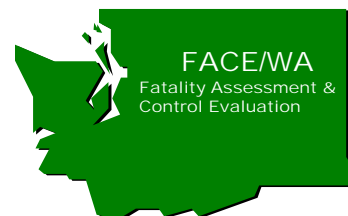


Fatal Falls from Elevation in Construction: Analysis of Incidents in Washington

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Washington FACE Program

- **Goal:** Prevent work-related fatal injuries and acute trauma injuries

Three Primary Program Activities:

- 1) Tracking all work-related acute trauma fatalities in Washington State.
- 2) Investigations of a select number of these incidents.
- 3) Developing and disseminating interventions for the prevention of fatal injuries.

WA FACE Preventions Efforts

Four Types of Written Materials

1) Fatality Narratives

Monthly email distribution of construction fatality narratives for each incident in the industry.

2) Investigation Reports

In-depth investigations of selected fatalities based on NIOSH and Washington FACE priorities using root-cause analysis.

3) Hazard Alerts

Brief documents alerting an industry to a specific incident and hazard based on a recent fatal outcome.

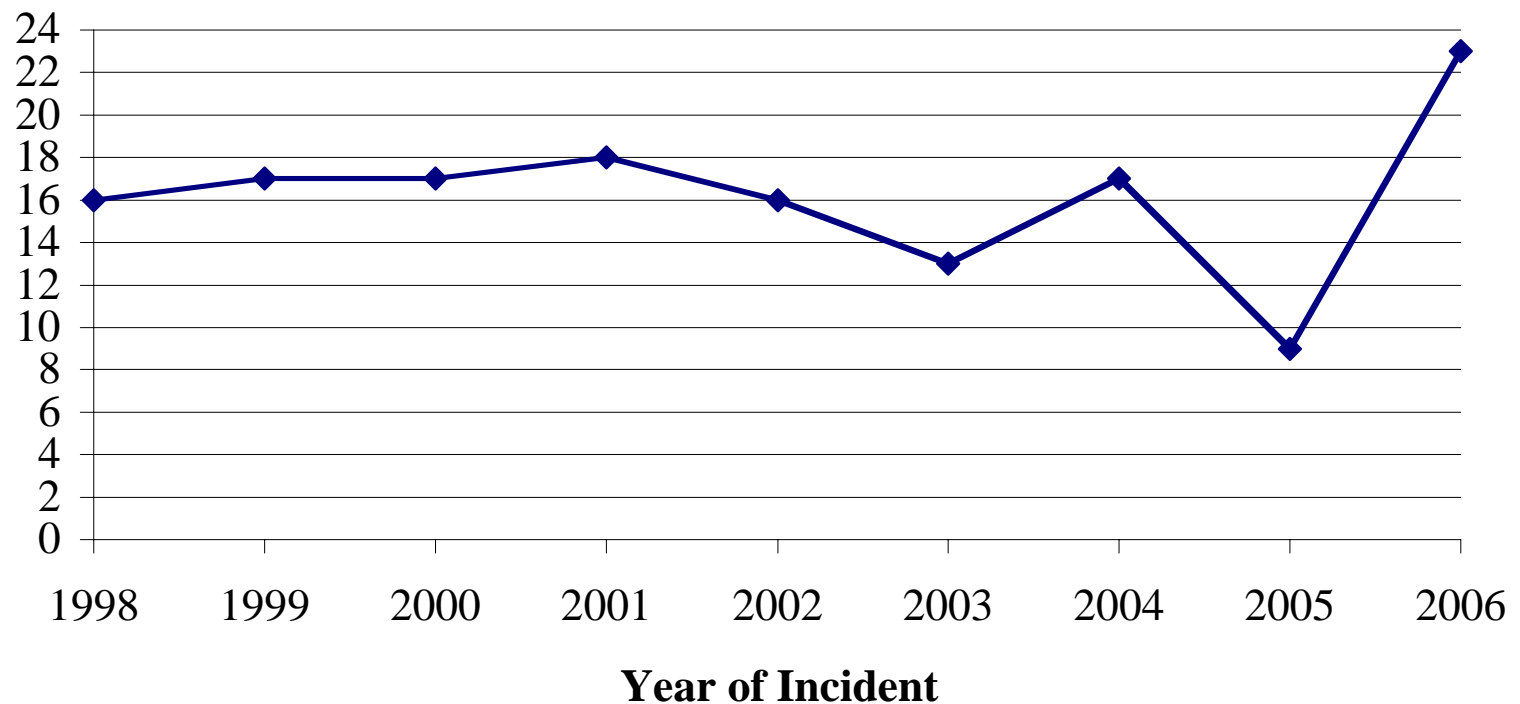
4) Case Series

A document similar to a hazard alert but highlighting a hazard that has resulted in multiple recent incidents in the state.

