

1.02 Spring Water Monitoring – Flow Protocol

last updated: 01/08/2016

As of March 2015, spring flow (CFS) is being monitored at **8-flume** locations on the refuge. Measurements are taken once a month; usually during the last week of the month. Water flow is measured using two methods: 'Historical Flume Measure' and 'Flow Probe Meter'. Instructions for how to take both measurements are provided below.

What to Take in the Field:

- **Flow Probe Meter** (stored in the black 'shotgun' case.)
- **Wire Bristled Brush** (to clean off the flume gage to read water depth)
- **Blank Data Sheet!** (*Blank data sheets should be available in the in the CFS data binder, but if needed, an electronic copy is stored on the local server at I:\BIOLOGY PROGRAM\INVENTORY and MONITORING PLAN (IMP)_ISIs and SOPs\Initial Survey Instructions (ISIs)\1.02 Spring Water Monitoring - Flow (FF06RFHS00-005)\Current*)
- **Conversion Tables**– also located in the CFS Binder. There are two pages make sure you take both with you. (*NEVER TAKE THE ONLY COPY INTO THE FIELD WITH YOU, make a copy if necessary. If the last print-out is lost, a copy of the table is available in the same server folder listed above.*)
- **Toothbrush**
- **Pencils**
- **Clip Board**
- **Charged Radio**
- **Trimble**

Locating Spring Flumes

PRIOR TO HEADING INTO THE FIELD:

1) Turn on the Trimble.

- a) Turn on the unit to be used by tapping the green power button toward the bottom of the Trimble unit. Depending on the unit series (2000 or 6000), the boot up process may take a few minutes.

2) Check the Battery Level.

- a) Check the battery level by looking at the battery icon in the upper right corner of the screen.
 - i) Make sure the battery has 3-4 vertical bars showing.

(1) If there **are less than 3 bars** and you are planning on using the Trimble for a long period that day, consider switching to another Trimble unit with more battery life if available and make sure to turn off the current unit* (see below for proper instructions to ensure the unit is turned off and not sleeping) and place the unit on its correct charging port.

(2) If you see a **red '!'** within the battery icon, this Trimble has very low battery life and is not going to be usable in the field at this time and you will need to switch to another Trimble unit. When this happens, make sure to turn off the current unit* and place the current unit on its correct charging port, this unit will not be useable in the field for several hours.

**If the unit is not turned off properly prior to charging, the unit may not charge properly causing a further delay prior to it being usable in the field.*

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- 3) **Open ArcPad and see if the 'Water Spring Flow Sites' Map is loaded on that Trimble.**
 - a) Open ArcPad.
 - i) For the **2000 series**: Use the attached stylus to tap on the '**Start**' button located in the upper left corner of the screen – a drop down menu should appear. From the menu, tap on the '**ArcPad**' icon to open the program. Wait for the program to open completely.
 - ii) For the **6000 series**: Use the stylus to tap on the '**Windows**' icon located in the lower left corner of the startup screen – this should send you to another screen with several program icons available. Use your stylus to scroll down the screen by dragging the tip from the lower portion of the screen to the upper portion. Continue to scroll down until you see the '**ArcPad**' icon appear. Tap on the '**ArcPad**' icon to open the program. Wait for the program to open completely.
 - b) Check to see if the 'Water Spring Flow Sites' Map is loaded on that Trimble.
 - i) Once ArcPad opens, tap the '**Choose Map to Open**' option.
 - ii) Look under the '**Folder**' column for the '**Water Spring Flow Sites**' Map.
 - iii) If it is there select that map and go to **step 5**. If it is **not** there, go to **step 4**.
- 4) **Add 'Water Spring Flow Sites' Map to Trimble Unit.**
 - a) Open the '**Water Spring Flow Sites**' Map in GIS.
 - i) On a computer with GIS, open ArcMap.
 - ii) Once ArcMap opens a box will appear with options. On the left-hand side of the box, under '**Existing Maps**' select '**Browse for more...**'
 - iii) Navigate to: **I:\GIS DATA and MAPS\Maps\Water Management**.
 - iv) Select '**Water Spring Flow Sites**'.
 - b) Export ArcMap '**Water Spring Flow Sites**' Map to an ArcPad '**Water Spring Flow Sites**' formatted Map.
 - i) Make sure the ArcPad Data Manager toolbar is accessible. If it appears on the main screen, go to **step 4-b-iii**, if it is not go to **step 4-b-ii**.
 - ii) Add the toolbar to the main screen by going to '**Customize**' → '**Toolbars**' → and click on '**ArcPad Data Manager**'.

