NCTCOG PRESENTATION

OpenStreetMap and NCTCOG: Exploring the Possibilities
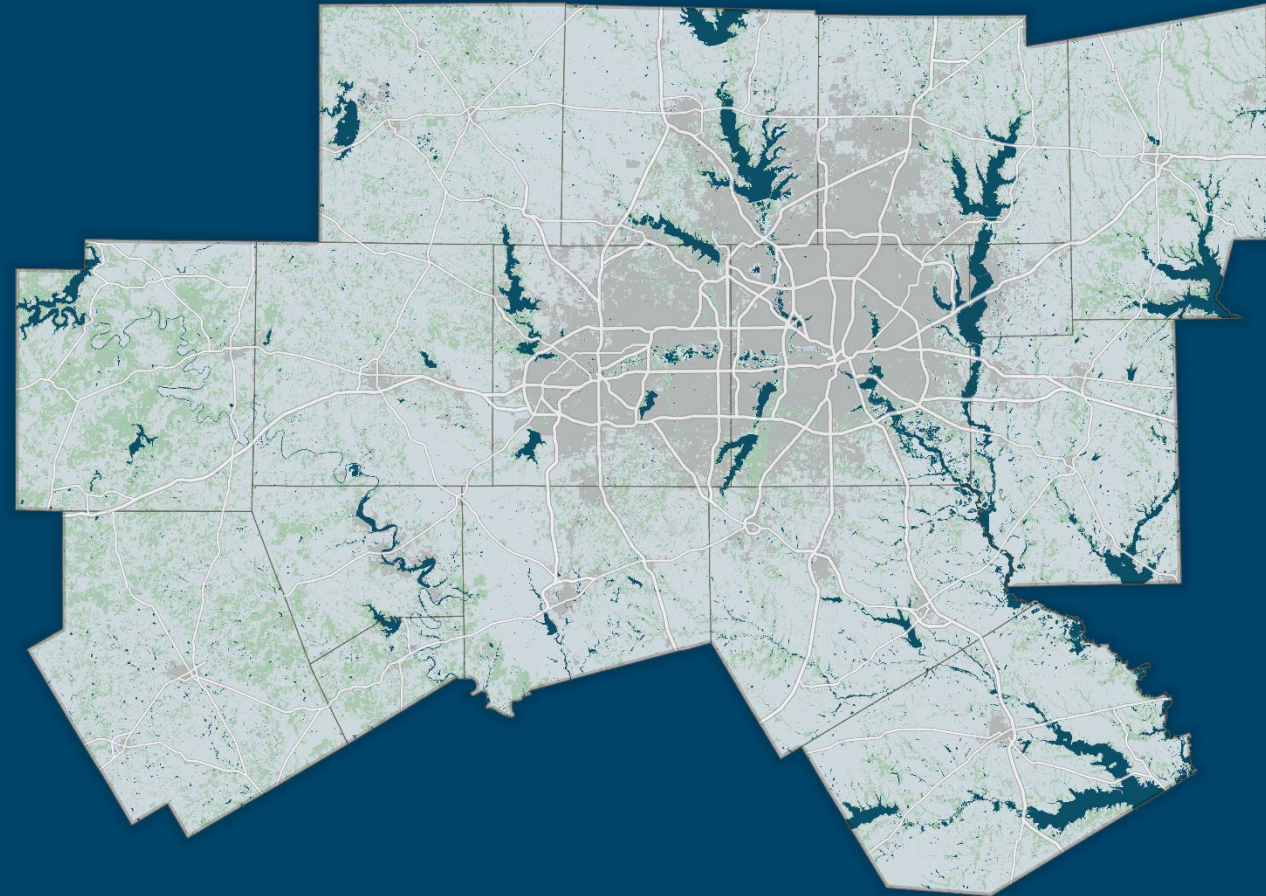
GIS Regional Meeting | 5.16.2024

