is required to issue a forecast.
- **Flow** - flow (CFS) at Issuance Stage
- **Threshold Runoff** - value in inches of threshold runoff variable used for SSHP points
    - derived from a digital elevation model dataset using GIS
- **Remarks** - any pertinent information - 255 chars max
- **Forecast Point Group Assignment** - GUI to assign a location to RiverPro Forecast Group
    - Also see Setup > RiverPro Forecast Groups/Points
- **Primary Stage/Flow Physical Element** - MUST be selected so Hydro perspective displays data for the "Primary" choice for any Physical Element
    - MapData > Point Data Control (Elements) --> Primary for the "primary" PE
    - Note: Used by RiverPro for Observed and Forecast time series
- **Use Latest Forecast When Computing Maximum Forecast Value** - should ALWAYS be toggled ON

---**River Gage** (Additional Info page)

- **Period of Record** - update period of record for this station, including End if applicable
- **Lat/Lon Source** - USGS records, station description, previous E-19, GPS, topo map, etc.,
    - Verify **Horizontal Datum** used on Modify Location > Additional Info page
- **Level** - Agency and Date of latest vertical elevation validation of the gauge
    - Note - NOT the **Zero Datum**, and value is recorded in Modify Location > Elevation
    - Note2 - If a NWS wire weight or staff gauge, etc., this is YOUR job, but if it is a USGS or other agency gauge it should be in the station description
- **Vertical Datum** - Reference datum (e.g., NAVD 88) used for Zero Datum on River Gage (Geophysical page)
- **Rated** - agency responsible for rating (stage vs flow) curve
- **Date of Rating** - date of latest rating curve
- **USGS Rating No**. - rating curve number from USGS (or Rating agency)
- **Tidal Effect** - select from pulldown if there are tidal effects for this gauge
- **Backwater** - any backwater effects at this location?
- **Bankfull** - stage when river is at bankfull (may or may not be = flood stage)
- **Check Bar** - if a wire weight, what is the latest Check Bar elevation
- **Pool** - normal pool elevation (or top of Conservation pool)

---Rest of **River Gage** Menu----------

Flood Category

- Make any change to Minor (= Flood Stage), Moderate, Major stage (or Discharge)

Impact Statement

- Update any impacts for High stages/flows (used by RiverPro)

Low Water Statement

- Update any impacts for Low stages/flows

Flood Damage

Update any flood damage for particular stages (used for E-19s, NOT RiverPro)

Rating Curve

- Use GUI to Import Curve if you have a new one available
- Use RUHT or other program to get new curve (RUHT is on SCP) - see link on Reference slides

Unit Hydrograph

- Use GUI to Import or Export a rating curve
- Use RUHT or other program to get new UH or import from correct directory

Crest History

- Use GUI to update significant crests and Record Crest

Low Water

- Update any actual Low stages/flows

Benchmark

- Update any benchmark data and location/description

Datum

- Update Zero Datum elevation (where gauge = 0.0 ft)
- Also update in River Gage > Zero Datum, and put reference datum in River Gage > Additional Info > Vertical Datum (e.g., NAVD 88)

Description

- Update metadata, including Reach
- Add lat/lon pairs in **Affected Areas** box to create simple basin plot for WWA map

Publications

- List available data such as USGS Water Supply Paper dates, etc.

References

- Update reference information such as USGs Station Description, E-19 dates

---**Reservoir** Menu----------

Reservoir

- Use GUI to update any information for that reservoir
- This information is crucial for any potential dam break situation

---**Data Ingest** Menu----------

Ingest Filter -

- Use this GUI to ensure **Master Switch** = **T** (toggle Master Switch ON in lower right) for station data; toggle MPE Input Switch ON to use precip data for MPE; WFOs can ignore the OFS (middle) switch - it was created for RFC use
- **CAUTION**: **DO NOT** click the **Set Switches for All Listed Above** button!!
    - Any stations included in the display (that is, not filtered out by PE, TypeSrc, or ID), will have the Master, OFS, and MPE switches set for all of them by the 3 boxes next to this button; There is no **UNDO** !!
- Toggle ON Location filter parameter and add LID in Location box
- Scroll down in contents table to select the line with PE, Dur, TypeSrc, and Ext data to examine
- Click to highlight that line

- Toggle the Master Switch (and/or MPE switch if desired) ON or OFF as desired
- Change the TypeSrc **Rank** to change order of using a particular gauge if you have duplicate gauges at that location and need to switch (e.g., if DCP goes out but wire weight/staff gauge readings are available)
- Use the Physical Element scroll area to select a New PE to add to that location add a new gauge of some kind, etc.

Adjustment Factors - probably won't use this very much

- Use this GUI to apply a set adjustment to specific data when the data comes in

QC/Alert/Alarm Limits - may use this quite a bit
Use this to adjust any of the following:

- **Default Limits** - affect ALL stations in your hydro DB for a particular Physical Element
- **Gross Max** or **Min**
- **Reasonable Max** or **Min**
- **Rate of Change** (units per hour)
- **Alert Limits** (Upper, Lower, ROC, Diff)
- **Alarm Limits** (Upper, Lower, ROC, Diff)
- **IMPORTANT**:
    - Make sure you allow Gross Max to go high enough to cover Record Events
    - Make sure you set values that cover the offices you backup as well
- **Location Limits** - affect only a specific station
- These can be set for time periods (seasonal) as well
- Start and End times cannot cross the end of the calendar year so you may need 3 lines to cover Jan-Mar, Apr-Oct, Nov-Dec for example

Purge Parameters – you may not need to use this option

- Use this if you need to purge particular data more or less often
- Work with your ITO to make sure you won't be filling filesystems or data tables that would cause problems storing new data

---**Reports** Menu----------

Flood Report---

- Use this to help you create an E-3 or E-5 report
- Use the data plotted to list reports above FS for the dates above
- Use the Insert into Crest Table button to insert highlighted crest into the table, then use the River Gage > Crest History GUI to label the crest as preliminary, official, or record

Text Reports---

- Use this to create an E-19, E-19A, B-44, or to see sorted station list, station class, or service backup lists

---**Setup** Menu----------

Administration---

- Use to update your office contact info (name/phone)
- Use to create or change the password for HydroBase (only the HydroBase GUI - NOT the hydro database password)

Reference Fields---

- Update Reservoir Owner or Type to make them available in the Reservoir GUI

States/Counties/Zones---

- Use to change County assignments for a WFO
- Use to assign Service Backup Primary & Secondary

RiverPro General Parameters---

- Set number of hours to look back for Observed Data
- Set number of hours to look forward for Forecast Data
- Specify the string to use for a value of "missing"
- Set default number of hours before expiration of RVS, FLS, FLW

RiverPro Forecast Groups/Points---

- Use this GUI to edit RiverPro forecast groups or the points in those groups
- Use this GUI to Add or Delete RP Group(s)

Radar Locations---

- Use this GUI to make changes to Radars (used by MPE in your AWIPS-2)

Areal Definitions---

- This data is used by Site Specific application to compute mean areal precipitation
- Use Import to Database to read in a new **basins.dat** file for two DB tables

NWR Transmitter Towers---

- This opens a UI to manage NWR transmitters - ask your BMH focal point if this is even used anymore with the new BMH application handling NWR

TimeSeries Group Configuration---

- This opens the SITE version of the **group_definition.cfg** file in the Localization perspective's Eclipse editor - use this to configure Hydro Time Series Groups, per training in a previous course

HydroGen Configuration---

- Use this GUI to manage HydroGen stations (for posting to AHPS)
- This will be covered in another course