**If the icons on the 'ArcPad Data Manager' are greyed out, you will need to active the toolbar by going to 'Customize' → 'Extensions' -> and checking the box by 'ArcPad Data Manager'.*
 - iii) Click on the icon that looks like a Trimble with an arrow pointing to the **right**.
 - iv) You are not checking out an RLGIS shapefile database for this, click '**No**'.
 - v) In the window that appears, the middle column should be titled '**Actions**'; click in that column next to where it says '**SpringWaterFlowSites**' and select '**Export as background data**' → '**Make read only**'.
 - vi) Repeat **step 4-b-v** for '**Map_Refuges_Subunits**' and click '**Next**'.
 - vii) Do not do anything in this screen except click '**Next**'.

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- viii) In the middle **right** of the pop-up box, there is an icon that looks like a **folder**. Click on this icon and navigate to where you want to save the ArcPad **'Water Spring Flow Sites'** formatted Map. Make sure you remember where you save this map; you will need it in future steps.
 - ix) In this window, in the lower **right** section, there is a **white box** with **'Map Name'** to its left. In this box Name the map what you would like it to be named, chose something short but clear. Then click **'Next'**.
 - x) On the new screen, click **'Finish'**.
 - xi) A **report** will appear letting you know if everything transferred properly. Click **'OK'**.
 - xii) You can now close out of ArcMap if you want.
- c) **Connect Trimble to Computer.**
- i) If you still have ArcPad open on your Trimble, close the program by tapping on the upper left icon (Trimble in a circle) and selecting **'exit'**.
 - ii) Make sure the proper connecting cable is plugged into the computer. For the **2000 series** it will be a charging cradle, for the **6000 series** it will be a USB cord.
 - iii) On your computer, go to **'Start' → 'All Programs' → 'Windows Mobile Device Center'**. If a white pop-up window appears asking about setting up the Trimble, exit out of the window.
 - iv) Once **'Windows Mobile Device Center'** is opened, with your Trimble still turned on, attached it to its charger or USB cable (see step 4-b-ii). On the Trimble screen a pop-up box will appear letting you know it is connecting. It will also say **'Connecting'** on the **'Windows Mobile Device Center'** screen in the lower left corner. Once it is connected, the pop-up box on the Trimble will disappear and the **'Windows Mobile Device Center'** screen will say **'Connected'*** in the lower left corner. If a white pop-up window appears asking about setting up the Trimble, exit out of the window.
- *If it does not connect, repeat the step a couple more times. If it still doesn't want to work, you may need to re-start your computer. That will usually allow it to connect.*
- v) Repeat **steps 4-c-i thru 4-c-iv**.
- d) **Move ArcPad 'Water Spring Flow Sites' formatted Map onto Trimble device.**
- i) Once connected, select **'Connect without setting up your device'**.
 - ii) Select **'File Management' → 'Browse the contents of your device'**.
 - iii) In the pop-up box that opens, double click the disk icon in the box on the right and navigate to **'My Documents'**. Leave that window open.
 - iv) On your computer, click **'Start' → 'Computer'** to open a **'new file window'**.
 - v) In that **'new file window'**, navigate to where you just saved the ArcPad **'Water Spring Flow Sites' formatted Map** from **step 4b** and copy the entire file.
 - vi) Paste the Map you just copied in the **'new file window'** into the **'My Documents'** file in the **'Windows Mobile Device Center'** screen. A pop-up window will appear with a 'status bar' indicating the progress of the transfer. Once that box closes the transfer is complete.

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- vii) The map should now be loaded onto the Trimble. Close the 'Windows Mobile Device Center' window and remove the Trimble from the cradle or cable.
- viii) Go back to **step 3**.

5) Turn on the GPS function and make sure satellites acquire properly.

a) Turn on the GPS Function.

- i) Do this **outside*** prior to heading into the field. That way if there are any problems are right by the office for assistance and/or to switch out Trimble units if necessary.