NCTCOG Transportation

Long and short-range transportation planning for North Central Texas

Provide regional coordination for transportation planning activities, especially for projects that impact multiple jurisdictions
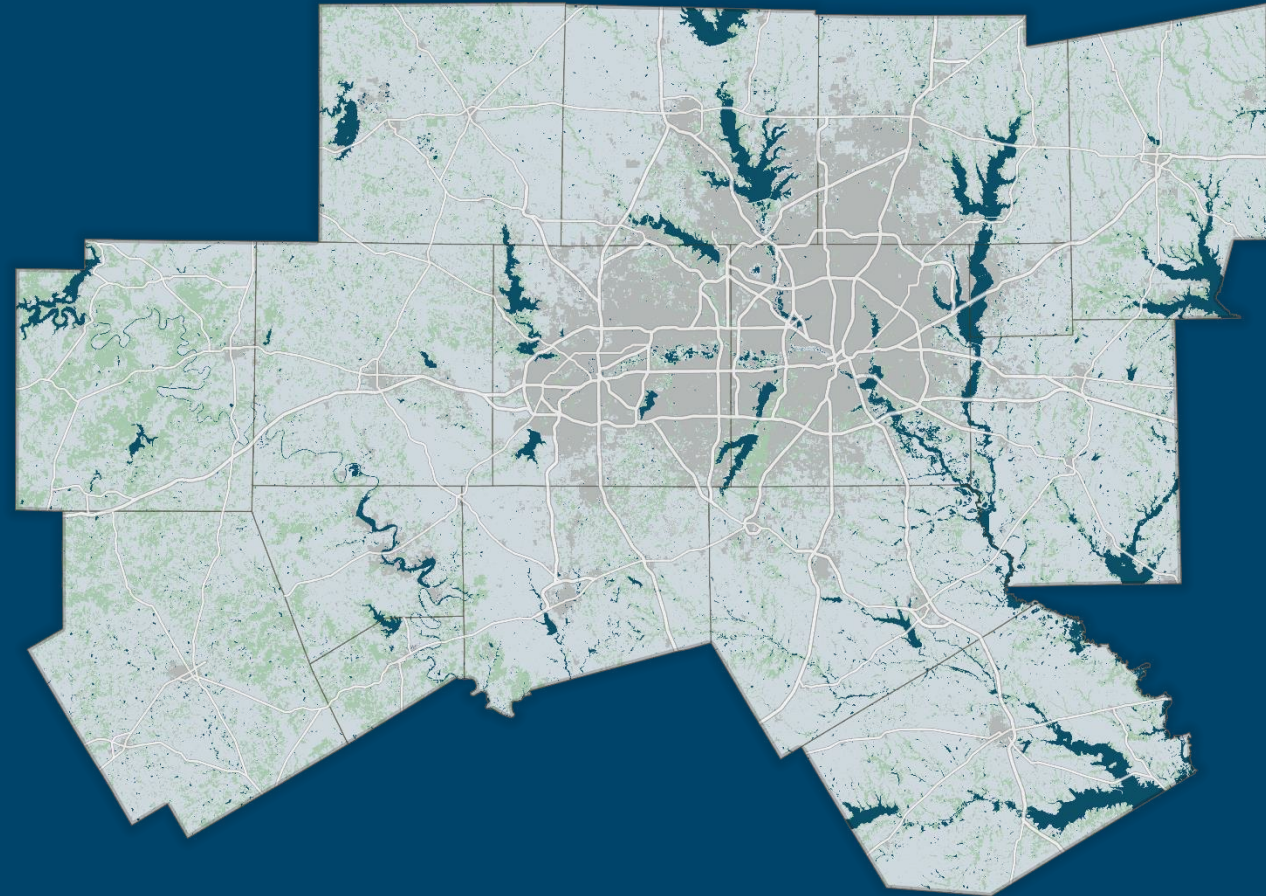
NCTCOG Transportation

Direct certain streams of federal transportation funding to transportation projects around the region

