SWITRS Data Dictionary

6/30/2021

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Introduction

- The Statewide Integrated Traffic Records System (SWITRS) is a database of traffic crashes that occurred in California.
- Law enforcement agency (LE) in California is required by California law to send crash reports of injury or fatal crashes to the California Highway Patrol (CHP) for use by the CHP, California Department of Motor Vehicles (DMV), and California Department of Transportation (Caltrans).
- The CHP enters parts of the crash data into a computer database called the SWITRS data warehouse. The data warehouse has no personal or sensitive data like name, address, or birthdate.
- SWITRS uses the terms crash, collision, and accident synonymously. A crash is an unintended event that produces damage or injury, involving a motor vehicle in-transport. The word injury includes fatal injury[i].
- A crash involves one or more parties. A party is typically a vehicle, but can be a pedestrian, a bicyclist, or some other entity. If there are several occupants in a vehicle, they count as one party.
- A victim is a person who was injured or killed in a crash.
- The SWITRS data warehouse has three fact tables: accident, party, and victim. An accident is uniquely identified by the case_id. A party is uniquely identified by the case_id and party_number. A victim has the data elements case_id and party_number but is not uniquely identified by them because there can be more than one victim in a party.
- This PDF document is accompanied by the following:
    - An Excel workbook containing codes and description of some data elements
    - Three text files containing comma-delimited text that one might get by downloading the SWITRS data from the web application I-SWITRS. There is one file each for accident, party, and victim.
- This document uses the name of the headers in the raw data file as data elements.
- This document has end notes. In the end notes, HPM stands for Highway Patrol Manual and HPM 110.5 refers to the Collision Investigation Manual (CIM).
- This data dictionary is current as of 4/26/2022 and is applicable to crashes reported by SWITRS since 2002.

SWITRS Accident Record

Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
case_id	string	8	The unique identifier of the crash case		9025539
accident_year	number	4	The year when the crash occurred	YYYY	2020
proc_date	number	8	The date that the crash case was last changed	YYYYMMDD	20200519
juris	string	4	Law enforcement agency that has jurisdiction over the crash. For allied agency, it is a four character subset of the "NCIC number" assigned by the FBI. For the CHP, it is 9 followed by a three-digit area number.	See sheet "juris" in the workbook "Tables"	5701
collision_date	number	8	The date when the crash occurred	YYYYMMDD	20200106
collision_time	number	4	The time when the crash occurred in 24 hour military time. Unknown time is coded as 2500-2559.	HHMM	0032
officer_id	string	8	The badge number of the officer who wrote the crash report.		119
reporting_district	string	5	Value of the field "reporting district" on the crash report.		7
day_of_week	string	1	The code for the day of the week when the crash occurred	1 - Monday 2 - Tuesday 3 - Wednesday 4 - Thursday 5 - Friday 6 - Saturday 7 - Sunday	1
chp_shift	string	1	CHP shift at the time of the crash	1 - 0600 thru 1359 2 - 1400 thru 2159 3 - 2200 thru 0559 4 - CHP Not Stated 5 - Not CHP	5
population	string	1	Deprecated. See notes.[ii]		5

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
cnty_city_loc	string	4	The city or unincorporated county where the crash occurred.	See sheet "cnty_city_loc" in the workbook "Tables"	5701
special_cond	string	1	A computed value. 0 means not private property.	1 - School bus on Public Roadway (CHP Beat or CHP Adm Beat 901) 2 - State University (Also San Francisco International Airport) 3 - School bus Not on Public Roadway (CHP Adm Beat 903) 4 - Off-road (Unimproved) (CHP Adm Beat 906, 907) 5 - Vista Point or Rest Area (CHP Adm Beat 903) or Scales or Inspection Facility (CHP Com Beat 860-898) 6 - Other Public Access (Improved) (CHP Adm Beat 903) 0 - Not Above - - Not Stated	0
beat_type	string	1	Location of crash based on beat.	1 - CHP State Highway 2 - CHP County Road Line 3 - CHP County Road Area 4 - School bus on City Roadway (CHP Adm Beat 901) 5 - School bus not on Public Roadway (CHP Adm Beat 903) 6 - Off-road (Unimproved) (CHP Adm Beat 906, 907) 7 - Vista Point or Rest Area (CHP Adm Beat 903) or Scales or Inspection Facility (CHP Com Beat 860-898) 8 - Other Public Access (Improved) (CHP Adm Beat 903) 0 - Not CHP	0

