NTCIP 1204 Observation Types Data Dictionary

id	name	units	description	1204 sect.
	essAtmosphericPressure	10^-1 millibars, or 10^-1 hectopascals	The force per unit area exerted by the atmosphere	5.5.4
	windSensorAvgDirection	degrees clockwise from true North	A two-minute average of the direction from which the wind is blowing	5.6.10.5
	windSensorAvgSpeed	10^-1 meters per second	A two-minute average of the windspeed	5.6.10.4
	windSensorSituation	integer	Describes the weather and travel situation in terms of wind from staffed stations only. Specific ranges for these values are defined in the Glossary of Meteorology	5.6.10.10
	windSensorGustSpeed	10^-1 meters per second	The maximum wind gust recorded by the wind sensor during the 10 minutes preceding the observation	5.6.10.8
	windSensorGustDirection	degrees clockwise from true North	The direction of the maximum wind gust recorded during the 10 minutes preceding the observation	5.6.10.9
	windSensorSpotDirection	degrees clockwise from true North	The direction from which the wind is blowing	5.6.10.7
	windSensorSpotSpeed	10^-1 meters per second	The wind speed	5.6.10.6
	essWetBulbTemp	10^-1 degrees Celsius	The wet-bulb temperature; instantaneous	5.7.4
	essDewpointTemp	10^-1 degrees Celsius	The dewpoint temperature; instantaneous	5.7.5
	essMaxTemp	10^-1 degrees Celsius	The maximum temperature recorded during the 24 hours preceding the observation	5.7.6
	essMinTemp	10^-1 degrees Celsius	The minimum temperature recorded during the 24 hours preceding the observation	5.7.7
	essRelativeHumidity	percent	The relative humidity	5.8.1
	essAirTemperature	10^-1 degrees Celsius	The dry-bulb temperature; instantaneous	5.7.3.3
	waterLevelSensorReading	centimeters	Indicates the depth of the water from a user-defined point	5.8.21.2
	essAdjacentSnowDepth	centimeters	The depth of snow on representative areas other than the highway pavement, avoiding drifts and plowed areas	5.8.3
	essRoadwaySnowDepth	centimeters	The current depth of unpacked snow on the driving surface	5.8.4
	essRoadwaySnowpackDepth	centimeters	The current depth of packed snow on the roadway surface	5.8.5
	essPrecipYesNo	integer	Indicates whether or not moisture is detected by the sensor: (1) precip; (2) noPrecip; (3) error	5.8.6
	essPrecipRate	10^-1 grams per sq. meter per second	The rainfall, or water equivalent of snow, rate	5.8.7
	essSnowfallAccumRate	10^-7 meters per second	The snowfall accumulation rate	5.8.8
	essPrecipSituation	integer	Describes the weather situation in terms of precipitation; see NTCIP 1204 for validation rules and text mapping	5.8.9
	essIceThickness	millimeters	Indicates the thickness of the ice	5.8.10
	essPrecipitationStartTime	seconds since 00:00:00 Jan 1, 1970 UTC	The time at which the most recent precipitation event began	5.8.11
	essPrecipitationEndTime	seconds since 00:00:00 Jan 1, 1970 UTC	The time at which the most recently completed precipitation event ended	5.8.12
	essPrecipitationOneHour	10^-1 kg per sq meter	The total water equivalent precipitation over the one hour preceding the observation	5.8.13
	essPrecipitationThreeHours	10^-1 kg per sq meter	The total water equivalent precipitation over the three hours preceding the observation	5.8.14
	essPrecipitationSixHours	10^-1 kg per sq meter	The total water equivalent precipitation over the six hours preceding the observation	5.8.15
	essPrecipitationTwelveHours	10^-1 kg per sq meter	The total water equivalent precipitation over the twelve hours preceding the observation	5.8.16

