# **Waze Traffic View Feed**

# **Data specifications**

Version 1

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# Introduction

## Overview

When you define an area in Traffic View, you get the most accurate traffic reporting available for that area. Traffic View compares historical traffic data with live road reports shared by millions of Waze drivers, so you can see where traffic is congested, get alternative routes, and know what's unusual for that day. This lets you promote safer drives for your citizens, improve traffic flow and speed up response and clearing times.

The Traffic View feed is the full set of raw data from Traffic View. If you integrate this data into your communication methods, you can post ETA times on digital billboards and give your citizens the most current information on your commute apps. You can also use the Traffic View feed to aggregate data over time and set alerts for unusual traffic incidents that fall outside the normal traffic patterns for a given day and time.

Traffic speed information comes either from drivers using Waze (Wazers) or external sources.

## How to understand Waze Traffic View feed data

This document details the structure and content of the Waze Traffic View data feed.

The Traffic View feed is the raw data from the Traffic View integration. When you set your polygon and watchlist in Traffic View, Waze tracks the routes within them.

A route is defined as a road or group of roads to get from a starting point to a destination. When you set a route for your Watchlist, you define and name the route yourself.

The Traffic View feed shows you information about your routes, including how long it takes to travel the route, the length of the route, the overall jam level of the route, and possibly an alternate route if it has a faster ETA than the original.

When a route has jams on it, Waze splits it into subroutes, each with a different jam level. This gives a more granular level of detail to where on the route the jams are. For example, a route can be split into 4 subroutes with corresponding jam levels of 0, 4, 3, 0.

In addition, the Traffic View feed gives you data about the routes within the defined polygon that have <u>unusual traffic</u>.



## How to retrieve the Waze Traffic View feed

To request the Waze Traffic View feed, please email ccp@waze.com.

When you have the Waze Traffic View integration, you get a URL link to the JSON file containing the Traffic View feed data. Waze shared data is approved only for CCP partners, as per the CCP partner agreement.

The data feed refreshes once every minute and is provided to you by URL.

- To get the data, you need:
  - Waze Traffic View integration that includes
    - A defined area. This is either a set polygon with up to 4 points or a bounding box (see this tool as an example)
    - Defined routes in the Traffic View watchlist
- The URL looks like this: https://www.waze.com/rtserver/broadcast/BroadcastRSS

### What you'll see in the Waze Traffic View feed

Here's the information you see in the Traffic View feed:

- 1. General traffic information routes, unusual traffic, ETAs
- 2. **Irregularities (also called <u>unusual traffic</u>)** alerts and traffic jams that affect an exceptionally large number of users
- 3. **Incidents/reports/alerts** Waze user generated reports and alerts related to a specific incident causing traffic.

**Note**: When you change the polygon or routes in the Traffic View tool, your feed changes too.

JSON Element	Value	Description	
alternateRoute		A suggested route with a faster ETA for this route. This is only calculated for routes that have a jam level over 1 and ETA more than 2 minutes that free flow (traffic is slower at least by 2 mins)	
bbox		Bounding box of the feed	
broadcasterId		id of the feed owner in Waze database	
type	See alert type table	Event type	
subtype	See alert subtypes table	Event subtype - depends on atof parameter	
street	String	Street name (as is written in database, no canonical form, may be null)	
city	String	City and state name [City, State] in case both are available, [State] if not associated with a city. (supplied when available)	
country	String	(see two letters codes in <u>http://en.wikipedia.org/wiki/ISO_3166-1</u> )	
envelope		Bounding box of the route	
historicTime		Time in seconds it usually takes to cross this route on the current day of week and time	
id		Route id in the database	
irregularities		List of routes that are found as having high ETA relative to historic ETAs (a.k.a. Unusual traffic events)	
Under irregularities/route			
name		Route name (i.e. major street name this route goes through, similar to route name a user sees when routes from the app)	
id		A counter running starting with 0 that counts the number of irregularities on routes	
type		Is always DYNAMIC	
fromName, toName		Street names where routes starts/ends	
time, line, length, historicTime, jamLevel, envelope, alternateRoute, leadAlert		As described in route definitions	
isMetric		Indication to the UI what units to use in the display.	
jamLevel		jamLevel - total jam level of the route from 0=no jam to 4=standstill	
leadAlert		One of many alerts on the route that's prioritized as the most major one	