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
chp_beat_type	string	1	Location of crash based on beat.	1 - Interstate 2 - US Highway 3 - State Route 4 - County Road Line 5 - County Road Area A - Safety Services Program Beats S - Administrative Beats (900's) 0 - Not CHP Contract City: 6 - US Highway 7 - State Route 8 - County Road Line 9 - County Road Area	0
city_division_lapd	string	1	Deprecated. See notes[iii].		
chp_beat_class	string	1	Location of crash based on beat.	1 - CHP Primary 2 - CHP Other 0 - Not CHP	0
beat_number	string	6	Beat of the officer who reported the crash.		003
primary_rd	string	50	The name of roadway on which the crash occurred		5TH ST
secondary_rd	string	50	The name of the roadway that intersects the primary roadway		POLE LINE RD
distance	number	9.2	Distance of the crash from the intersection with the secondary roadway in feet		570
direction	string	1	Direction of the crash from the intersection with the secondary roadway.	N - North E - East S - South W - West - or blank - Not Stated, in Intersection	E
intersection	string	1	A flag that denotes if the crash occurred at the intersection with the secondary roadway	Y - Intersection N - Not Intersection Blank - Not stated	N

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
weather_1	string	1	Weather condition at the time of the crash	A - Clear B - Cloudy C - Raining D - Snowing E - Fog F - Other G - Wind - - Not Stated	A
weather_2	string	1	Additional weather condition at the time of the crash	same as weather_1 above	-
state_hwy_ind	string	1	A flag to indicate whether the crash is on or near a state highway. See notes[iv].	Y - State Highway N - Not State Highway Blank - Not stated	N
caltrans_county	string	3	Deprecated. See notes[v].		
caltrans_district	number	2	Deprecated. See above.		
state_route	number	3	Deprecated. See above.		
route_suffix	string	1	Deprecated. See above.		
postmile_prefix	string	1	Deprecated. See above.		
postmile	number	6.3	Deprecated. See above.		
location_type	string	1	Deprecated. See above.		
ramp_intersection	string	1	Deprecated. See above.		
side_of_hwy	string	1	Deprecated. See above.		
tow_away	string	1	A flag to indicate whether the vehicle was towed away from the crash scene.	Y - Yes N - No	Y
collision_severity	string	1	the worst injury suffered by any victim in the crash.	1 - fatal injury. 2 - suspected serious injury or severe injury 3 - suspected minor injury or visible injury 4 - possible injury or complaint of pain 0 - no injury, also known as "property damage only" or PDO.	2
number_killed	number	3	Number of killed victims		0
number_injured	number	3	Number of injured victims		1
party_count	number	3	Number of parties involved in the crash. Note: a vehicle counts as one party regardless of the number of occupants.		1