NTCIP 1204 Observation Types Data Dictionary

id	name	units	description	1204 sect.
	essPrecipitation24Hours	10^-1 kg per sq meter	The total water equivalent precipitation over the 24 hours preceding the observation	5.8.17
	essTotalSun	minutes	The total amount [sic] of sunshine over the 24 hour period preceding the observation	5.9.2
	essCloudSituation	integer	Describes the amount of cloud cover; see NTCIP 1204 for validation rules and text mapping	5.9.3
	essInstantaneousTerrestrialRadiation	watts per sq meter	The instantaneous infrared (wavelength of 3.5 - 50 micrometers) radiation being emitted from the atmosphere	5.9.4
	essInstantaneousSolarRadiation	watts per sq meter	The instantaneous ultraviolet, visible, and near-infrared (wavelength of less than 3.0 micrometers) radiation hitting the earth's surface	5.9.5
	essTotalRadiation	joules per sq meter	The average total radiation [i.e., energy] hitting the earth's surface during the radiation period	5.9.6
	essTotalRadiationPeriod	seconds	The period that corresponds to the length of time the essTotalRadiation is averaged [i.e., accumulated]	5.9.7
	essVisibility	10^-1 meters	Surface visibility	5.10.1
	essVisibilitySituation	integer	Describes the travel environment in terms of visibility; see NTCIP 1204 for validation rules and text mapping	5.10.2
	essSurfaceStatus	integer	A value indicating the pavement surface status; see NTCIP 1204 for validation rules and mapping	5.11.3.7
	essSurfaceTemperature	10^-1 degrees Celsius	The current pavement surface temperature	5.11.3.8
	essPavementTemperature	10^-1 degrees Celsius	The current pavement temperature 2-10 cm below the pavement temperature. The specific depth at which the reading is taken is defined by pavementSensorTemperatureDepth	5.11.3.9
	essSurfaceSalinity	parts per one hundred thousand by weight	The pavement [surface] salinity	5.11.3.11
	essSurfaceFreezePoint	10^-1 degrees Celsius	The temperature at which the existing solution on the roadway will freeze	5.11.3.13
	essSurfaceBlackIceSignal	integer	A value indicating if Black Ice is detected by the sensor; see NTCIP 1204 for data validation and mapping	5.11.3.14
	essPavementSensorError	integer	A value indicating the type of pavement sensor error; see NTCIP 1204 for data validation and mapping	5.11.3.15
	essSurfaceIceOrWaterDepth	10^-1 millimeters	The current thickness of ice or depth of water on the surface of the roadway	5.11.3.16
	essSurfaceConductivityV2	10^-1 millimhos/cm	Indicates the conductivity of the ice/liquid mixture on the pavement as detected by the sensor	5.11.3.17
	pavementSensorTemperatureDepth	centimeters	The depth at which the pavement temperature is detected	5.11.3.19
	essSubSurfaceTemperature	10^-1 degrees Celsius	The current sub-surface temperature	5.11.6.5
	essSubSurfaceMoisture	percent	The sub-surface moisture expressed as a percentage (eg. 0 indicates dry, 100 indicates saturated)	5.11.6.6
	essSubSurfaceSensorError	integer	A value indicating the type of sensor error; see NTCIP 1204 for data validation and mapping	5.11.6.7
	essVehicleSpeed	km/hr	Current speed being reported by the vehicle	5.4.3

NTCIP 1204 Observation Types Data Dictionary

id	name	units	description	1204 sect.
	essVehicleBearing	degrees clockwise from true North	Current bearing of the vehicle	5.4.4
	essVehicleOdometer	meters	Current odometer reading of the vehicle	5.4.5
	essMobileFriction	percent	Indicates measured coefficient of friction	5.12.1
	essMobileObservationGroundState	integer	The prevailing observed ground state of the surrounding environment as determined by the observer. This is an indicator of past weather conditions. See NTCIP 1204 for data validation and mapping	5.12.2
	essMobileObservationPavement	integer	The prevailing ovserved conditions on the driving surface as determined by the observer. See NTCIP 1204 for data validation and mapping	5.12.3
	essPaveTreatProductType	integer	Indicates the type of treatment being applied to the road; see NTCIP1204 for data validation and mapping	5.13.3.2
	essPaveTreatProductForm	integer	Incidates the condtion of the reatment being applied to the road; see NTCIP 1204 for data validation and mapping	5.13.3.3
	essPercentProductMix	percent	Indicates the percentage of the total application mix by weight that is of the type specified in essPaveTreatProductType	5.13.3.4
	essPaveTreatmentAmount	kg per lane km	Indicates quantity of the treatment being applied	5.13.4
	essPaveTreatmentWidth	meters	Indicates the width of the spread of treatment	5.13.5
	essCO	ppm	The concentration of carbon monoxide in the air	5.14.1
	essCO2	ppb	The concentration of carbon dioxide in the air	5.14.2
	essNO	ppm	The concentration of nitrous oxide in the air	5.14.3
	essNO2	ppb	The concentration of nitrous dioxide in the air	5.14.4
	essSO2	ppb	The concentration of sulfur dioxide in the air	5.14.5
	essO3	parts per one hundred billion	The concentration of ozone in the air	5.14.6
	essPM10	micrograms per cubic meter	The concentration of small particulate matter of 10 micrometers or less in diameter in the air	5.14.7