Practice on 3. Vector Analysis

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NOAA / Climate Prediction Center - International Desks

Fiji Pacific Climate Early Warning Workshop
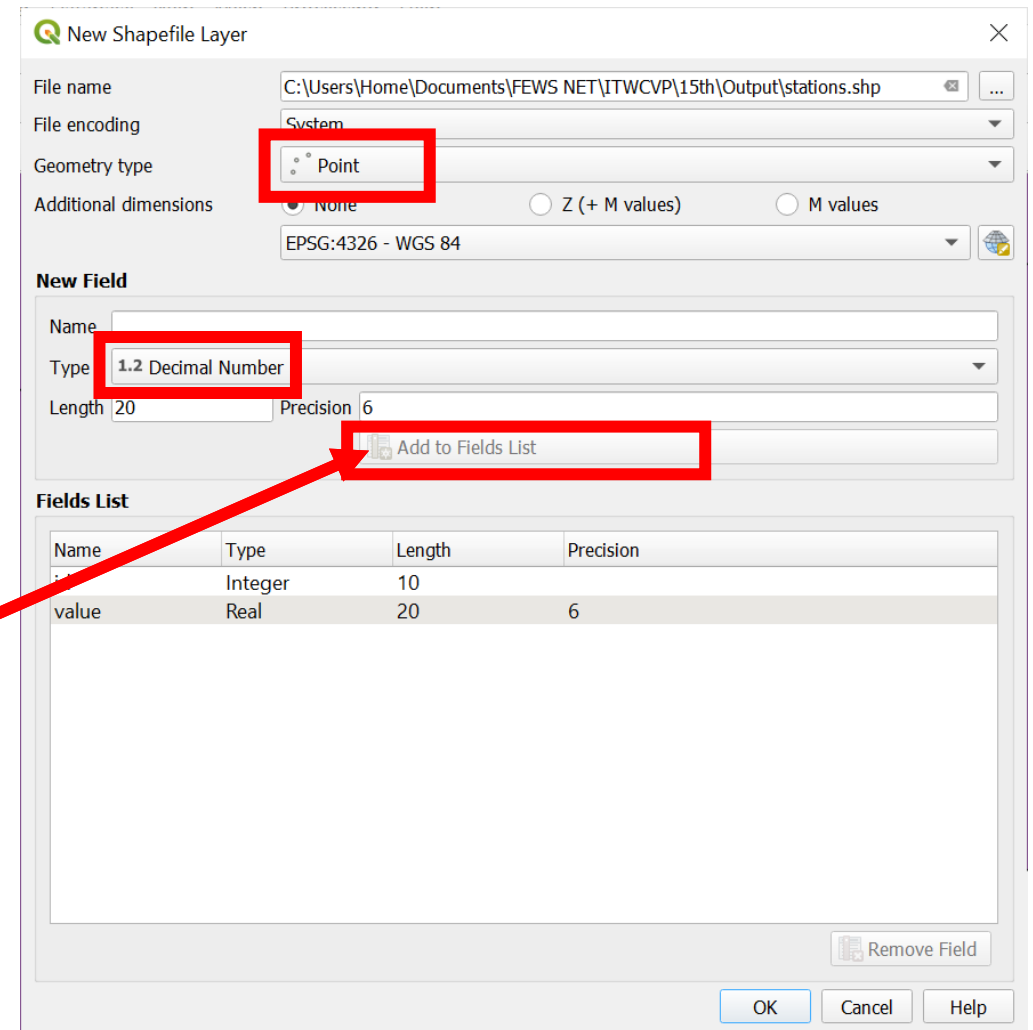
Fiji, 15 – 24 July 2023

Exercise 5: Creating a New Vector Data

- From last exercise, click [icon] to deselect selected features

- Click [icon] to create a new shapefile layer. Save as `stations` to `output` folder, select `Point` in `Geometry type`