****Turning this feature on before heading outside will cause the battery to drain quickly as it tried to search for satellites from within the building.***

- ii) In the top toolbar, tap on the  icon. A second toolbar will appear underneath the top toolbar.
- iii) On the second toolbar, tap on the  icon. It should (temporarily) turn blue and a **red** box should appear at the bottom of the screen with the words 'No Fix'.
If this does not happen, tap on the black down arrow located immediately below the  icon. A dropdown menu should appear.
- iv) Within the drop down menu, look for the heading 'GPS Active' with  icon to its left. If there is not a **red** box outline around the icon, tap once on the 'GPS Active' heading. The dropdown menu should disappear and a **red** box should appear at the bottom of the screen with the words 'No Fix'. If there is a **red** box outline around the icon, the the GPS function has already been turned on.

b) Acquiring Satellites and Current Position.



- i) Once the GPS function has been turned on, it will immediately start trying to acquire satellite signal. You must be outside and should not be too near buildings for this to work successfully.
- ii) While it is trying to acquire the satellites, the **red** box with the words 'No Fix' will continue to stay red. Additionally, you will get a white pop-up window that appears periodically with the message "No current position fix at this time."
- iii) Once the GPS has a strong enough signal, the **red** box with the words 'No Fix' will turn **green** and the pop-up box will stop appearing. You can tap the small 'x' in the upper right corner of the **green** box to make it disappear so that you can better see the underlying map.
- iv) **You may lose signal on occasion in the field**, especially when in a car. When this happens the pop-up box will reappear and keep appearing until you get a strong enough signal.
- v) **Be careful when using the Trimble in a vehicle.** The vehicle may be moving faster than the Trimble is re-acquiring your current position. This can cause a 'lag' effect that can cause you to overshoot your destination.

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USING THE TRIMBLE IN THE FIELD:

1) Viewing the full extent of the map loaded on the Trimble.

- a) Zoom out to see the full map that has been loaded.
 - i) In the top toolbar, tap on the  icon. A second toolbar will appear.
 - ii) Tap on the **black** arrow directly under the icon second from the left.
 - iii) Select the 'Zoom to Full Extent' option.
 - iv) The icon above the black arrow will now change to .
 - v) Tap the icon once to view the full extent of the map loaded to the Trimble.



2) How to adjust your view of the underlying map to a certain area.

- a) Zooming in/out to a specific area. *
 - i) In the top toolbar, tap on the  icon. A second toolbar will appear
 - ii) Tap on the **black** arrow directly under the left most icon.
 - iii) Tap on the option that you want, either 'Zoom In' or 'Zoom Out'.
 - iv) The icon above the black arrow will now change to either  or **.
 - v) Use your stylus to draw a square around the area you want to zoom to. Do this by placing the tip of the stylus to the top left of the area and then (while keeping continuous contact) dragging the stylus in a downward diagonal to your right.
 - vi) The size of the box will impact the magnitude of the zoom. A small box will zoom the image further in or out than a larger box. *



**Keep in mind that once the GPS function is turned on and has acquired satellites, current Trimble settings will not allow you to zoom into an area that does not include your current position.*

***If the icon you need is already the one that appears above the black arrow, then all you need to do is tap the icon prior to using your stylus on the screen.*

b) How to 'Pan' (move the screen without zooming)

- i) In the top toolbar, tap on the  icon. A second toolbar will appear
- ii) Tap on the **black** arrow directly under the left most icon.
- iii) Tap on the 'Pan' option.
- iv) The icon above the black arrow will now change to .
- v) Tap the screen to 'grab' it and without lifting the stylus, drag the image to the desired location.

c) Going back to your previous zoom extent.

- i) This function can be used if you unintentionally zoom too far in or out, or if you accidentally move the underlying image so that it is no longer where you need it to be.
- ii) In the top toolbar, tap on the  icon. A second toolbar will appear underneath the top toolbar.
- iii) Tap on the **black** arrow directly under the third icon from the left.
- iv) Select the 'Go Back to Previous Extent' option.
- v) The icon above the black arrow should now look like .
- vi) Tap that icon once to go back one 'move'. You can tap the icon more than once if needed.

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3) Navigating to a location.

a) Knowing which way is north.

- i) The map in the Trimble is loaded so that when looking at the map, 'North' is always at the top of the Trimble (furthest from the 'power' button). The underlying map does not reorient itself when you move around. In other words, if you have the top of the Trimble pointed east, north on the map will still be at the top of the Trimble. If confused, reorient the Trimble so the the top of the Trimble is pointed north (towards Harrison and Gadwall unit).