Under leadAlert:	
id	Alert id (internal id)
type	Alert type
subType	Alert sub type
reportByNickname	Nickname of the reporter user
reportByMood	Mood id of the reporter user
description	Alert description as added by the reporting user (optional)
numThumbsUp	Number of thumbs up given by wazers to this alert
numNotThereReports	Number of thumbs down given by wazers to this alert
City, Street	of the alert (optional)
reportTime	When alert was reported
position	Alert location (latitude, longitude)
length	Length of route in meters
lengthOfJams	List of total length of jams in the bounding box by jam level (indicates how jammed the area is)
line	Route geometry
subRoutes	List of sub sub routes. When a route has any jams on it the route is split into sub routes, each of them with a different jam level. For example, a route could be split into 4 sub routes with corresponding jam levels 0,1,3,0.
Under subRoutes:	
fromName, toName	Street names where subroute starts and ends
line, length, time, historicTime, jamLevel, envelope	route data as described in basic definitions, just for sub route.
name,fromName, toName	Given by the feed owner, describes the route
segments	Segments ids of the route
time	Time in seconds it takes to cross the route right now (i.e. in the last check. Checks happen about every two minutes)
type	Always static
usersOnJams -	Count of users per jam level (these are relative weighted numbers)

### Traffic View feed example

```
{
 "usersOnJams": [
  {
   "wazersCount": 1718,
   "jamLevel": 0
  },
  {
   "wazersCount": 0,
   "jamLevel": 1
  },
   "wazersCount": 25,
   "jamLevel": 2
  },
   "wazersCount": 0,
   "jamLevel": 3
  },
   "wazersCount": 0,
   "jamLevel": 4
 }
 ],
 "routes": [
  {
   "historicTime": 446,
   "line": [
     {
      "x": -74.20689323194252,
      "y": 40.64175770128392
    },
     {
      "x": -74.14963579315261,
      "y": 40.60903444419476
    }
   ],
   "bbox": {
    "minY": 40.60903444419476,
     "minX": -74.22707498420026,
     "maxY": 40.643716689521995,
    "maxX": -74.14963579315261
   },
   "length": 9846,
   "type": "STATIC",
   "jams": [],
```

```
"alerts": [],
 "toName": "",
 "name": "278 E",
 "fromName": "",
 "jamLevel": 0,
 "id": 1376,
 "time": 436
},
{
 "subRoutes": [
  {
   "toName": "SR-139 W (lower)",
   "historicTime": 358,
   "line": [
    {
      "x": -74.006321,
      "y": 40.722572
    },
     {
      "x": -74.006582,
      "y": 40.722752
    },
     {
      "x": -74.085259,
      "y": 40.730522
    }
   ],
   "bbox": {
    "minY": 40.730522,
    "minX": -74.085259,
    "maxY": 40.740889,
     "maxX": -74.062409
   },
   "fromName": "SR-139 W (lower)",
   "length": 3520,
   "jamLevel": 0,
   "time": 261