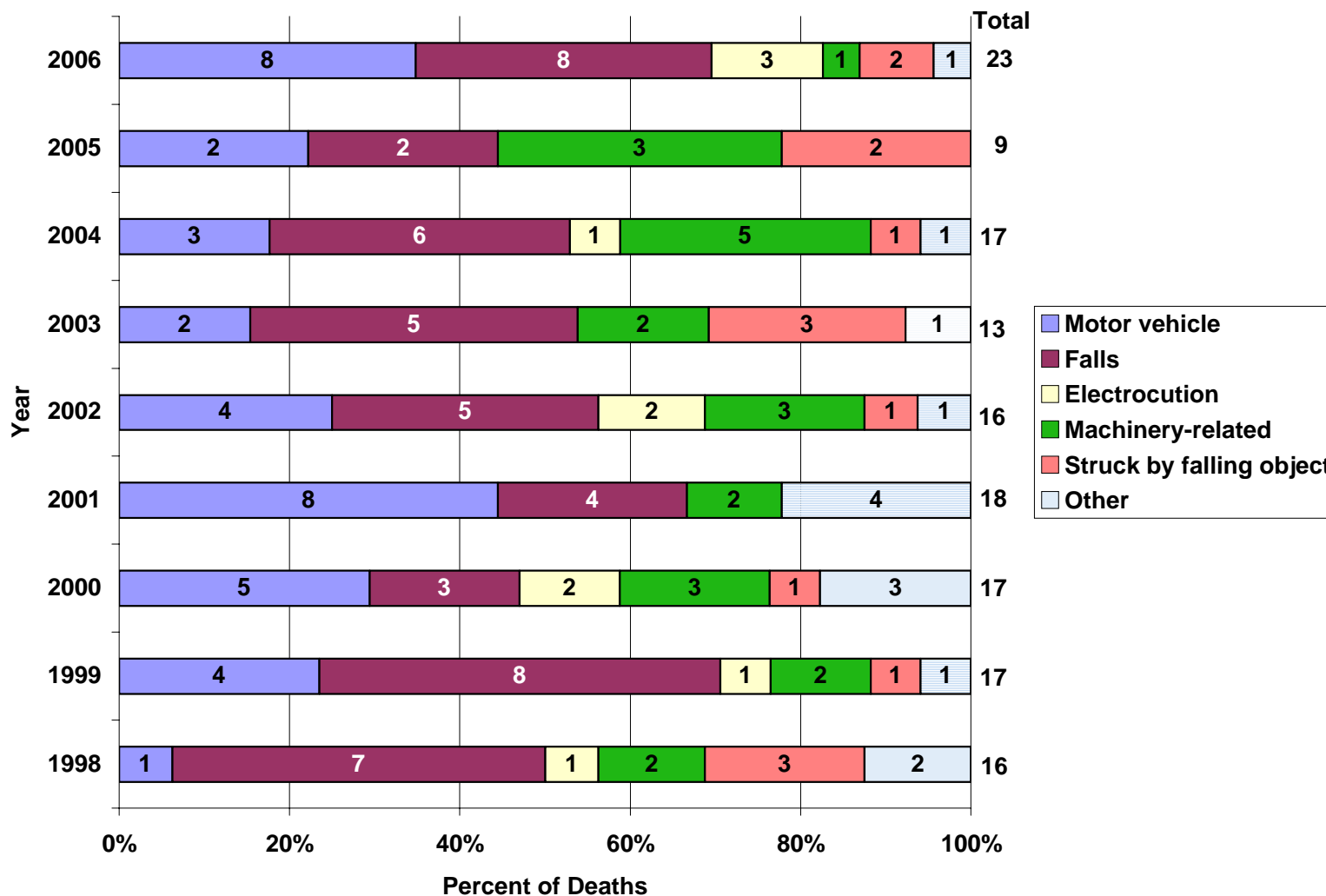
Everything is on the WA FACE web site:

www.lni.wa.gov/safety/research/face

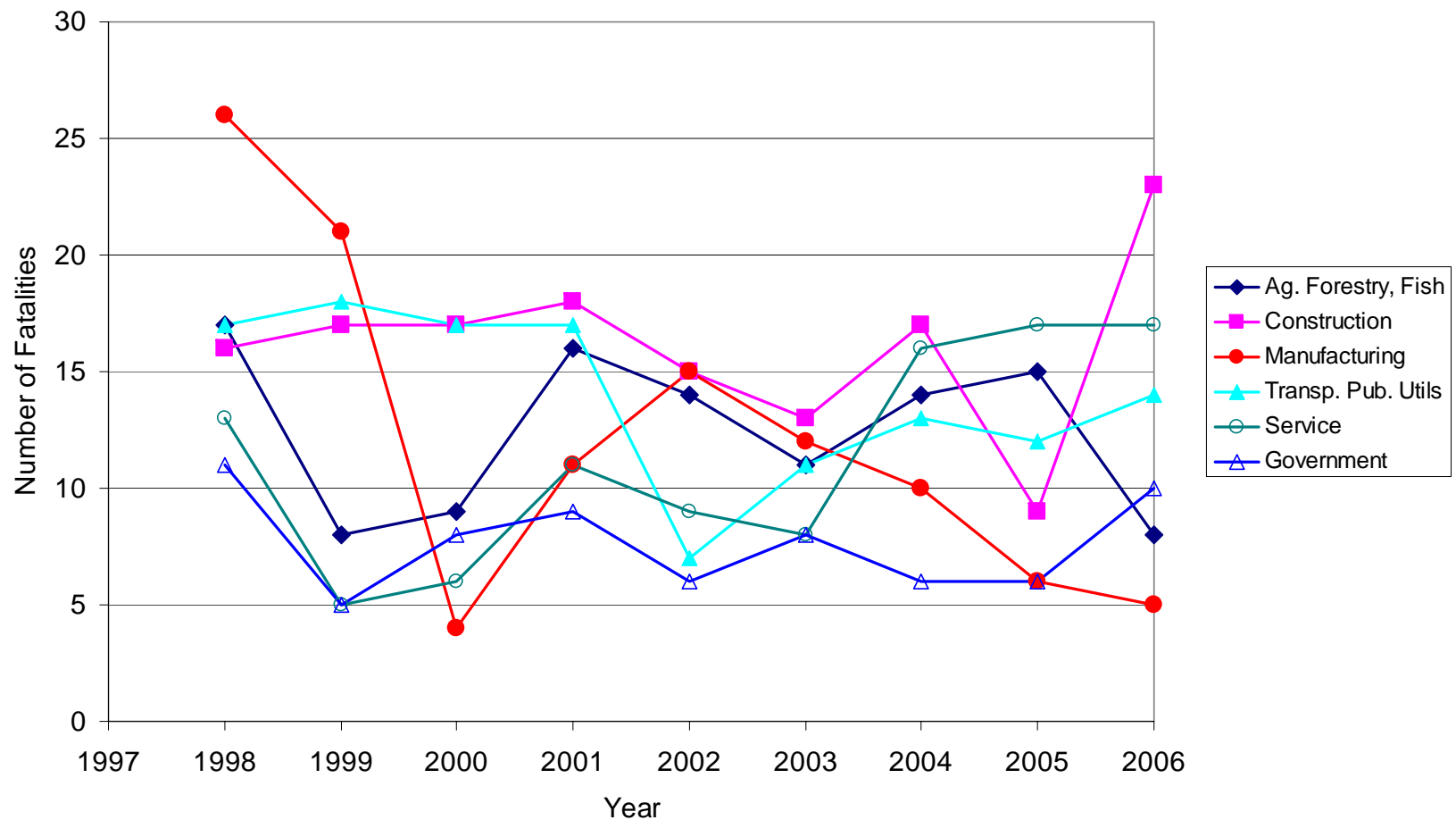
Washington State Fatalities in Construction, 1998-2006