- In `Name` under `New Field`, type `value`, select `Decimal number` as `Type` and click `Add to Fields List`, and click `OK`
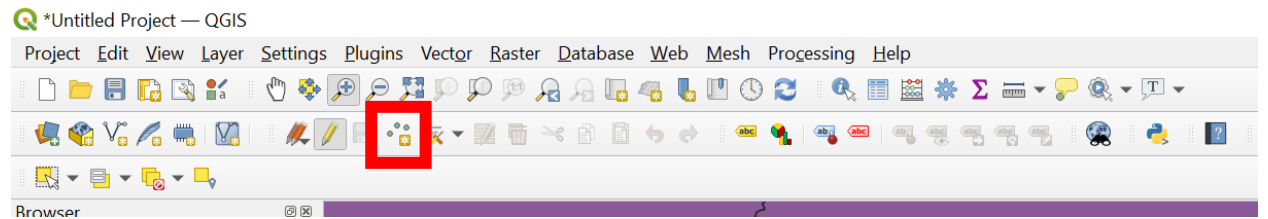
Exercise 5: Creating Points

- Edit the newly created `stations` data by clicking `Toggle Editing` toolbar
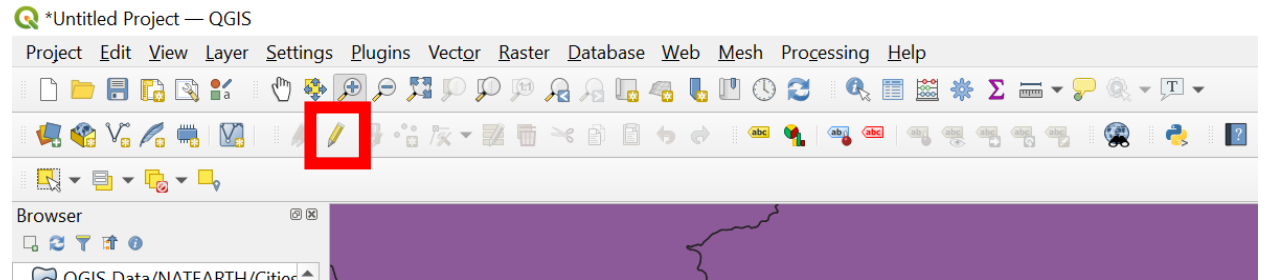
- Click `Add Point Feature`, click on map, where you want to draw the point, type value, and click `OK`. Add all remaining points.

