



LECTURE #4

Mapping Freiburg – Rivers, Lakes, and Neighborhoods

OBJECTIVE

CREATE A THEMATIC MAP OF FREIBURG USING:

- RIVERS AND STREAMS (LINE FEATURES)
- LAKES AND PONDS (POLYGON FEATURES)
- NEIGHBORHOOD BOUNDARIES (ADMINISTRATIVE AREAS)

STEPS

1. PROJECT SETUP IN QGIS.
2. DOWNLOAD DATA.
3. STYLING THE LAYERS.
4. CLIP DATA TO FREIBURG.
5. MAP LAYOUT.
6. EXPORT MAP.

1 – DOWNLOAD DATA (SHP)

01

IMPORTANT

CREATE A PROJECT FOLDER NAMED
“WASSER” WITH THE SUBFOLDERS:

→ SHP

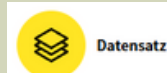
→ PNG

1 – DOWNLOAD DATA (SHP)



02

A) NEIGHBORHOODS – CITY OF FREIBURG (VIA
DATEN.BW.DE)
HTTPS://WWW.DATEN-
BW.DE/SUCHEN/-/DETAILS/STADTBEZIRKE-DER-
STADT-FREIBURG-I-BR?UTM_SOURCE=CHATGPT.COM



Stadtbezirke der Stadt Freiburg i. Br.

DOWNLOAD IN THE
PROJECT FOLDER
→ 'SHP' FOLDER



"stadtbezirke" als Shapefile (.zip)

Download als Shapefile (.zip)

Letzte Änderung: -

Verfügbarkeit: -

Offenheit der Lizenz:  Freie Nutzung

Nutzungsbedingungen: Datenlizenz Deutschland Namensnennung 2.0

Namensnennungstext: Datengrundlage: Stadt Freiburg, www.freiburg.de

URL: [https://geoportal.freiburg.de/wfs/abi_gliederung/abi_gliederung?](https://geoportal.freiburg.de/wfs/abi_gliederung/abi_gliederung?REQUEST=GetFeature&SRSNAME=EPSG:25832&SERVICE=WFS&VERSION=2.0.0&TYPENAMES=stadtbezirke&OUTPUTFORMAT=shapezip)

[REQUEST=GetFeature&SRSNAME=EPSG:25832&SERVICE=WFS&VERSION=2.0.0&TYPENAMES=stadtbezirke&OUTPUTFORMAT=shapezip](https://geoportal.freiburg.de/wfs/abi_gliederung/abi_gliederung?REQUEST=GetFeature&SRSNAME=EPSG:25832&SERVICE=WFS&VERSION=2.0.0&TYPENAMES=stadtbezirke&OUTPUTFORMAT=shapezip)

1 – DOWNLOAD DATA (SHP)

B) HYDROGRAPHY – OPENSTREETMAP / GEOFABRIK

[HTTPS://DOWNLOAD.GEOFABRIK.DE/EUROPE/GERMANY/BADEN-WUERTTEMBERG.HTML](https://download.geofabrik.de/europe/germany/baden-wuerttemberg.html)

DOWNLOAD IN THE
PROJECT FOLDER
→ 'SHP' FOLDER



Sub Regions

Click on the region name to see the overview page for that region, or select one of the file extension links for quick access.