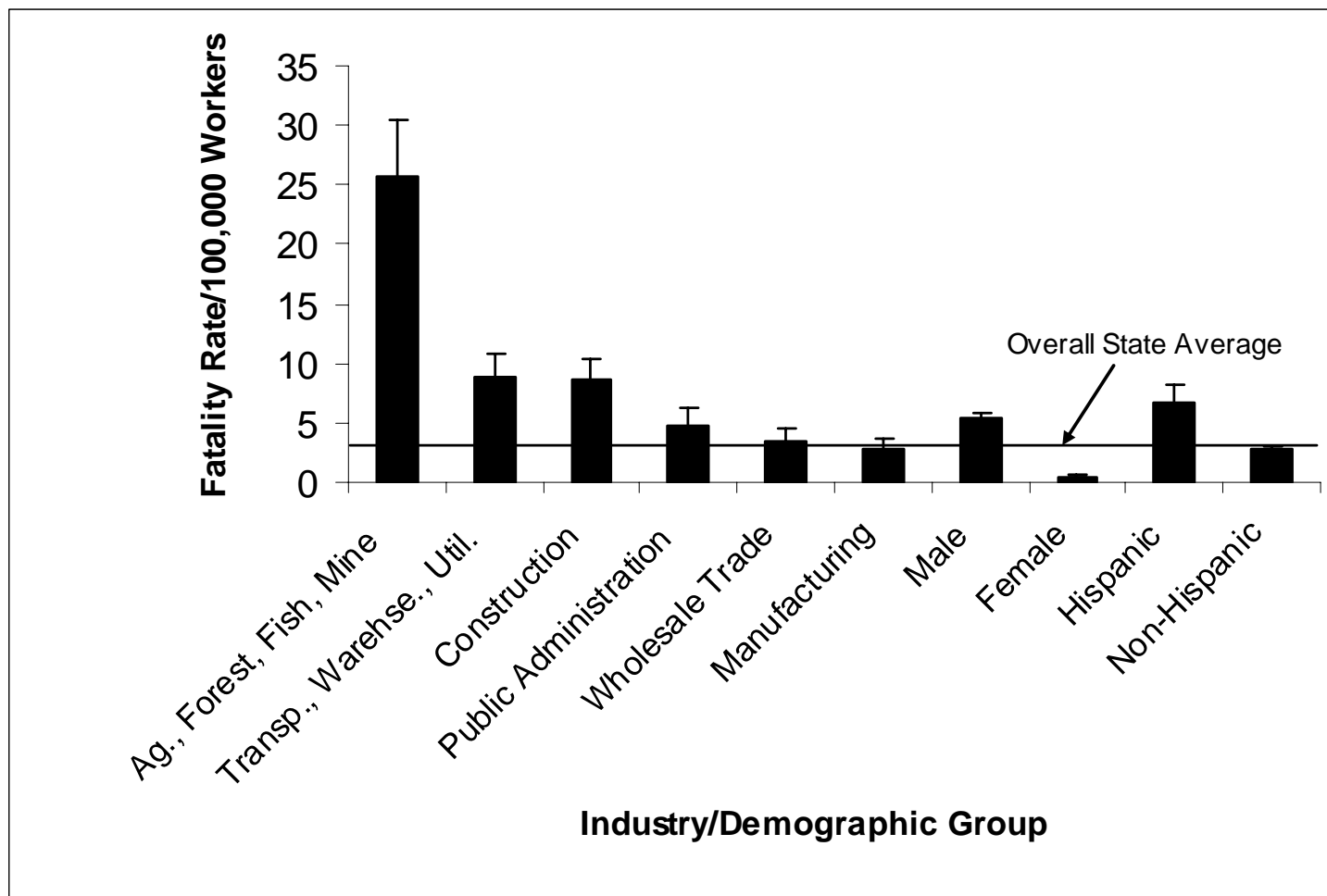
Type of Fatal Incident in Construction by Year, 1998-2006