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
primary_coll_factor	string	1	The primary cause of the crash	A - Code Violation B - Other Improper Driving C - Other Than Driver D - Unknown E - Fell Asleep - - Not Stated	D
pcf_code_of_viol	string	1	The law code that was violated and was the primary cause of the crash. Note: Vehicle Code is usually omitted.	B - Business and Professions C - Vehicle H - City Health and Safety I - City Ordinance O - County Ordinance P - Penal S - Streets and Highways W - Welfare and Institutions - - Not Stated	-
pcf_viol_category	string	2	A value computed from the law section that was given as the primary cause of the crash.	See sheet "pcf_viol_category" in the workbook "Tables"	01
pcf_violation	string	5	The law section given as the primary cause of the crash. The subsection is in the data element pcf_viol_subsection		23152
pcf_viol_subsection	string	1	The subsection of the law section given as the primary cause of the crash in the data element pcf_violation	Blank if no subsection.	B
hit_and_run	string	1	A flag to indicate the severity of hit-and-run crash. Felony hit-and-run resulted in injury or death to other parties. Misdemeanor hit-and-run did not result in injury or death to other parties.	F - Felony M - Misdemeanor N - Not Hit and Run	N

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
type_of_collision	string	1	The general type of crash as determined by the first injury or damage-causing event.	A - Head-On B - Sideswipe C - Rear End D - Broadside E - Hit Object F - Overturned G - Vehicle/Pedestrian H - Other - - Not Stated	F
mviw	string	1	Describes what, in conjunction with a motor vehicle in-transport, produced the first injury or damage-causing event, on or off the road.	See sheet "motor vehicle involved with" in the workbook "Tables"	J
ped_action	string	1	The action just prior to the crash of the first pedestrian injured or otherwise involved.	A - No Pedestrian Involved B - Crossing in Crosswalk at Intersection C - Crossing in Crosswalk Not at Intersection D - Crossing Not in Crosswalk E - In Road, Including Shoulder F - Not in Road G - Approaching/Leaving School Bus - - Not Stated	A
road_surface	string	1	Roadway surface condition at the time of the crash in the traffic lane(s) involved.	A - Dry B - Wet C - Snowy or Icy D - Slippery (Muddy, Oily, etc.) - - Not Stated	A
road_cond_1	string	1	Roadway condition at the time of the crash in the traffic lane(s) involved.	A - Holes, Deep Ruts B - Loose Material on Roadway C - Obstruction on Roadway D - Construction or Repair Zone E - Reduced Roadway Width F - Flooded G - Other H - No Unusual Condition - - Not Stated	H
road_cond_2	string	1	Second roadway condition at the time of the crash in the traffic lane(s) involved.	same as road condition 1 above	-

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
lighting	string	1	Lighting conditions at the crash location and the time of the crash.	A - Daylight B - Dusk - Dawn C - Dark - Street Lights D - Dark - No Street Lights E - Dark - Street Lights Not Functioning - - Not Stated	C
control_device	string	1	Presence and condition of crash-related traffic control devices at the time of the crash. Control devices include regulatory, warning, and construction signs. This excludes striping and officers or other persons directing traffic.	A - Functioning B - Not Functioning C - Obscured D - None - - Not Stated	D
chp_road_type	string	1	Deprecated. See notes[vi].		0
pedestrian_accident	string	1	Indicates whether the crash involved a pedestrian	Y or blank	
bicycle_accident	string	1	Indicates whether the crash involved a bicycle	Y or blank	
motorcycle_accident	string	1	Indicates whether the crash involved a motorcycle	Y or blank	Y
truck_accident	string	1	Indicates whether the crash involved a big truck	Y or blank	
not_private_property	string	1	Y indicates that the crash did not occur on private property	Y or blank	Y
alcohol_involved	string	1	Indicates whether the crash involved a party who had been drinking. Note: a passenger does not count as a party.	Y or blank	
stwd_vehtype_at_fault	string	1	Indicates the Statewide Vehicle Type of the party who was at fault	See sheet "statewide_vehicle_type" in the workbook "tables"	-
chp_vehtype_at_fault	string	2	Indicates the CHP Vehicle Type of the party who was at fault	See sheet "CHP_vehicle_type" in the workbook "tables"	-
count_severe_inj	number	3	Number of victims in the crash with suspected serious injury or severe injury		1
count_visible_inj	number	3	Number of victims in the crash with suspected minor injury or visible injury		0