Point	Value
1	0.9
2	1.5
3	0.5
4	1.5
5	1.1

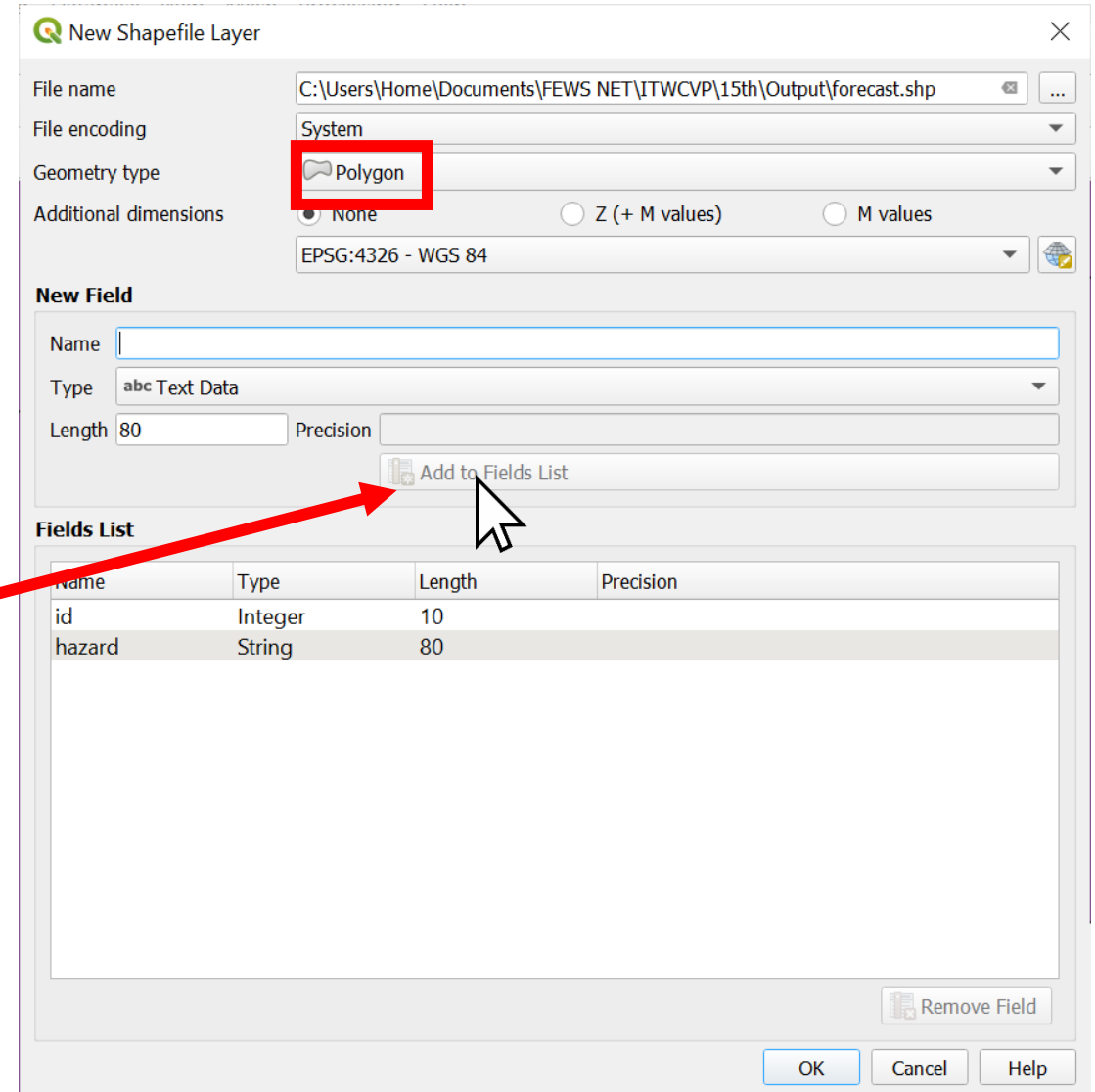stations - Feature Attributes

id   NULL

value 0.9

OK   Cancel

Exercise 5: Creating Points (Cont'd.)