Washington State Fatalities by Industry Group, 1998-2006



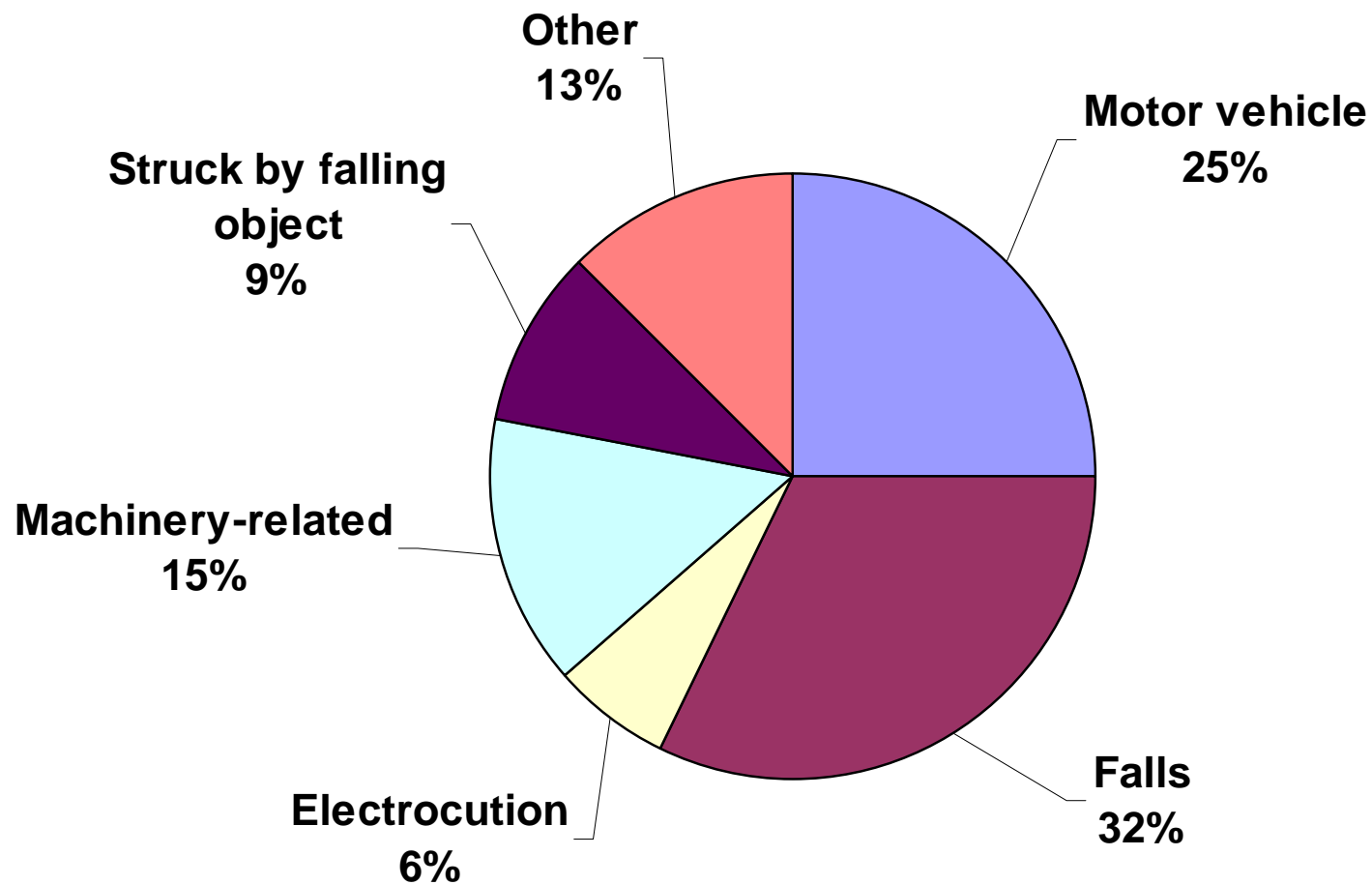
WA Fatality Rates by Industry, 1998-2002