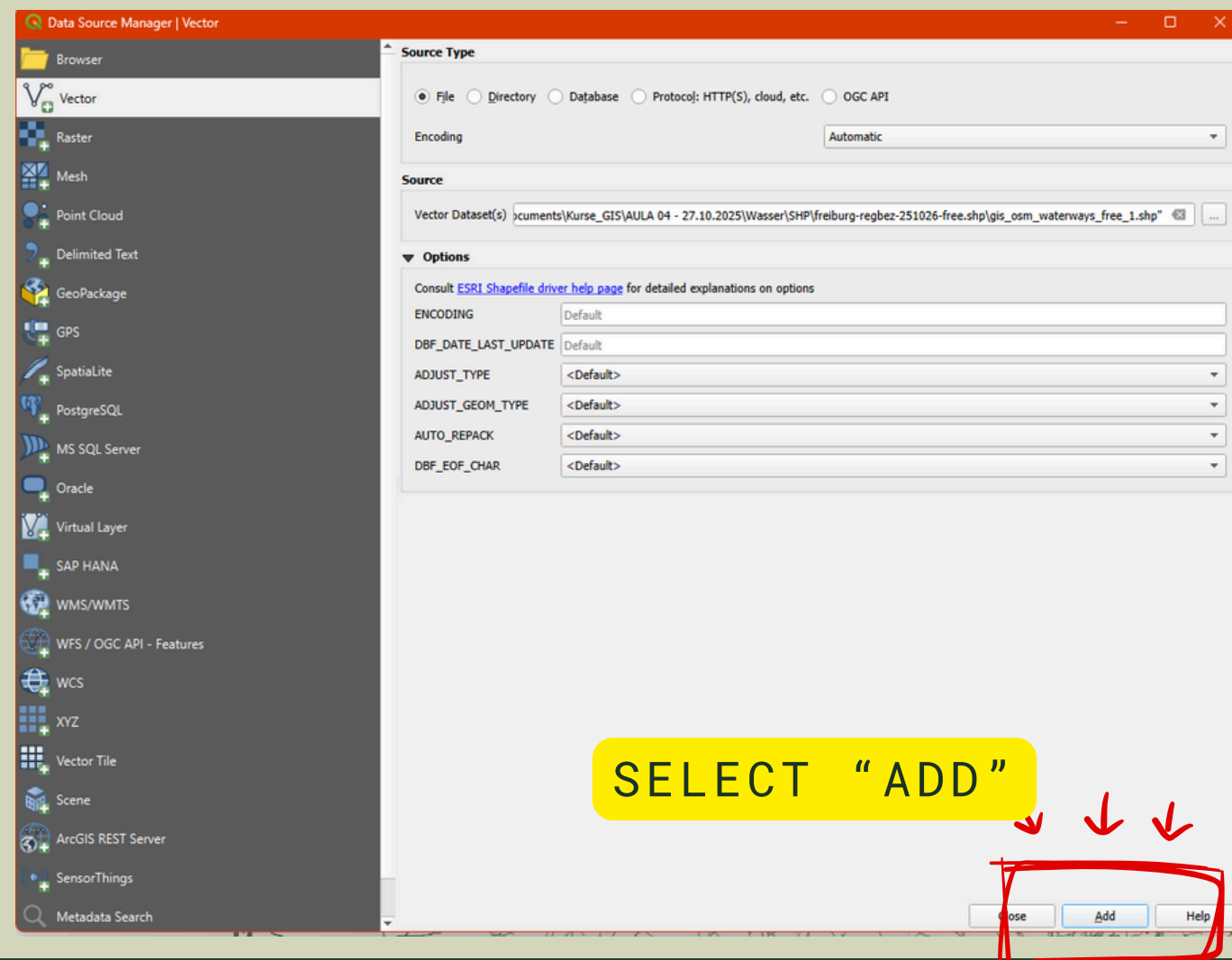
Sub Region	Quick Links	
	.osm.pbf	.shp.zip
Regierungsbezirk Freiburg	[.osm.pbf] (146 MB)	[.shp.zip]
Regierungsbezirk Karlsruhe	[.osm.pbf] (142 MB)	[.shp.zip]
Regierungsbezirk Stuttgart	[.osm.pbf] (194 MB)	[.shp.zip]
Regierungsbezirk Tübingen	[.osm.pbf] (113 MB)	[.shp.zip]