4) Knowing where you are on the map.


a) Understanding the red circle.

- i) Once the Trimble has acquired a GPS signal, a red circle will appear on the map. This circle indicates where you are in relation to the map.
- ii) The Trimble settings are currently set so that you cannot zoom into an area of the map that does not include your red circle.
- iii) As you move around in the field, the Trimble unit will automatically adjust the underlying map so that your red circle, and subsequently, the current area you where are located is always in view.
- iv) Be aware that your 'level of zoom' can impact how close you look to a designated spot. If you are zoomed way out, you may look like you are at a target location when in fact you may be several meters away. If you are zoomed in too close, every slight move will cause your red circle to 'jump' a distance on the screen. Subsequently, as you appear to get closer to a target, you may have to slowly zoom in more and more until you find that 'sweet spot' that lets you know you are where you should be without causing the red circle to jump all of the screen.

5) Closing out of ArcPad at the end of the Day*

***This must be done in order to ensure the data collected during the day is properly saved.**

a) Close out of ArcPad

- i) Tap the  icon in the upper left corner.
- ii) Tap 'Exit'.
- iii) If it asks if you want to save changes, select 'Yes'.
- iv) You may see several processing bars flash across the screen – that is okay.
- v) ArcPad is now closed down.

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6) Turning the Trimbles OFF* and placing them to Charge.

The Trimble may be in 'Power Saver' mode with screens grayed out – THAT DOES NOT MEAN THEY ARE OFF. Do **NOT plug them in to charge while in 'Power Saver' mode. The GPS will continue to try and acquire satellites which will drain the battery as fast or faster than it can charge. This results in it Trimble not being usable (i.e. having enough battery charge) the next time it is needed in the field.*

a) Make sure the Trimble is not in 'Power Saver' Mode.

- i) If the screen is on and you can see the map it is not in 'Power Saver' Mode.
- ii) If the screen is gray, tap the button once quickly. It is better to accidentally turn it back ON and have to wait to turn it back OFF than it is to plug it in while in 'Power Save' Mode.
- iii) Once the screen is visible, turn OFF the unit.

b) Turn OFF the Trimble Unit.

- i) Press and hold down the **green** power button at the bottom of the Trimble.
- ii) A new screen will appear with 4 or 5-buttons to choose from.
- iii) Tap the 'Shutdown' button.
- iv) The unit will shut off.

c) Place the Unit on the correct charger.

- i) The 2000 series Trimbles are placed on the cradle chargers.
 - (1) Insert the top of the Trimble under the 'hooks' at the top of the cradle and **gently** push the unit down at the bottom so that it locks into the base.
 - (2) The light at the lower right corner of the cradle should light up. If it does not, remove the Trimble unit and try again.
 - (3) The light will turn green once the unit is fully charged.
- ii) The 6000 series Trimbles are charged using charger cables.

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Historical Flume Measurement:

1. Scrub the flume gage with the wire brush if needed so you can accurately read the water gage mounted inside the flume.
2. Read the flume gage and record water depth (ft) on your data sheet.
3. On your datasheet, under each flume's name you will see listed the width of each flume (3", 6", 9", 12" or 24").
4. Look at the TPS conversion table, on the **left** side of the table ('*Gage Reading*') look for the gage reading that matches what you recorded for water depth. At the **top** of the table ('*Discharge in Cubic Feet per Second* '), match the width of the flume. This will give you the correct CFS.
<Ex>If Depth=0.72' and Width= 24" then CFS = 4.81
5. Record the value in the "Fume CFS" column of your data sheet.
6. Once back in the office, **double check** your values from the table; it is very easy to record from the wrong row or column.
7. Make correction/s if necessary.
8. Complete data entry into the '**WaterFlow**' database (*Group Data I:\BIOLOGY PROGRAM\INVENTORY and MONITORING PLAN (IMP)_ISIs and SOPs\Initial Survey Instructions (ISIs)\1.02 Spring Water Monitoring - Flow\Current*) using the data entry instructions found below for that database.