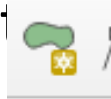- Click on [icon] to save edits. Click [icon] to `Toggle Editing` off
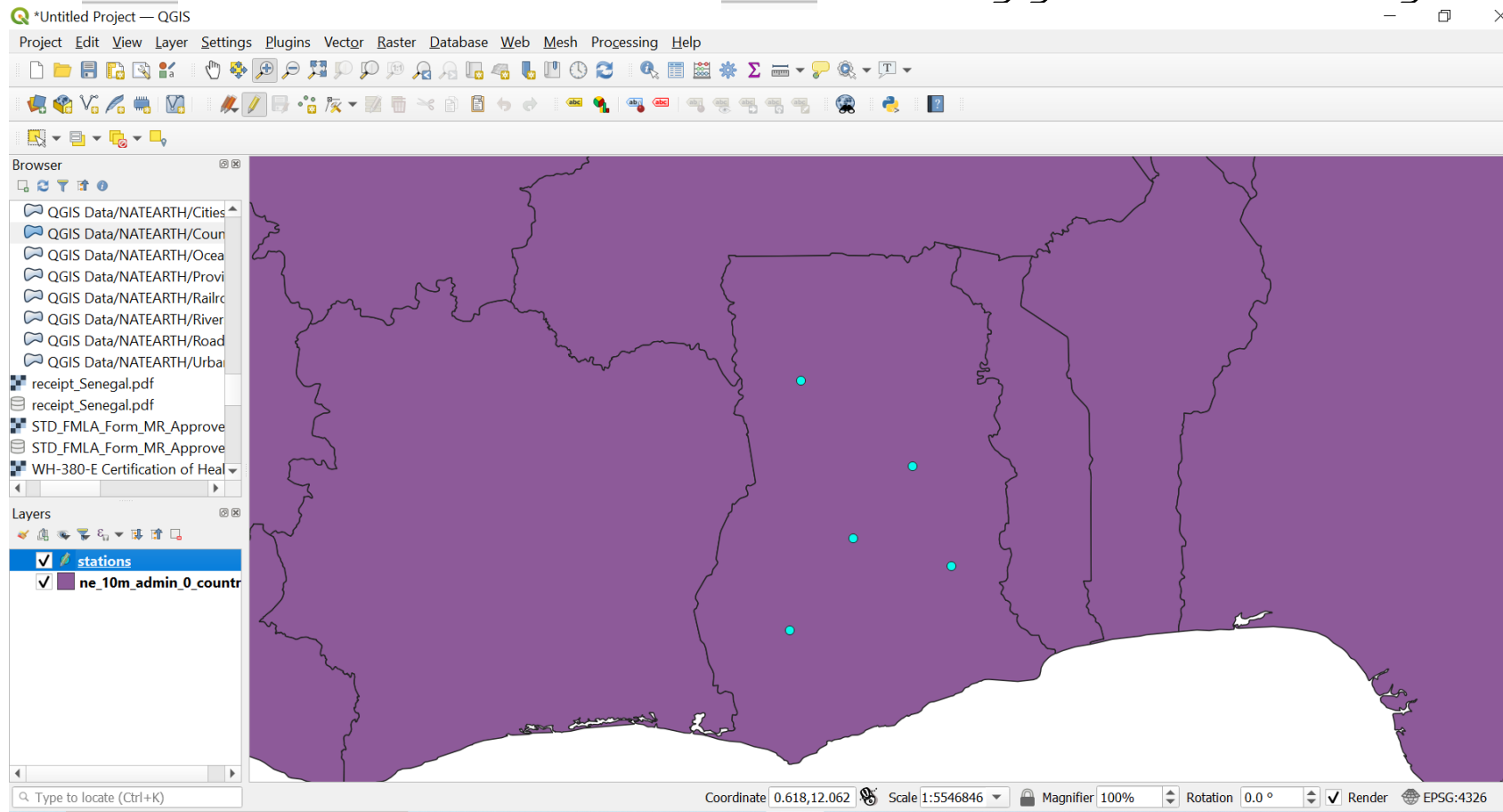
Exercise 5: Creating a Polygon