2 – PROJECT SETUP

2. OPEN QGIS → NEW PROJECT

- ADD THE LAYERS:
 - NEIGHBORHOODS: STADTBEZIRKE_FREIBURG.SHP

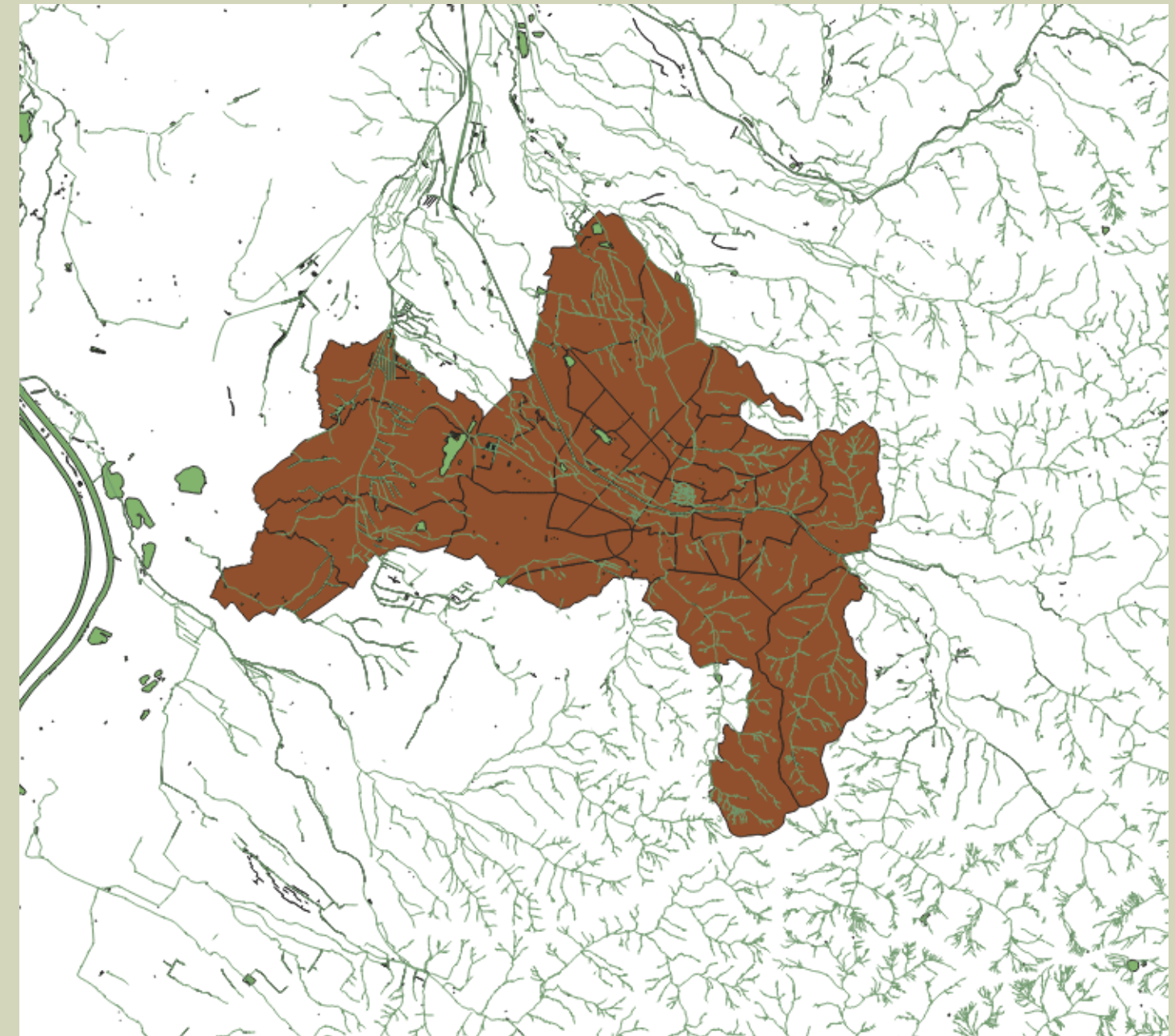
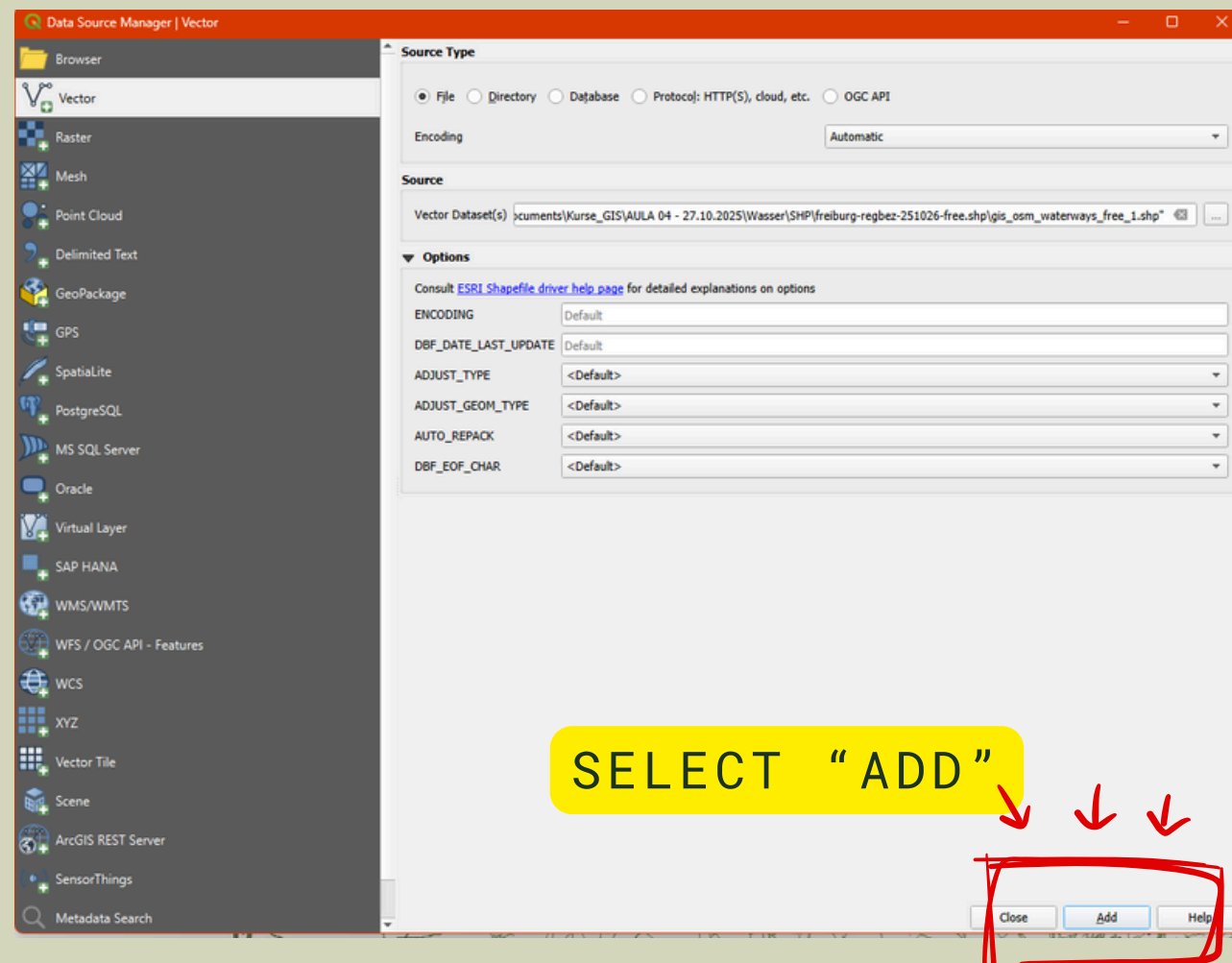


