National Park Service
U.S. Department of the Interior

Public Risk Management Program

Mortality Dashboard Data Dictionary

Version 1

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INTRODUCTION

It is the intent of the National Park Service that all visitors have an injury-free park experience. However, each year, hundreds of visitors to national parks are involved in preventable incidents that result in death. Accurate data are essential to support the development, implementation, and assessment of visitor safety programs across more than 420 park units.

The NPS mortality dashboard provides a summary of death statistics reported by national parks. It identifies key trends such as leading causes of deaths, activities that resulted in a death, and populations that are at risk of experiencing a death. Parks, as well as regional and national level programs, use the data to prioritize and develop visitor safety projects to prevent deaths and save lives.

This data dictionary provides detailed information about the NPS mortality dashboard including sources of information, scope of data, and definitions of data element. Its goal is to help improve accessibility and understanding of death data reported in parks.

WHAT IS THE NPS MORTALITY DASHBOARD

The National Park Service (NPS) mortality dashboard provides a summary of deaths reported by national parks. The current dashboard includes deaths reported from calendar year (CY) 2014 to 2019[1].

The dashboard shows data from 177 parks that reported one or more deaths in this six-year period. This is the most recent validated death data. The dashboard is updated when validated data is available.

Sources of Information

The NPS combines and validates information from existing NPS systems of record to create the NPS mortality dataset. This dataset is used to create the NPS mortality dashboard. Sources include:

- Incident Management Analysis and Reporting System (IMARS)
- emsCharts[©]
- Crash Data System (NPS Transportation Program)
- Leadership Notification Tool
- Visitor Board of Review Reports
- Media reports (e.g., Park news release)

December 8, 2021, was the last day for retrieval of deaths reported from CY2017 to CY2019 in the systems listed above. It is important to note that these systems update continuously. If queried today, data from the same time-period might be slightly different.

The NPS recognizes that due to the complex and varied legal jurisdictions within the NPS and political boundaries, there may be death data captured in systems other than the ones listed under Sources of Information (e.g., county law enforcement and medical database).

Scope of Information

The NPS mortality dashboard includes data on incidents that met the following criteria:

- Reported between calendar year 2014 and 2019
- Validated by the NPS for official release
- The incident either began <u>or</u> ended within the park's boundary
- The individual was not on-duty (i.e., working) at the time of the incident

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[1] The prior dashboard showed validated death data from CY2014 to 2016.

The dashboard exclude:
- Incidents that began <u>and</u> ended outside park boundaries (e.g., NPS law enforcement aids a local law enforcement agency in the local community)
- On-duty NPS employees, volunteers, contractors, and concessioners
- On-duty employees, volunteers, and contractors of another agency/entity
- Data from calendar year 2007 to 2013 that is not validated
- Data from calendar year 2020 to the present that is not validated

CY 2014 to2019 death data is the most recent validated data. Validation includes quality checks and coordination with each reporting park unit. It is essential to ensure the accuracy of the statistics that are published. The NPS is working diligently to update the NPS mortality dashboard in a timely manner.

It is important to note that validated death data will always be one to two years behind. Per policy, a law enforcement incident has up to one year before it is considered closed and the NPS can officially begin the validation process.

How to Access the Data

The complete NPS mortality dataset is available for download as a spreadsheet on https://www.nps.gov/aboutus/mortality-data.htm. It includes:

- Unintentional death data, only, reported from CY 2007 to 2013. These records have not undergone the validation process.
- Validated death data (unintentional, intentional, medical, and undetermined) reported from CY 2014 to 2019.
- Preliminary death data reported from CY 2020 to present. These records have not undergone the validation process and are subject to change as information continues to be collected and analyzed.

For additional inquiries and requests related to the NPS mortality data, please submit a Freedom of Information Act (FOIA) request. Please be detailed in your request to help us identify if the data you are seeking exists and if it can be disclosed under the FOIA.

DATA DICTIONARY

Intent

Identifies whether a death was caused by an act carried out on purpose (by oneself or by another person), an unintended and unplanned act, or a natural/medical event.

- **Intentional** – death resulting from purposeful harmful actions upon oneself (suicide) or others (homicide) or due to legal intervention.

- **Medical**- death resulting from natural or medical related causes (e.g., seizure, heart attack)., when sedentary or during physical activity, and are not due to intentional or unintentional causes.

- **Unintentional**- death that occur without the intention of hurting oneself or others which result in damage to the body from acute exposure to kinetic, thermal, electrical, or chemical energy or from the absence of such essentials as heat or oxygen (e.g., drownings, motor vehicle crash, fall, poisoning, hypothermia, thermal burns).