To support these planning activities, we create, maintain, and analyze a lot of data on the region's transportation system
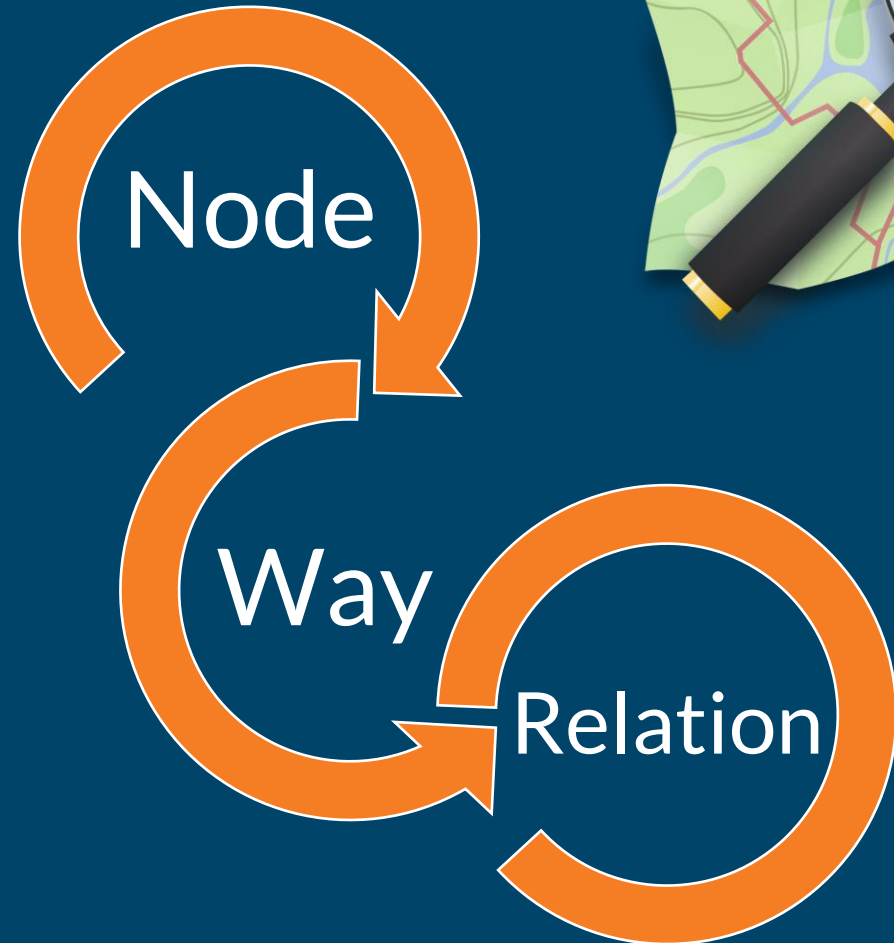
OpenStreetMap

Open-source street mapping platform ran by user community

Wealth of data curated by local communities

Data used in numerous third-party applications

Uses tag-system to attribute data to features

Node

Way

Relation

OpenStreetMap Data Structure

Nodes

Individual points representing features – Stop signs, signalized intersections, railroad crossings

Ways

Lines which are made up of nodes connected together – Road segments, transit lines, railroads

Relations

Nodes or ways related together in some way – Full route of IH 35W, cities, time zones

NCTCOG and OpenStreetMap

NCTCOG and OpenStreetMap

Our Uses for OSM Data
- Bicycle-pedestrian features
- Understanding traffic control devices
- OSM IDs when relating to third-party platforms
- Conflation activities
- Roads layers in vector basemaps