2 – PROJECT SETUP

2. OPEN QGIS → NEW PROJECT

- ADD THE LAYERS:

- RIVERS: GIS_OSM_WATERWAYS_FREE_1.SHP
- LAKES: GIS_OSM_WATER_A_FREE_1.SHP



2 – PROJECT SETUP

06

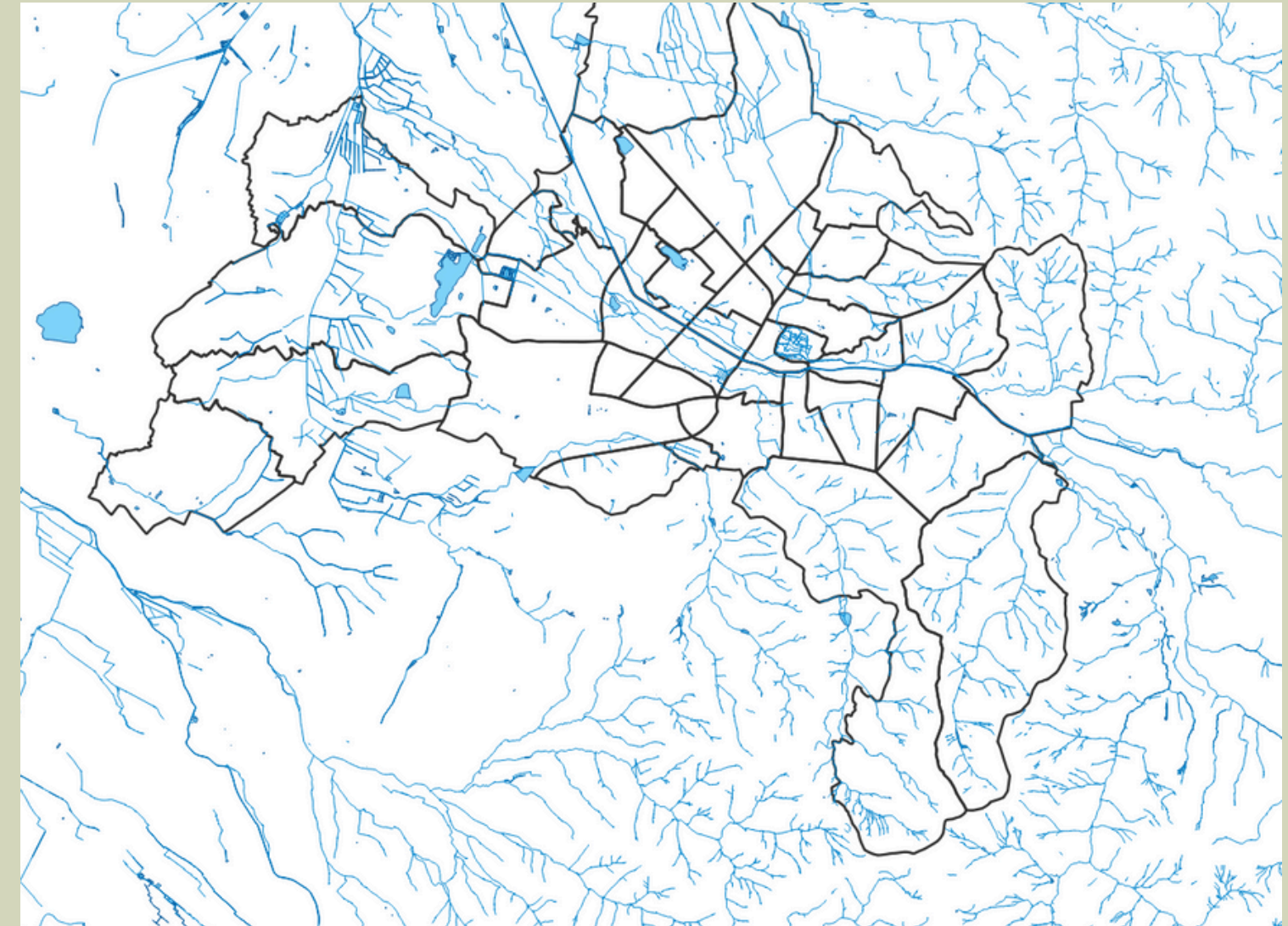
- MAKE SURE ALL LAYERS SHARE THE SAME COORDINATE REFERENCE SYSTEM (CRS).
- EPSG:25832 UTM ZONE 32N.

SINCE UTM UNIT IS 'METERS', WE USE EPSG:25832 TO WORK IN METERS AND OBTAIN ACCURATE DISTANCES AND AREAS.