- **Undetermined** – deaths where the intent could not be determined due to one of the following reasons:
  - Official intent classified as "Undetermined"
  - Insufficient information in the incident report to determined intent
  - Record is restricted in the source system of record
  - Data captured by an outside agency (e.g., local law enforcement agency)

Cause of Death

The NPS mortality dashboard reports the *underlying* cause of death, rather than the *direct* cause of death. This aligns with the Center for Disease Control and Prevention (CDC) Web-based Injury Statistics Query and Reporting System[2]. Please refer to the Coding Updates section for changes to the data set.[3]

Underlying cause refers to what starts the chain of events that leads to an injury. Direct cause is what produces the actual physical harm.

One of our goals in creating the dashboard is to inform injury prevention efforts. Preventing the underlying cause can stop the injury from occurring in the first place.

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[2] Center for Disease Control and Prevention – Definitions for Injury Reports
[3] The CY14-CY16 data was updated to reflect the new definition.

- **Drowning** – death from respiratory impairment caused by inhaling water when submersed or immersed in liquid.

  It includes drownings due to water vessel accidents (e.g., kayak capsizes and the person drowns). It excludes drownings due to:
    o Fall into water (coded as *Fall*)
    o Cataclysm (e.g., drowning during a flashflood is coded as *Flash Flood* which is nested under *Environmental* cause of death)
    o Motor vehicle crash (coded as Motor Vehicle Crash, Most Harmful Event = Non collision, Immersion)

- **Environmental** – umbrella category for death associated with one of the following environmental causes: altitude, avalanche, falling ice, falling tree/branch, flash flood, heat, cold, landslide, lightning, rock fall, and sunburn.

- **Fall** – death from descending abruptly due to the force of gravity and striking a surface at the same or lower level. It also includes incidents where the individual:
    o Unintentionally falls into a body of water causing drowning and submersion, except when the fall occurs from a water vessel (coded as either Drowning or Vessel Incident depending on the nature of the death)
    o Intentionally jumps or dives into a body of water, with the intent to recreate, causing drowning and submersion, including jumping or diving from a water vessel.

- **Homicide** – death from injuries inflicted by another person with intent to injure or kill, by any means. It excludes injuries due to legal intervention.

- **Legal Intervention** – fatal injuries inflicted by the police or other law-enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal actions. Excludes injuries caused by civil insurrections.

- **Medical - during physical activity** - a medical death while the victim was engaged in physical activity (e.g., hiking, swimming, climbing).

- **Medical - not during physical activity** - a medical death while the person was not engaged in physical activity (e.g., sleeping, eating, passenger of a vehicle).

- **Medical - unknown** - a medical death where it is unknown whether the person was participating in a physical activity at the time of the incident.

- **Motor vehicle crash** – death in an incident involving one or more motor vehicles traveling on a traffic way. Table 1 is a list of motor vehicles, as defined in 36 C.F.R. § 1.4 that would make a crash eligible to be included in the MVC dashboard.

Motor Vehicles		
ATV (All-Terrain Vehicle)	Motor Coach	Pickup Truck
Cargo Van (10, 000 lbs. or less)	Motor Home	School Bus
Low Speed Vehicle (Golf cart, etc.)	Motorcycle (MC) <150cc (Trail Bike)	Segway
Farm Equipment	Motorcycle (MC) >150cc	Sport Utility Vehicle (SUV)
Maintenance/Construction Vehicle	Other Light Truck (10,000 lbs. or less)	Transit/Shuttle Bus
Medium/Heavy Trucks	Passenger Car (Not an SUV)	
Moped/Minibike/Scooter	Passenger Van	

Table 1 A list of motor vehicles that would make a crash eligible to be part of the MVC dashboard.

- **Other** - death from a cause that does not fall under one of the eight historical categories developed by the NPS Public Risk Management Program. Specific causes include electrocution, fire, asphyxiation, and struck by/against.

- **Other Transportation** – an umbrella category that includes deaths in an incident that involved one or more mode of transportation <u>except</u> a motor vehicle. Modes of transportation include the following as defined in 36 C.F.R. § 1.4:
  - Vehicle (e.g., bicycle only crash)
  - Water vessel (e.g., boat fire)
  - Aircraft (e.g., helicopter crashes into mountain)
  - Device (e.g., train runs over a person on the tracks)

Table 2 is a list of land-based transportation modes and Table 3 is a list of a water-based transportation modes which qualify as "Other Transportation".