NCTCOG and OpenStreetMap

Consumption of OSM Data
- Updated internal datasets based on features from OSM
  - All-way stops, signalized intersections, and at-grade railroad crossings
- Created dataset of OSM roadways to be used in tandem with third-party applications
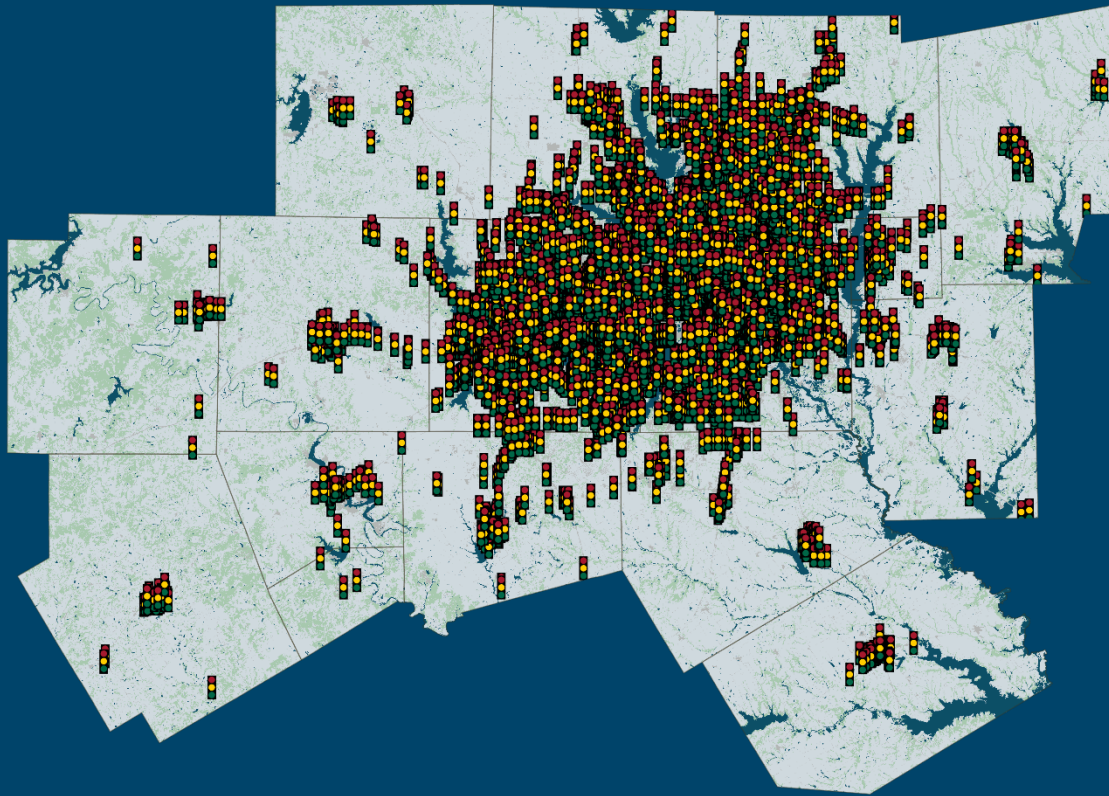
Contribution to OSM Data
- Manual edits to stop signs, signalized intersections, and railroad crossings
  - Removing and adding over 1000 features
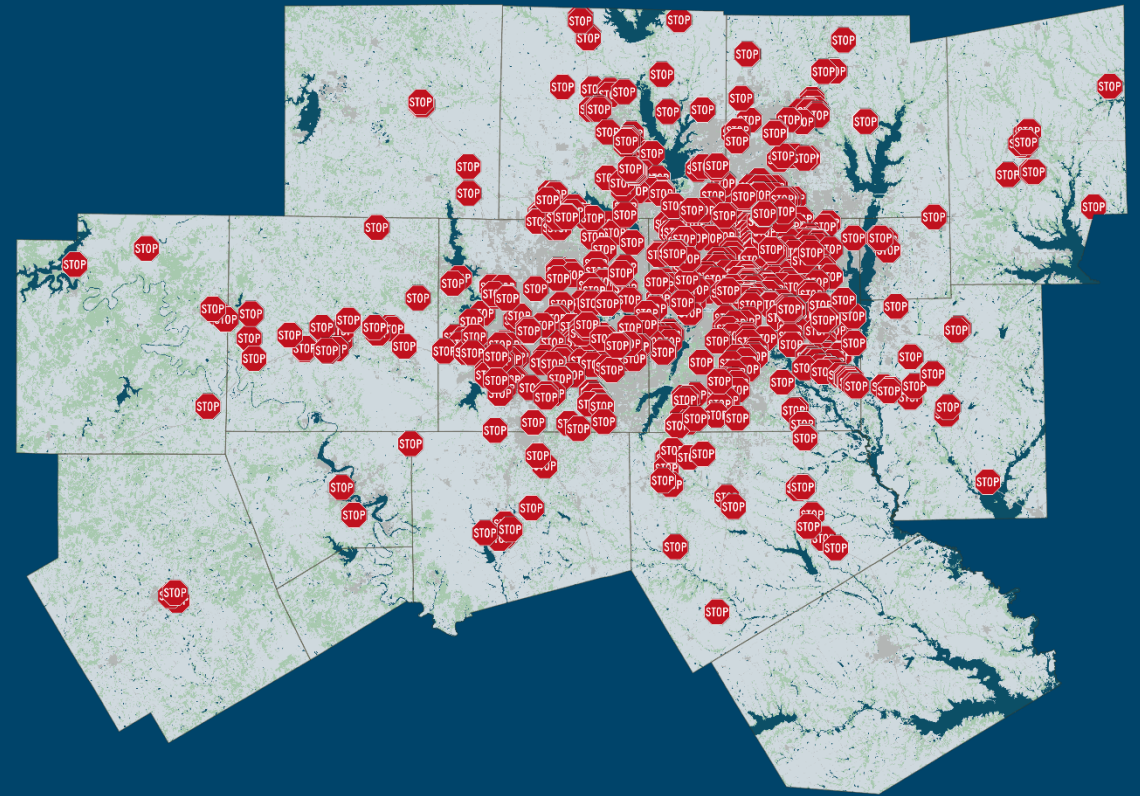- Automated edits to roadway network
  - Updated tags on over 600 elements