- RIGHT-CLICK ON THE WATERWAYS LAYER → EXPORT → SAVE FEATURES AS...
- IN THE DIALOG WINDOW:
- FORMAT: ESRI SHAPEFILE
- FILE NAME: WATERWAYS_25832.SHP
- CRS: CLICK THE GLOBE ICON → SELECT
 - EPSG:25832 – ETRS89 / UTM ZONE 32N
 - CLICK OK.
- REPEAT THE SAME PROCESS FOR THE WATER LAYER (LAKES).
- ADD THE NEW FILES (WATERWAYS_25832 AND WATER_25832) TO THE PROJECT AND REMOVE THE OLD ONES.

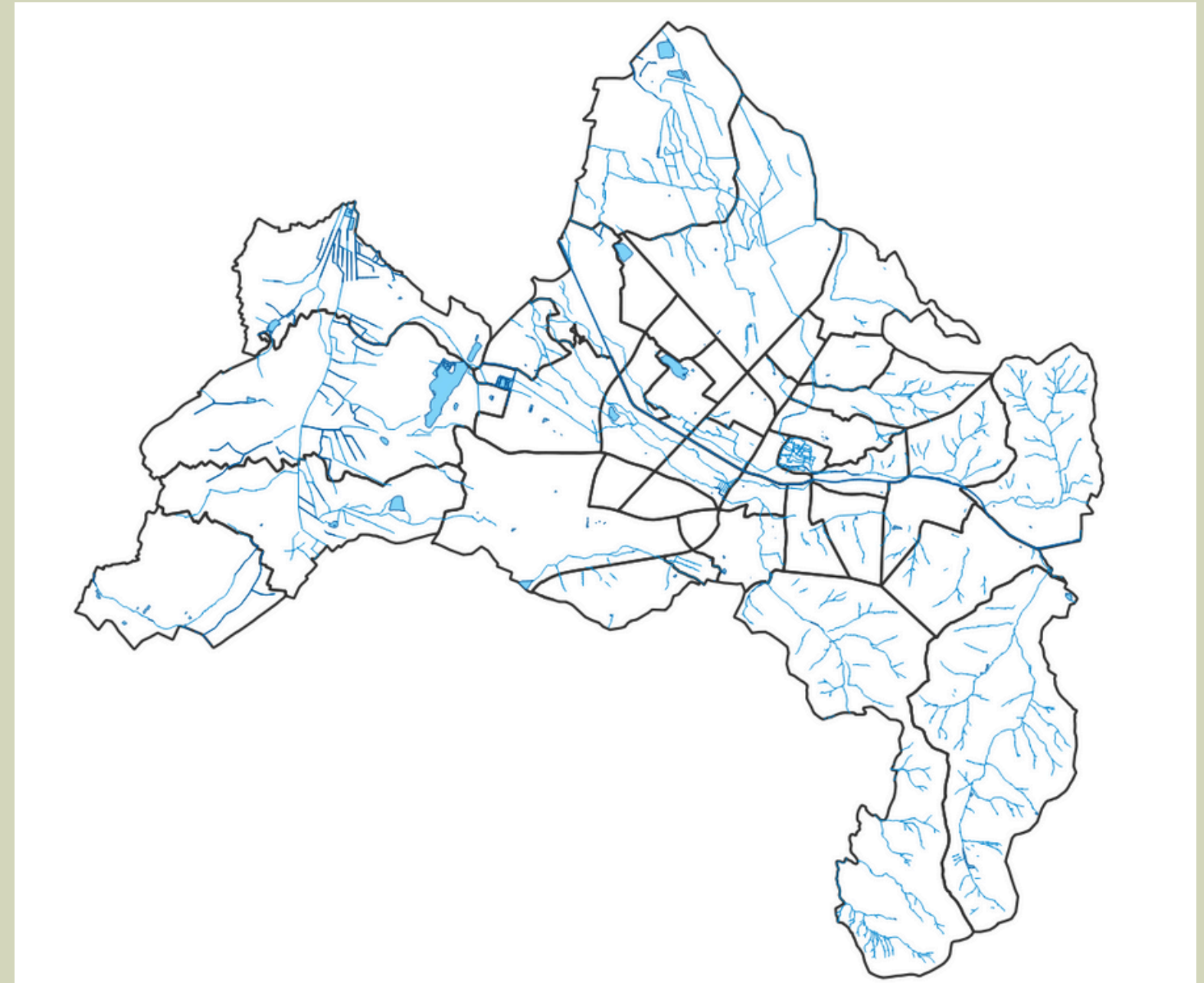