***Additional information regarding the database development and design can be found in the black 'Database SOP binder' or in the Excel workbook titled 'WaterFlow' located in the 'Waterflow SOP' subfolder within the same source folder as the 'WaterFlow' database.**

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Flow Probe Meter Readings:

Look at your data sheet, all the flumes have 3 or 4 “Points” listed. ‘LB’ stands for Left Bank, ‘RB’ is Right Bank, and ‘A’ and ‘B’ are in between, so if there are 4 points, then A is about a quarter of the way across the width of the channel, nearest to the far bank, same deal with point B, but relative to the right bank. If there are three points, A is in the middle. ORIENT YOURSELF FACING UPSTREAM TO DETERMINE WHERE EACH POINT IS LOCATED.

1. Gently plug in the read-out screen into the tube of the flow meter if you haven’t already. Make sure when placing or removing the screen to gently pull/push straight up/down; do **not** twist or pull at an angle as this can loosen wires and/or tear the pin loose from the mechanism. This is expensive to have fixed.
2. Make sure the propeller is clear of any debris.
3. Check the read-out screen. The **upper-right** corner (below ‘MENU’) it should say ‘TIMER’. If it does not, tap the black button in the **upper-left** corner until the readout says ‘TIMER’. This lets you use the timer on the meter to make sure all your measurements are consistent.
4. **Check the readout screen at each new flume site** as it can easily be bumped and changed while being handled between sites!
5. Look in the water around the flume. If vegetation is growing within and/or immediate around the flume in the water, manually remove the vegetation before taking the measurements.
6. Place the meter in the water making sure the arrow is facing downstream (with the direction of flow). Make sure the bottom isn’t angled towards shore; the closed sides of the probe should be directly parallel to the sides of the flume.
7. Press the “reset” button, a readout of running average ft/s will appear on the screen
8. Very slowly and smoothly move the meter up and down in the water without letting it come out of the water or letting it stay in one place too long. If the water is too shallow, just hold the meter as steady as possible in the middle of the water column. Continue this for 20 seconds (time yourself so all measurements are taken for the same amount of time).
 - a. If the av ft/s readings are jumping around or staying at 0, pull out the probe, gently turn it over and check that is obstructing the propeller. If you see SAV in the propeller, gently remove all of it until it is moving freely. A toothbrush can help with this process.
9. At the 20 second mark, press the “save” button, which should prompt the meter to display an average FT/S measurement. Record this measurement as flow meter CFS for the appropriate flume point (LB, A, B or RB).
10. Press the “back” button to exit the save mode
11. Press the “reset” button to restart the timer.
12. Repeat all these steps 5-10 for each point of the flume.
13. **DO NOT** use the flow probe as a prop to help you stand back up. This can damage the probe.
14. See Historical Flume Measure, step 8.

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DATA ENTRY

Data Collection Form Created On: 2/20/2014
First Form Created By: M. Lapinski

Last Updated On: 01/11/2016
Last Updated By: T. Cummins

DATABASE TITLE:	<u>Water Flow</u>
DATA TYPE:	<u>CFS Measurements at Springs and Impoundments using Flume and Flow Probe methods</u>
FORM used for data entry:	<u>Water Flow Database, Water Flow Database- pre 2011</u>
TABLES associated w/Form:	<u>Water Flow Database</u>

Type of Data Collected:	<u>CFS Measurements 1964-present.</u>
Data Collection Sheet/s:	<u>DATASHEET_Spring Flow Monitoring_03242015</u>
e-Datasheet (blank) Location/s:	<u>Group Data I:\BIOLOGY PROGRAM\INVENTORY and MONITORING PLAN (IMP)_ISIs and SOPs\Initial Survey Instructions (ISIs)\1.02 Spring Water Monitoring - Flow\Current</u>
Raw Data Location/s:	<u>Completed data sheets are located in a 3-ring binder labeled "Flume Readings", historic data is located in the file cabinet in the room with the employee entrance.</u>

Data Entry Instructions:

1. On the Refuge Data HD navigate to "I:\BIOLOGY PROGRAM\Databases\1.02 Spring Water Monitoring - Flow Database" and open the "WaterFlow.accdb" file.
2. On the left hand side of the screen under "Forms", review your options*.
 - a. If you are entering data collected using **ONLY** the "Historical Methodology" "Water Flow Database – pre2011" and skip to **step 3**.
 - b. If you are entering data collected using the "Historical Methodology" **and** the "Flow Probe Methodology" then select the form titled "Water Flow Database – 2011 to current" and skip to **step 4**.