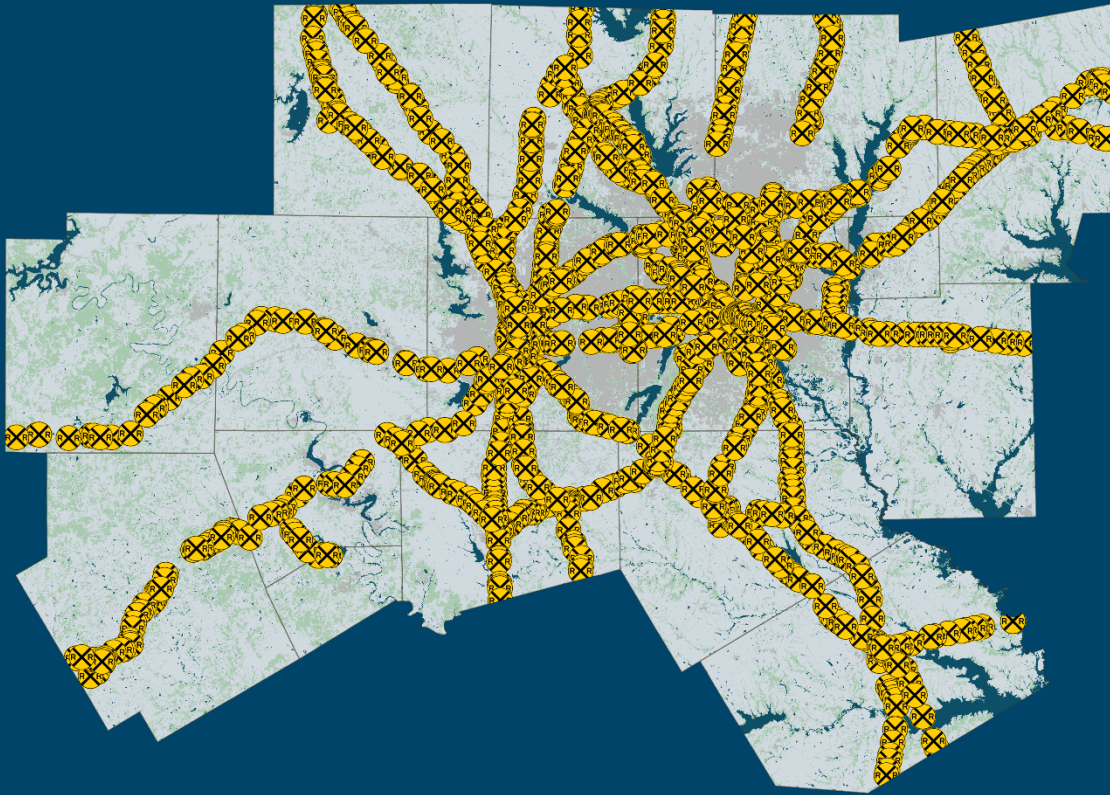# NCTCOG Datasets Enriched by OSM
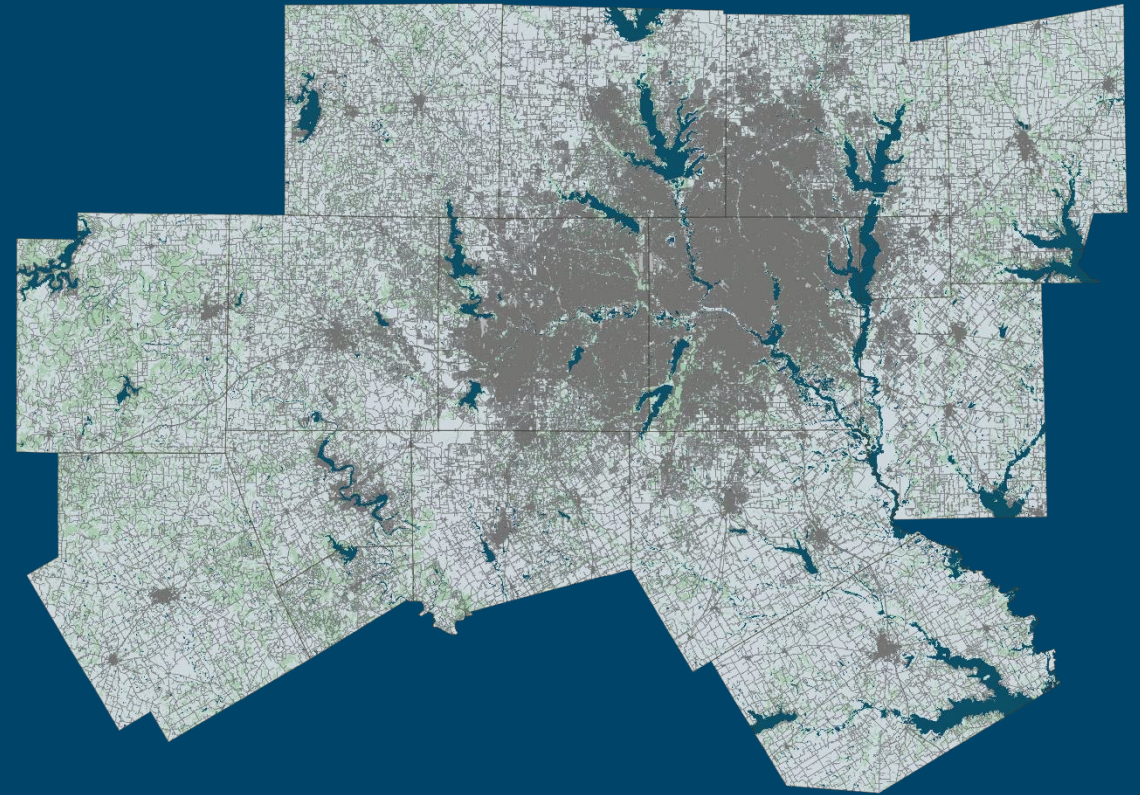
Signalized Intersections