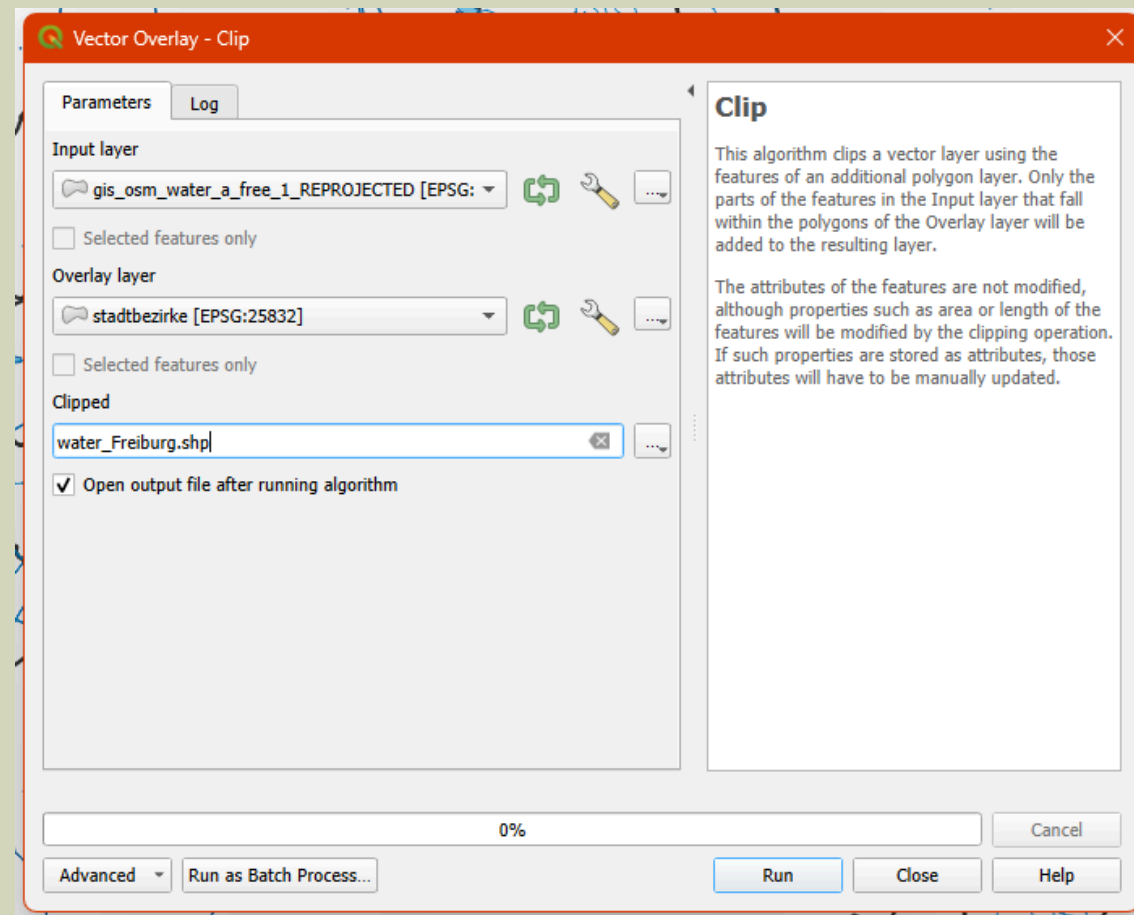
3 – STYLING THE LAYERS

- **RIGHT CLICK ON THE LAYER;**
 - → **PROPERTIES → SYMBOLOGY**
- **A) NEIGHBORHOODS (POLYGONS)**
 - **FILL COLOR: 'NO BRUSH'**
 - **BORDER: DARK GRAY #333333, WIDTH 0.6**
- **B) LAKES (POLYGONS)**
 - **FILL COLOR: LIGHT BLUE #81D4FA**
 - **OUTLINE: DARK BLUE #01579B**
- **C) RIVERS (LINES)**
 - **COLOR: MEDIUM BLUE #0288D1**
 - **WIDTH: 0.8**