Vehicles	
Bicycle	Skateboard
Electronic bicycle	Roller skates
Wheelchair	Animal/Animal-drawn

Aircrafts
Airplane
Helicopter
Glider
Balloon

Devices	
Train	Sled
Trolly	Snowboard
Snowmobile	Snowshoe
Ski	Tube (snow)

Table 2 A list of land-based transportation modes.

Water Vessels				
Air boat	Houseboat	Parasail	Rowboat	Surfboard
Auxiliary sail	Jet ski	Pontoon - motorized	Sailboard	Tube (water)
Boogie board	Kayak	Pontoon - unknown	Sailboat	Wake surfboard
Cabin motorboat	Kite board	Pontoon-non-motorized	Skim board	Wakeboard
Canoe	Open motorboat	Raft	Standup Paddleboard	Water skis

Table 3 A list of water-based transportation modes.

- **Poisoning** – death from ingestion, inhalation, absorption through the skin, or injection of so much of a drug, toxin, or other chemical that it results in a harmful effect.

- **Suicide** - death from injuring oneself with the intent to die.

- **Wildlife** – death from encounter (e.g., bite, sting, butting, mauling) with an animal.

Activities

This section has definitions for activities that are not commonly used or known by the public. Some activities, such as *Diving*, may be further categorized [e.g., Diving (Land) and Diving (Water vessel)] due to specific risks associated with each and how interventions can be applied.

- **Diving (Land)** – diving or jumping from cliffs and other land-based surfaces into a body of water.

- **Diving (Water vessel)** – diving or jumping from a water vessel (e.g., boat, raft, jet ski) into a body of water.

- **Illegal Activity** - an act committed in violation of the law. Examples include illegally crossing the United States border and theft.

- **Other -** an activity for which a specific code does not exist in the Visitor Injury Data System (VIDS). Examples include spending time in a hotel room and watching television.

- **Vessel Related** - watercraft activity including boating, kayaking, canoeing, rafting, sailing, and surfing.

CODING UPDATES

To better align with industry standards[4] for coding injury and death data, PRMP has updated some codes for *Cause of Death* and *Activity*. The updates listed in Table 4 and Table 5 have been applied to all deaths reported between CY2014 and CY2019. These updates account for the differences in reporting between the CY2014-CY2016 dashboard and the newly updated CY2014-CY2019 dashboard.

INCIDENT EXAMPLE	OLD CAUSE OF DEATH	UPDATED CAUSE OF DEATH
Person *intentionally* jumps or dives off a cliff and into a body of water and either does not resurface or floats up unresponsive	"Drowning"	"Fall"
Person *unintentionally* falls off a trail, or other earth mass, into a body of water and either does not resurface or floats up unresponsive	"Drowning"	"Fall"
Crash involving an All-Terrain Vehicle (ATV)	"ATV crash" nested under "Other Transportation"	"Motor Vehicle Crash"
Horseback riding incident	"Other"	"Horseback riding incident" nested under "Other Transportation"
Incident where person fell off moving train	"Blunt Force Trauma" nested under "Other"	"Train crash" nested under "Other Transportation"
Fatal skiing incident in the snow	"Other"	"Skiing incident" nested under "Other Transportation"
Fall from wakeboard	"Fall"	"Vessel incident" nested under "Other Transportation"
Fatal gliding incident	"Fall"	"Aircraft incident" nested under "Other Transportation"
Falling off a snowmobile	"Fall"	"Snowmobiling incident" nested under "Other Transportation"
Incidents where person died due to blunt force trauma caused by a fall	"Blunt Force Trauma" nested under "Other"	"Fall"
Incident where person became electrocuted from boat engine	"Electrocution" nested under "Other"	"Vessel incident" nested under "Other Transportation"

Table 4 A list of changes PRMP has made to Cause of Death codes.

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[4] [2024 International Classification of Disease - External causes of morbidity (icd10data.com)](icd10data.com)

INCIDENT EXAMPLE	OLD ACTIVITY	UPDATED ACTIVITY
Incidents that occurred while the person was sleeping, eating, or sitting at a campground	"Camping"	Activity coded as "sleeping", "eating", and "sitting". "Camping" reserved only for incident where the person was actively camping (pitching tent, making fire, etc.)

Table 5 A list of changes PRMP has made to Activity codes.

CONTACT

For questions or comments please contact askNPS@NPS.gov. For any data requests, please contact NPSFOIA@nps.gov