All-Way Stops

NCTCOG Datasets Enriched by OSM
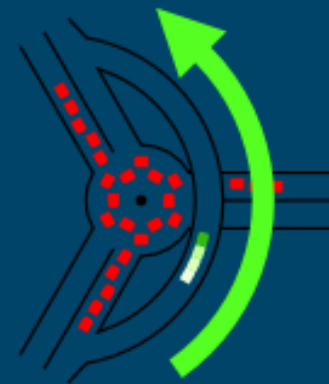
At-Grade Railroad Crossings

OSM Roadways

How to Interact with OpenStreetMap

Consume OSM Data

Build queries in Overpass Turbo

Create python scripts that feed queries into Overpass API

Parse through data to get appropriate tags and feed geometry to desired output

Contribute to OSM Data

Manual

Use online editing applications to manually change features

Automated

Use the OSM API to create an application or python script which updates features

Community Forum

For larger or more complex edits, make sure to consult the community forum to ensure edits are made for the benefit of the community

Open Discussion

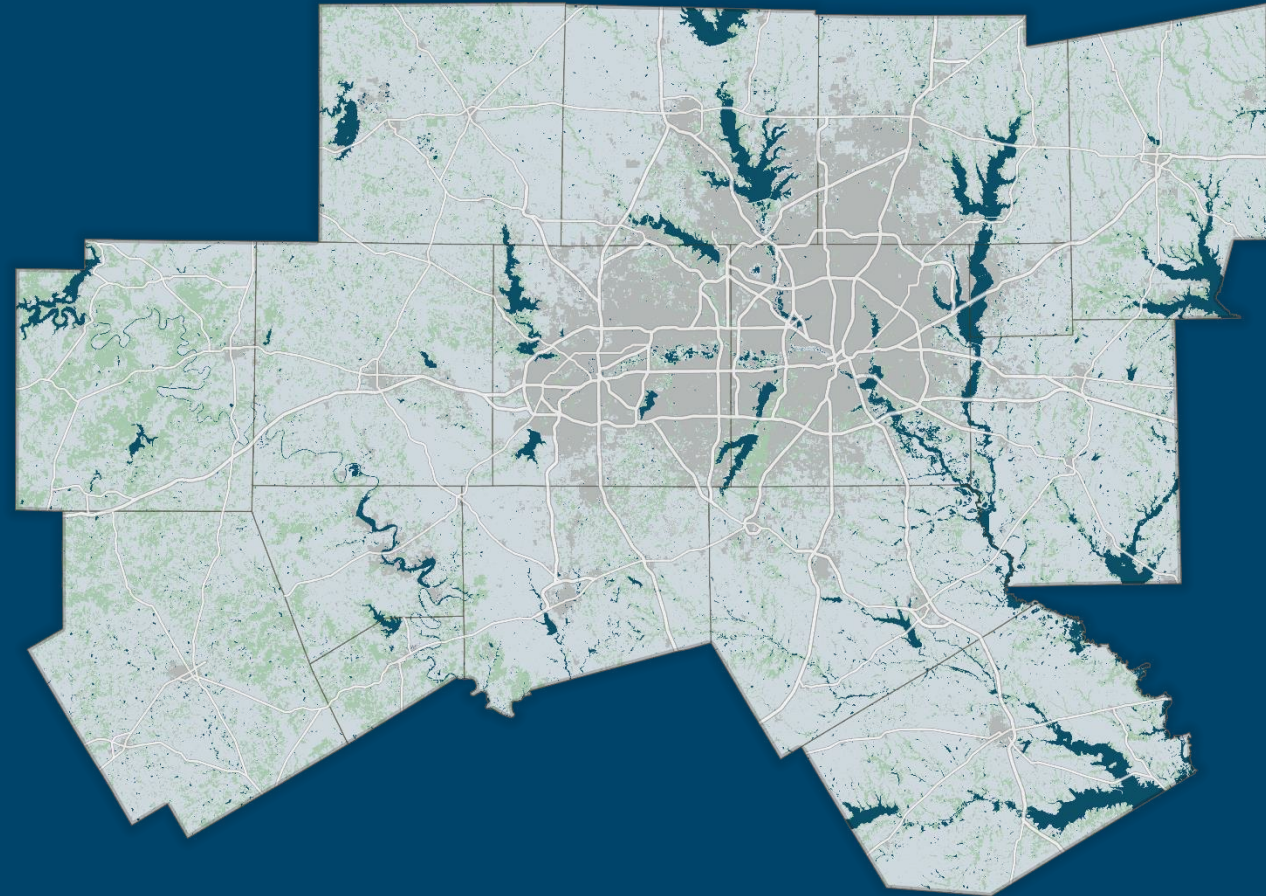📍 How has your organization utilized OpenStreetMap?

📍 Does your organization use any third-party applications which utilize OSM data?

📍 Is there any data you believe may be worthwhile for contributing to the platform?

CONTACT US

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North Central Texas
Council of Governments