SWITRS Accident Record

Data Element Name	Type	Width	Description	Possible Values or Format	Example
count_complaint_pain	number	3	Number of victims in the crash with possible injury or complaint of pain		0
count_ped_killed	number	3	Number of killed pedestrian victims		0
count_ped_injured	number	3	Number of injured pedestrian victims		0
count_bicyclist_killed	number	3	Number of killed bicyclists		0
count_bicyclist_injured	number	3	Number of injured bicyclists		0
count_mc_killed	number	3	Number of killed motorcyclists		0
count_mc_injured	number	3	Number of injured motorcyclists		1
primary_ramp	string	2	A description of the ramp, if any, on primary roadway. This value is computed by the key operator from information on the crash report.	NO-NB On Ramp, NF-NB Off Ramp, SO-SB On Ramp, SF-SB Off Ramp, EO-EB On Ramp, EF-EB Off Ramp, WO-WB On Ramp, WF-WB Off Ramp, To, From, Transition, Collector, Connector & blank	-
secondary_ramp	string	2	A description of the ramp, if any, on secondary roadway. This value is computed by the key operator from information on the crash report.	Same as primary_ramp	-
latitude	number	7.5	Latitude of the crash location in decimal degrees. The decimal point in included.		38.55057
longitude	number	8.5	Longitude of the crash location in decimal degrees. The decimal point in included. There is no minus sign. The longitude is understood to be west of meridian.		121.72314
local_report_number	string	30	The report number assigned by the reporting agency to the crash report		20-00061

SWITRS Party Record

Party Record

Data Element Name	Type	Width	Description	Possible Values	Example
case_id	string	8	The unique identifier of the crash case		9025539
party_number	number	3	A number that together with the case_id uniquely identifies a party in a crash.		1
party_type	string	1	Involved party type	1 - Driver (including Hit and Run) 2 - Pedestrian 3 - Parked Vehicle 4 - Bicyclist 5 - Other 6 - Operator - - Not Stated	1
at_fault	string	1	Indicates whether the party was at fault in the crash	Y - At fault N - Not at fault	N
party_sex	string	1	The gender of the party	M - Male F - Female X - Nonbinary - - Not Stated	M
party_age	number	3	The age of the party at the time of the crash	0 – 100+ 998 - Not Stated	20
party_sobriety	string	1	The state of sobriety of the party	A - Had Not Been Drinking B - Had Been Drinking, Under Influence C - Had Been Drinking, Not Under Influence D - Had Been Drinking, Impairment Unknown G - Impairment Unknown H - Not Applicable - - Not Stated	A
party_drug_physical	string	1	The state of the party with regard to drugs and physical condition	E - Under Drug Influence F - Impairment - Physical H - Not Applicable I - Sleepy/Fatigued - - Not Stated	-

SWITRS Party Record

Data Element Name	Type	Width	Description	Possible Values	Example
dir_of_travel	string	1	Direction that the party was travelling at the time of the crash. The direction is the direction of the highway, not the compass direction. For example, I-5 direction is N or S even though near Sacramento International Airport its compass direction is east-west.	N - North S - South E - East W - West - - Not Stated	E
party_safety_equip_1	string	1	The safety equipment of the party	See sheet "Safety Equipment" in the workbook "Tables"	P
party_safety_equip_2	string	1	The safety equipment of the party	See sheet "Safety Equipment" in the workbook "Tables"	V
finan_respons	string	1	Financial responsibility of the party	N - No Proof of Insurance Obtained Y - Yes, Proof of Insurance Obtained O - Not Applicable (used for parked cars, bicyclists, pedestrians, and party type others) E - Used if the officer is called away from the scene of the crash prior to obtaining the insurance information Blank - not stated	Y
sp_info_1	string	1	Value A indicates that the crash involved a vehicle known to be, or believed to be, transporting a hazardous material as defined in CVC Section 353, whether or not the crash involved a Hazardous Material Incident."[vii]	A - Hazardous Materials - - Not Stated	-
sp_info_2	string	1	Cell phone	B - Cell Phone in Use (4/1/01) C - Cell Phone Not in Use (4/1/01) D - No Cell Phone/Unknown (4/1/01) 1 - Cell Phone Handheld in Use 2 - Cell Phone Handsfree in Use 3 - Cell Phone Not in Use 4 - Cell Phone Use Unknown - - Not Stated	3