  }
 ],
 "historicTime": 687,
 "line": [
  {
   "x": -74.00632136441801,
   "y": 40.7225729836073
  },
  {
   "x": -74.08525957374057,
```

```
"y": 40.73052272482624
   }
  ],
  "bbox": {
   "minY": 40.7225729836073,
   "minX": -74.08525957374057,
   "maxY": 40.740889,
   "maxX": -74.00632136441801
  },
  "length": 9092,
  "type": "STATIC",
  "jams": [],
  "alerts": [],
  "toName": "",
  "name": "78 W",
  "fromName": "",
  "jamLevel": 0,
  "id": 1377,
  "time": 735
}
],
"irregularities": [
 {
  "alerts": [],
  "historicTime": -1,
  "line": [
   {
     "x": -74.016234,
     "y": 40.706399
   },
   {
     "x": -74.010097,
     "y": 40.70187
   }
  ],
  "bbox": {
   "minY": 40.706399,
   "minX": -74.016234,
   "maxY": 40.706399,
   "maxX": -74.016234
  },
  "name": "Double tube closure ",
  "length": 1040,
  "jamLevel": 5,
  "id": 0,
  "time": -1,
  "type": "DYNAMIC",
```

```
"jams": [],
 "leadAlert": {
  "numComments": 0,
  "comments": [],
  "city": "Manhattan, NY",
  "numThumbsUp": 0,
  "street": "Battery Park Underpass",
  "subType": "ROAD CLOSED EVENT",
  "id": "alert-2130271205/3c856425-262f-3668-b03c-25d3b02c01f7",
  "position": "40.706399 -74.016234",
  "type": "ROAD_CLOSED",
  "numNotThereReports": 0,
  "isLeadAlert": true,
  "reportTime": 1522084545431
 }
},
{
 "alerts": [],
 "historicTime": -1,
 "line": [
  {
   "x": -74.050004,
   "y": 40.73128
  },
  {
   "x": -74.062409,
   "y": 40.73913
  }
 ],
 "bbox": {
  "minY": 40.73128,
  "minX": -74.050004,
  "maxY": 40.73128,
  "maxX": -74.050004
 },
 "name": "Construction ",
 "length": 1414,
 "jamLevel": 5,
 "id": 1,
 "time": -1,
 "type": "DYNAMIC",
 "jams": [],
 "leadAlert": {
  "numComments": 0,
  "comments": [],
  "city": "Jersey City, NJ",
  "numThumbsUp": 0,
```

```
"street": "SR-139 W (lower)",
    "subType": "ROAD_CLOSED_EVENT",
    "id": "alert-2132049084/1c67d40f-2e98-30cb-a64a-ae153bfe850a",
    "position": "40.73128 -74.050004",
    "type": "ROAD_CLOSED",
    "numNotThereReports": 0,
    "isLeadAlert": true,
    "reportTime": 1522077324308
  }
  }
 ],
 "broadcasterId": "b9c6100b281f316fbc17b6d94f96524f",
 "areaName": "ny_area",
 "bbox": {
  "minY": 40.208,
  "minX": -74.75,
  "maxY": 41.108,
  "maxX": -73.38
 },
 "name": "New York Area | DEMO",
 "isMetric": false,
 "restrictions": {},
 "lengthOfJams": [
  {
   "jamLevel": 1,
   "jamLength": 1872
  },
  {
   "jamLevel": 2,
   "jamLength": 10461
  },
  {
   "jamLevel": 3,
   "jamLength": 9917
  },
  {
   "jamLevel": 4,
   "jamLength": 1470
  },
  {
   "jamLevel": 5,
   "jamLength": 43032
  }
 ],
 "updateTime": 1522138104077
}
```

### Alert types

Waze currently supports the following types and subtypes of user-generated alerts:

ID	Alert type	Alert Subtype	
	ACCIDENT	ACCIDENT_MINOR	
		ACCIDENT_MAJOR	
		NO_SUBTYPE	
-	JAM	JAM_MODERATE_TRAFFIC	
		<ul> <li>JAM_HEAVY_TRAFFIC</li> </ul>	
		<ul> <li>JAM_STAND_STILL_TRAFFIC</li> </ul>	
		• JAM_LIGHT_TRAFFIC	
		NO_SUBTYPE	
	WEATHERHAZARD /	HAZARD_ON_ROAD	
	HAZARD	HAZARD_ON_SHOULDER	
		HAZARD_WEATHER	
		<ul> <li>HAZARD_ON_ROAD_OBJECT</li> </ul>	
		<ul> <li>HAZARD_ON_ROAD_POT_HOLE</li> </ul>	
		<ul> <li>HAZARD_ON_ROAD_ROAD_KILL</li> </ul>	
		<ul> <li>HAZARD_ON_SHOULDER_CAR_STOPPED</li> </ul>	
		<ul> <li>HAZARD_ON_SHOULDER_ANIMALS</li> </ul>	
		<ul> <li>HAZARD_ON_SHOULDER_MISSING_SIGN</li> </ul>	
		<ul> <li>HAZARD_WEATHER_FOG</li> </ul>	
		HAZARD_WEATHER_HAIL	
		<ul> <li>HAZARD_WEATHER_HEAVY_RAIN</li> </ul>	
		<ul> <li>HAZARD_WEATHER_HEAVY_SNOW</li> </ul>	
		<ul> <li>HAZARD_WEATHER_FLOOD</li> </ul>	
		<ul> <li>HAZARD_WEATHER_MONSOON</li> </ul>	
		<ul> <li>HAZARD_WEATHER_TORNADO</li> </ul>	
		<ul> <li>HAZARD_WEATHER_HEAT_WAVE</li> </ul>	
		HAZARD_WEATHER_HURRICANE	
		<ul> <li>HAZARD_WEATHER_FREEZING_RAIN</li> </ul>	
		HAZARD_ON_ROAD_LANE_CLOSED	
		HAZARD_ON_ROAD_OIL	
		HAZARD_ON_ROAD_ICE	
		HAZARD_ON_ROAD_CONSTRUCTION	
		<ul> <li>HAZARD_ON_ROAD_CAR_STOPPED</li> </ul>	
		<ul> <li>HAZARD_ON_ROAD_TRAFFIC_LIGHT_FAULT</li> </ul>	
		NO_SUBTYPE	
	MISC	NO_SUBTYPE	
	CONSTRUCTION	NO_SUBTYPE	
	ROAD_CLOSED	ROAD_CLOSED_HAZARD	
		<ul> <li>ROAD_CLOSED_CONSTRUCTION</li> </ul>	
		ROAD_CLOSED_EVENT	

NO_SUBTYPE
------------

#### **Routes example**

```
v routes [40]
   ▶ 0 {15}
   ▶ 1 {13}
   ▶ 2 {14}
   ▼ 3 {14}
      ▼ subRoutes [2]
         ▼ 0 {8}
              toName : Tol Cikampek (Cikunir-Cikarang)
              historicTime : 2231
            ▶ line [161]
            ▶ bbox {4}
              fromName : Tol Tebet-Cawang
              length : 13117
              jamLevel: 0
              time : 2016
         ▶ 1 {8}
        historicTime : 2938
      ▶ line [228]
      ▼ bbox {4}
           minY: -6.258305891822439
           minX: 106.87574211205309
           maxY : -6.24329400000029
           maxX: 106.99060598481726
        length : 16467
        type : STATIC
      ▶ jams [0]
      alerts [0]
        toName : Tol Cikampek (Cikunir-Cikarang)
        name : Tol Cikampek (Cawang-Cikunir); Tol Cikampek (Cikunir-Cikarang)
        fromName : Tol Cawang-Tebet
        jamLevel : 2
        id : 9202
        time : 2723
```

#### Irregularities (unusual traffic jams) example

```
v irregularities [2]
   ▼ 0 {15}
        historicTime : 226
      ▶ line [13]
      ▶ bbox {4}
        length : 2199
        type : DYNAMIC
      ▶ jams [0]
      alerts [0]
      alternateRoute {6}
        toName : Jakarta Selatan,
        name : Tol Lingkar Luar (TMII-Ulujami)
        fromName : IM2
        jamLevel: 4
        id : 0
        time : 1406
      v leadAlert {13}
         comments [0]
           numThumbsUp : 17
           reportByMood : 1
           reportByNickname : On3zt
           type : HAZARD
           numNotThereReports : 0
           isLeadAlert : 🗹 true
           numComments : 0
           street : Tol Lingkar Luar (TMII-Ulujami)
           subType : HAZARD_ON_ROAD_CONSTRUCTION
           id : alert-1049262727/00ec0d36-eea4-338d-a3fa-15407c509987
           position : -6.292342 106.807891
           reportTime : 1516283119173
```

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