3 – CLIP DATA TO FREIBURG

- GO TO VECTOR → GEOPROCESSING TOOLS → CLIP
- INPUT LAYER: WATERWAYS OR WATER
- OVERLAY LAYER: STADTBEZIRKE_FREIBURG
- OUTPUT FILE NAME: RIVERS_FREIBURG.SHP AND LAKES_FREIBURG.SHP



LECTURE #4

Mapping Freiburg – Rivers, Lakes, and Neighborhoods

UPLOAD YOUR MAP IN THIS LINK:

[HTTPS://CLASSROOM.GITHUB.COM/A/TOZG4LAI](https://classroom.github.com/a/tozg4lai)

09

OBJECTIVE

CREATE A THEMATIC MAP OF FREIBURG USING:

- RIVERS AND STREAMS (LINE FEATURES)
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STEPS

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3. STYLING THE LAYERS.
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5. MAP LAYOUT.
6. EXPORT MAP.

REFER TO THE SLIDES AND TUTORIALS FROM THE PREVIOUS SESSION TO ADD LABELS, SATELLITE IMAGERY, AND ENHANCE THE VISUAL STYLE OF YOUR MAP FOR PRINTING.

LECTURE #4

Mapping Freiburg – Rivers, Lakes, and Neighborhoods

UPLOAD YOUR MAP IN THIS LINK:
[HTTPS://CLASSROOM.GITHUB.COM/A/TOZG4LAI](https://classroom.github.com/A/TOZG4LAI)

GIS-UCF-W2526-classroom-12dc23

Accept the assignment —
Lecture04 - Rivers, Lakes, and
Neighborhoods

Once you accept this assignment, you will be granted access to the
lecture04-rivers-lakes-and-neighborhoods-AyobamiBM repository in the
GIS-UCF-W2526 organization on GitHub.

Accept this assignment



You're ready to go!

You accepted the assignment, **Lecture04 - Rivers, Lakes, and
Neighborhoods**.

Your assignment repository has been created:

<https://github.com/GIS-UCF-W2526/lecture04-rivers-lakes-and-neighborhoods-AyobamiBM>

CLICK HERE

We've configured the repository


Your assignment is due by **Oct 31, 2025, 22:00 UTC**



LECTURE #4

Mapping Freiburg – Rivers, Lakes, and Neighborhoods

11

 **lecture04-rivers-lakes-and-neighborhoods-AyobamiBM** Private

[forked from GIS-UCF-W2526/gis-ucf-w2526-classroom-12dc23-lecture04-rivers-lakes-and-neighborhoods-Wasser_Freiburg_Map_Exercise](#)

main

2 Branches

0 Tags

Go to file

Add file

Code

This branch is 3 commits ahead of main .

github-classroom[bot]

add deadline

3c0cd87 · 3 minutes ago

4 Commits

.github	GitHub Classroom Feedback	3 minutes ago
README.md	add deadline	3 minutes ago

README

Review the assignment due date

QGIS Exercise – Mapping Freiburg: Rivers, Lakes, and Neighborhoods

Objective

In this exercise, you will create a thematic map of **Freiburg** showing:

About

gis-ucf-w2526-classroom-12dc23-lecture04-rivers-lakes-and-neighborhoods-Wasser_Freiburg_Map_Exercise created by GitHub Classroom

Readme

Activity

Custom properties

0 stars

0 watching

0 forks

Releases

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[Create a new release](#)

Packages

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UPLOAD FILE


LECTURE #4

Mapping Freiburg – Rivers, Lakes, and Neighborhoods

11



lecture04-rivers-lakes-and-neighborhoods-AyobamiBM /


UPLOAD FILE



Drag additional files here to add them to your repository

[Or choose your files](#)

 133893515658721714.jpg 



Commit changes

Add files via upload

Add an optional extended description...

☒ Commit directly to the `main` branch.

☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

Commit changes Cancel