- Create a new shapefile layer, named `forecast`

- Select `Polygon` as `Geometry Type`

- Type `hazard` as a `New Field`, leave `Type` as `Text Data`, then click `Add to Fields List` and `click OK`

Exercise 5: Creating a Polygon (Cont'd.)

- Click ✏️ to `Toggle Editing` on the forecast data. Click on 🟢 to add polygon

- Draw a polygon by connecting `nodes`, right click over the first `node` to close polygon

- Type `TSTM` to represent thunderstorm. Click back ✏️ and save edits to `forecast`
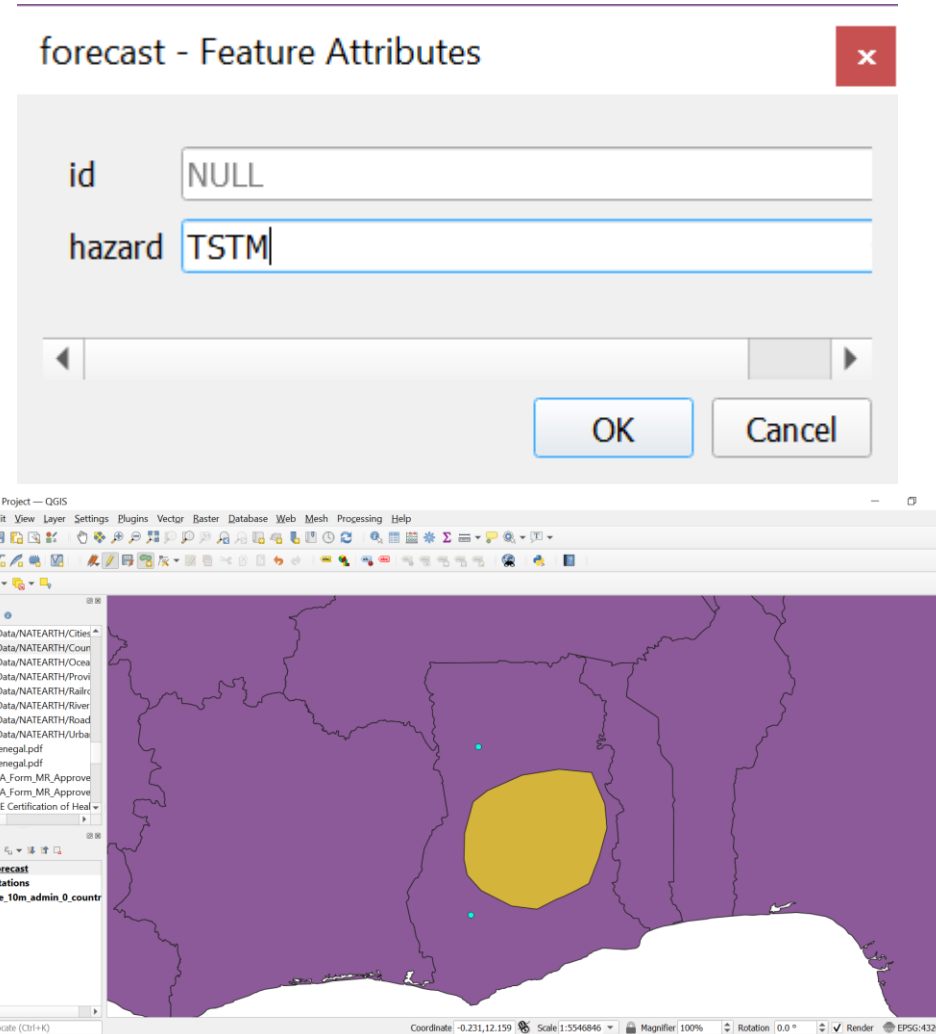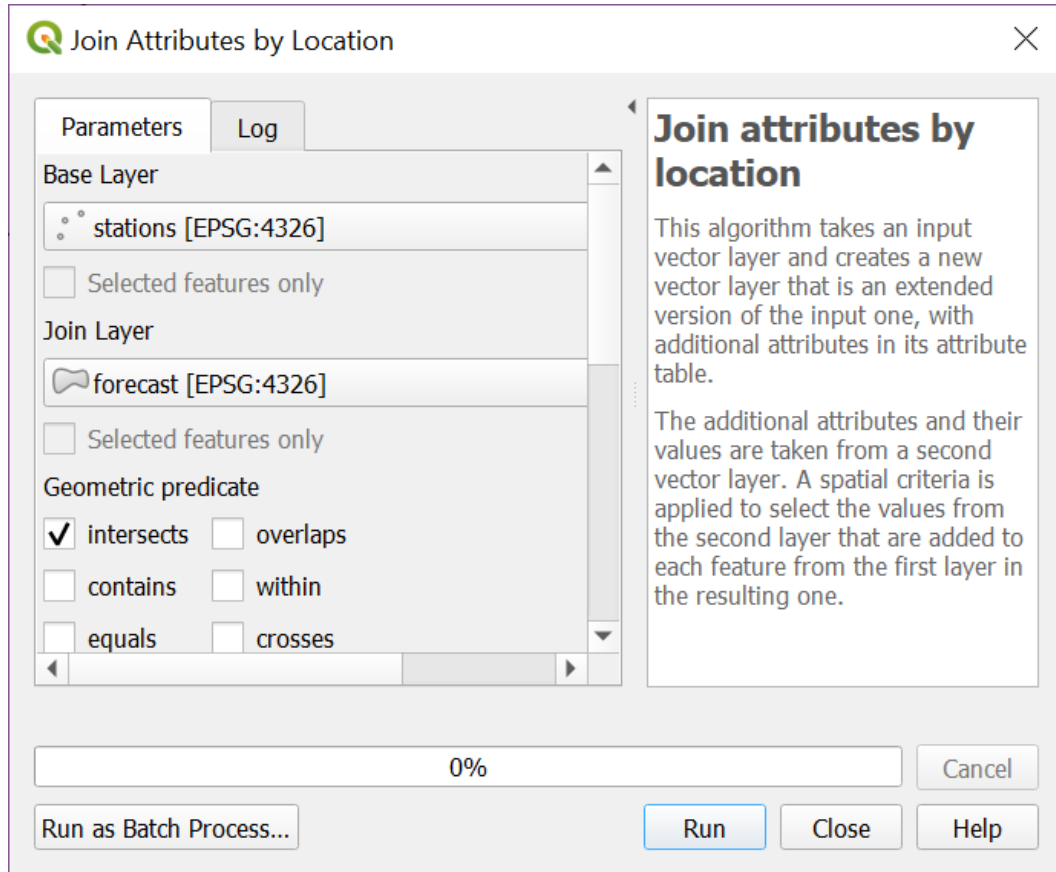
Exercise 6: Spatial Join

- Re-order data so that `stations` is on top of the `forecast` layer

- Open the `Attribute Tables` for `stations` and `forecast` by clicking on each data then `F6`