**Data collected using all data entry forms import data to the same database table, but the "Water Flow Database – pre2011" form doesn't have all the extra boxes for the flow probe data.*

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3. In the “**Water Flow Database – pre 2011**” form each spring will be entered as a single record in this form. (i.e. one ‘date entry page’ per each spring).
 - a. Enter the date (MO/DY/YEAR), year (XXXX), month* (select from dropdown menu).
**If measurements were taken in the month before or after the month for which the data was gathered, make sure to enter the correct month for which the data was collected. Ex: we didn’t have time to collect December’s data until January 2, then the date would be 1/2/XXXX but the month would still be “December”.*
 - b. From the dropdown menu provided next to ‘**Flume**’, select the correct spring for which you are entering data.
 - c. Next to ‘**Depth (ft)**’ enter the recorded depth for the spring you selected in **step 3b**.
 - d. Next to “**CFS**” enter the correct CFS value you recorded (*this is the value you ‘calculated’ using the TPS Table, the Springs’ flume width, and the associated recorded depth in the ‘**Historical Flume Measurement**’ portion, steps 4-6*).
 - e. If there are relevant comments regarding the CFS measurement, flume conditions, or you cannot provide the exact date or depth then make a note in the comments box.
 - f. Click the forward arrow to the right of the “**Record**” label at the bottom of the form to move to the next blank record.
4. In the “**Water Flow Database – pre 2011**” form each spring will be entered as a single record in this form. (i.e. one ‘date entry page’ per each spring).
 - a. Enter the date (MO/DY/YEAR), year (XXXX), month* (select from dropdown menu).
**If measurements were taken in the month before or after the month for which the data was gathered, make sure to enter the correct month for which the data was collected. Ex: we didn’t have time to collect December’s data until January 2, then the date would be 1/2/XXXX but the month would still be “December”.*
 - b. From the dropdown menu provided next to ‘**Flume**’, select the correct spring for which you are entering data.
 - c. Next to ‘**Depth (ft)**’ enter the recorded depth for the spring you selected in **step 4b**.
 - d. Next to “**CFS**” enter the correct CFS value you recorded (*this is the value you ‘calculated’ using the TPS Table, the Springs’ flume width, and the associated recorded depth in the ‘**Historical Flume Measurement**’ portion, steps 4-6*).
 - e. ‘**Point 1**’, ‘**Point2**’, etc...
 - i. Select “**LB**” from the “**point1**” dropdown box.
Point 1 will be labeled “LB”, point 2 will be labeled “A”, point 3 will be labeled “B” for flumes containing 4 points, or “RB” for flumes containing only 3 points, point 4 will either be blank (for flumes containing 3 points), or “RB” for flumes containing 4 points.
 - ii. Look at your data sheet to see what the appropriate value is for “**distance from lb**” for the spring you selected in **step 4b** and select this value from the dropdown box. *This values varies from spring to spring but is a fixed value on the datasheet.*
 - iii. Look at your data sheet to see what the appropriate value is for “**width**” for the spring you selected in **step 4b** and select this value from the dropdown box. *This values varies from spring to spring but is a fixed value on the datasheet.*

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- iv. Next to '**P1 Flow Meter ft/s**' enter the record the '**AV FT/S**' that was measured using the flow meter at **point LB** (*this will be the value you collected for LB using **steps 1-12** under the '**Flow Probe Meter Readings**' section*).
- f. Repeat **steps 4a-4e** for **Point 2**, **Point 3** and for the larger flumes, **Point 4**.
 - i. *Whether you enter 3 or 4 points is based upon the width of the flume associated with the spring selected in **step 4b**. The datasheet will make this clear for each spring.*
 - ii. **If you are entering data for any of the flumes that have only THREE measuring points, LEAVE THE "POINT 4" AND "P4 DISTANCE FROM LB" BOXES BLANK, BUT SELECT "0" FOR WIDTH AND TYPE "0" IN THE AV FT/S BOX! This is important for the auto-calculations for the flow probe total flow meter CFS within the database table.**
- g. If there are relevant comments regarding the CFS measurement, flume conditions, or you cannot provide the exact date or depth then make a note in the comments box.
- h. Click the small arrow next to the "**record**" label at the bottom of the form to go to the next record and enter data for the next spring.
- i. Any other info of interest will be auto-calculated in the "Water Flow Database" table based on what you entered.