SWITRS Party Record

Data Element Name	Type	Width	Description	Possible Values	Example
sp_info_3	string	1	Value E indicates that the crash involved a motor vehicle in-transport passing a stopped school bus with its red signal lamps in operation, pursuant to CVC Section 22112, or reacting to, pursuant to CVC Section 22454[viii].	E - School Bus Related (1/1/02) - - Not Stated (1/1/02)	-
oaf_violation_code	string	1	Other associated factor law code violated	B - Business and Professions C - Vehicle H - City Health and Safety I - City Ordinance O - County Ordinance P - Penal S - Streets and Highways W - Welfare and Institutions - - Not Stated	-
oaf_viol_cat	string	2	Category of the factor that contributed to the crash but was not the primary cause of the crash.	See sheet "oaf_viol_cat" in the workbook "Tables"	-
oaf_viol_section	number	5	The CVC section of the secondary violation that contributed to the crash,		
oaf_violation_suffix	string	1	The subsection of the CVC section of the secondary violation that contributed to the crash,	Blank if no suffix.	
oaf_1	string	1	A factor that contributed to the crash but was not the primary cause of the crash.	See sheet "oaf" in the workbook "Tables"	N
oaf_2	string	1	A factor that contributed to the crash but was not the primary cause of the crash.	See sheet "oaf" in the workbook "Tables"	-
party_number_killed	number	3	Number of killed victims in the party	0 to N for each party	0
party_number_injured	number	3	Number of injured victims in the party	0 to N for each party	1

SWITRS Party Record

Data Element Name	Type	Width	Description	Possible Values	Example
move_pre_acc	string	1	The action of the vehicle prior to the crash and before evasive action. This movement does not have to correspond with the PCF[ix].	A - Stopped B - Proceeding Straight C - Ran Off Road D - Making Right Turn E - Making Left Turn F - Making U-Turn G - Backing H - Slowing/Stopping I - Passing Other Vehicle J - Changing Lanes K - Parking Maneuver L - Entering Traffic M - Other Unsafe Turning N - Crossed Into Opposing Lane O - Parked P - Merging Q - Traveling Wrong Way R - Other S - Lane splitting - - Not Stated	B
vehicle_year	number	4	The model year of the party's vehicle	9999 or blank = not stated	2013
vehicle_make	string	50	The make of the party's vehicle		-
stwd_vehicle_type	string	1	Type of the party's vehicle according to a list called "statewide vehicle type"	See sheet "stwd_vehicle_type" in the workbook "Tables"	C
chp_veh_type_towing	string	2	The type of the solitary vehicle or the tractor unit according to the CHP manual HPM 110.5 Chapter 3 Annex F Vehicle Type Codes.	See sheet "CHP_vehicle_type" in the workbook "Tables"	02
chp_veh_type_towed	string	2	The type of the first trailer unit according to the CHP manual HPM 110.5 Chapter 3 Annex F Vehicle Type Codes.	See sheet "CHP_vehicle_type" in the workbook "Tables"	
race	string	1	The party's race based on the reporting officer's judgment.	A - Asian B - Black H - Hispanic O - Other W - White Blank - Not stated	H