- Perform a `spatial join` between `stations` and `forecast`. Go to `Vector > Data Management Tools > Join Attributes by Location`
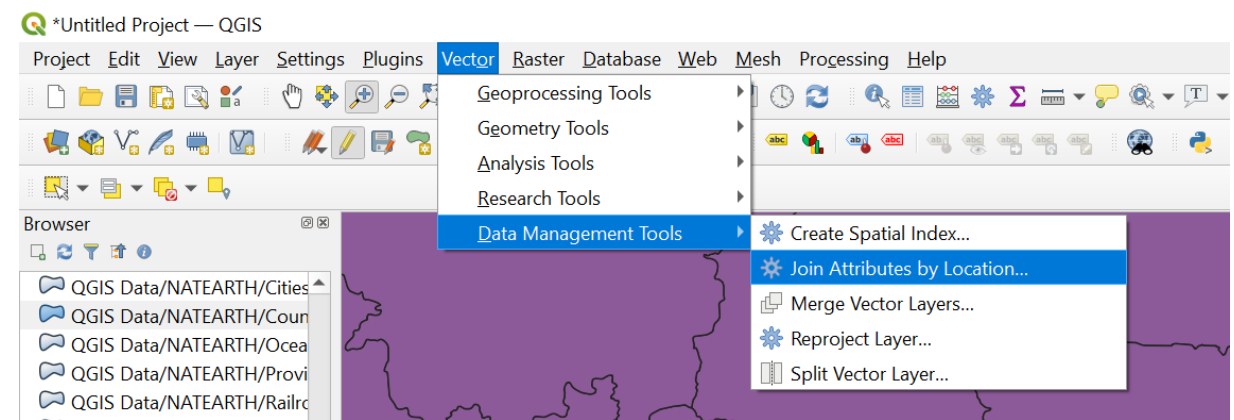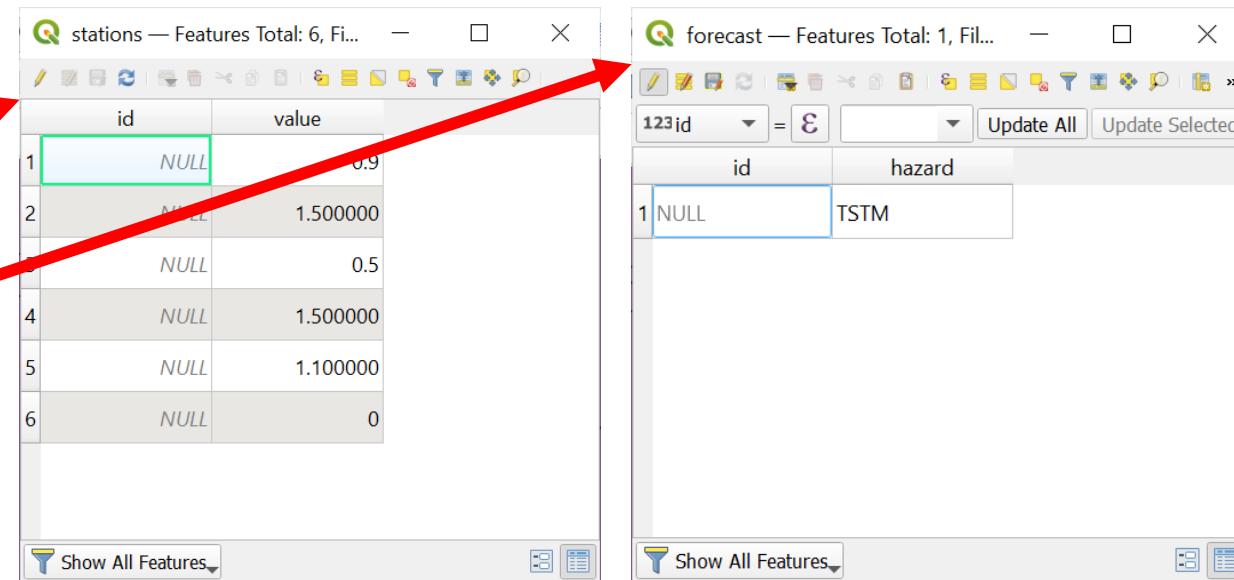
Exercise 6: Spatial Join (Cont'd.)

- Use `stations` as the `Base Layer` and `forecast` as the `Join Layer`

- Make sure `Geometry Predicate` is set to `intersects`

- Click `Run`

Exercise 6: Spatial Join (Cont'd.)

- Verify that the `Attribute Table` of the newly displayed `Joined Layer` shows

- Note that only the `points` inside the `polygon` have TSTM attribute