SWITRS Party Record

Data Element Name	Type	Width	Description	Possible Values	Example
inattention	string	1	Type of inattention	A – Cell Phone Handheld B – Cell Phone Handsfree C – Electronic Equipment D – Radio/CD E – Smoking F – Eating G – Children H – Animal I – Personal Hygiene J – Reading K – Other P – Cell Phone - - Not Stated	
special_info_f	string	1	The value F indicates that the party's vehicle is a 75 ft Motor Truck Combo. The current crash report form no longer has a box to indicate this.	F - 75 ft Motor Truck Combo - - Not Stated	-
special_info_g	string	1	The value G indicates that the party's vehicle is a 32 ft Trailer Combo. The current crash report form no longer has a box to indicate this.	G - 32 ft Trailer Combo - - Not Stated	-
local_report_number	string	30	The report number assigned by the reporting agency to the crash report		20-00061

SWITRS Victim Record

Victim Record

data element name	Type	Width	Description	Possible Values	Example
case_id	string	8	The unique identifier of the crash case		9025539
party_number	number	3	The unique identifier of the party in the crash that this victim belongs to		1
victim_role	string	1	The role of the victim	1 - Driver 2 - Passenger (includes non-operator on bicycle or any victim on/in parked vehicle or multiple victims on/in non-motor vehicle) 3 - Pedestrian 4 - Bicyclist 5 - Other (single victim on/in non-motor vehicle; e.g. ridden animal, horse-drawn carriage, train, or building) 6 - Operator	1
victim_sex	string	1	The gender of the victim	M - Male F - Female X - Nonbinary - - Not Stated	M
victim_age	number	3	the age of the victim at the time of the crash	0 – 125 998 – Not Stated 999 – Fatal Fetus	20
victim_degree_of_injury	string	1	The severity of the injury to the victim	1 - Killed 2 - Severe Injury 3 - Other Visible Injury 4 - Complaint of Pain 5 – Suspected Serious Injury 6 – Suspected Minor Injury 7 – Possible Injury 0 - No Injury	2

SWITRS Victim Record

data element name	Type	Width	Description	Possible Values	Example
victim_seating_position	string	1	Seating position of the victim	1 - Driver 2 thru 6 - Passengers 7 - Station Wagon Rear 8 - Rear Occupant of Truck or Van 9 - Position Unknown 0 - Other Occupants A - third row left B - third row center C - third row right - - Not Stated	1
victim_safety_equip_1	string	1	The safety equipment of the victim	See sheet "Safety Equipment" in the workbook "Tables"	P
victim_safety_equip_2	string	1	The safety equipment of the victim	See sheet "Safety Equipment" in the workbook "Tables"	V
victim_ejected	string	1	Indicates whether the victim was ejected from the vehicle	0 - Not Ejected 1 - Fully Ejected 2 - Partially Ejected 3 - Unknown - - Not Stated	3
local_report_number	string	30	The report number assigned by the reporting agency to the crash report		9025539

[i] HPM 110.5 Chapter 2 paragraph 14.
[ii] The data element was intended to be the population count of the city or county at the time of the crash. However, population count is time-dependent. Existing values are computed from a lookup table with no effective dates. Therefore the value cannot be accurate over time.
[iii] The column translates the value of the data element "reporting_district" in crashes reported by LAPD to a single letter. However, LAPD currently has 21 districts but the translation only covers 18 districts. Anyone wanting LAPD district can get it from the last two digits of the data element "reporting_district".
[iv] The officer checks the box "state highway related" if the crash was on or near a state highway. When the box is checked, the data element has the value Y. However, if Caltrans later decides that the crash was not state highway related, the data element is changed to N, for not state highway related.
[v] These data elements are from Caltrans coding form Card 8. The values are available only on some highway related documents that were received as hardcopy and are meaningful only to Caltrans.
[vi] The type of roadway at the location of the crash. This column is deprecated. The value is based on CHP beat and post mile. The post mile is from Caltrans coding form Card 8 but we stopped doing Card 8 on CHP crashes in 2015.
[vii] HPM 110.5 chapter 4 paragraph 28. a.
[viii] HPM 110.5 chapter 4 paragraph 28. f.
[ix] HPM 110.5 chapter 4 paragraph 26