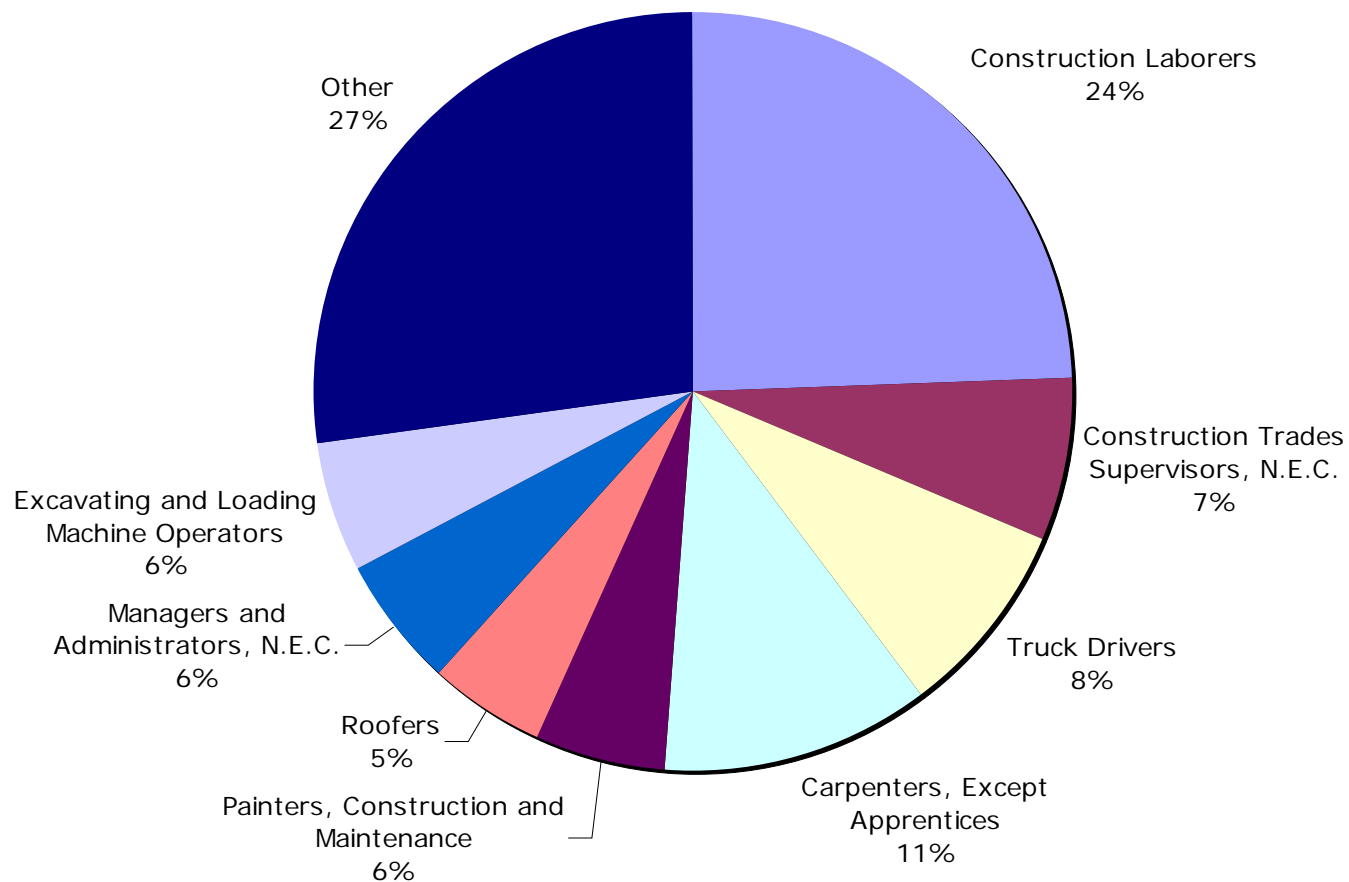
Source: WA FACE Program and CPS Data

Incident Types in Construction, 1998-2006

137 deaths

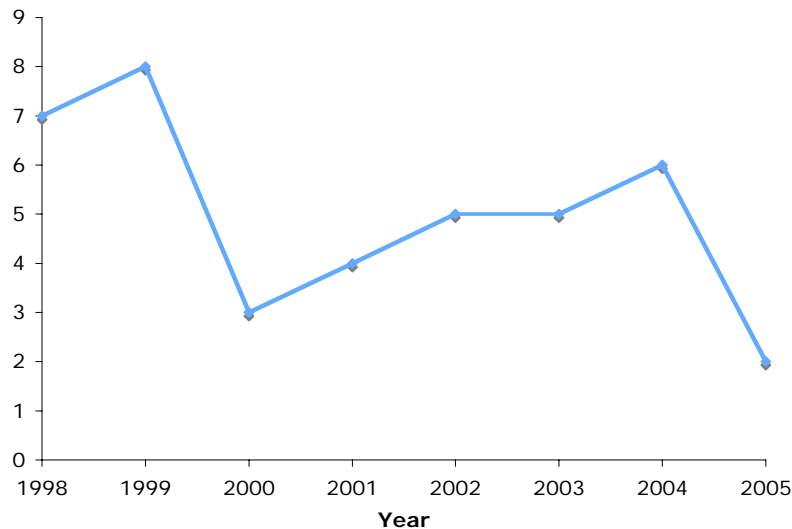


Occupations in Construction, 1998-2006



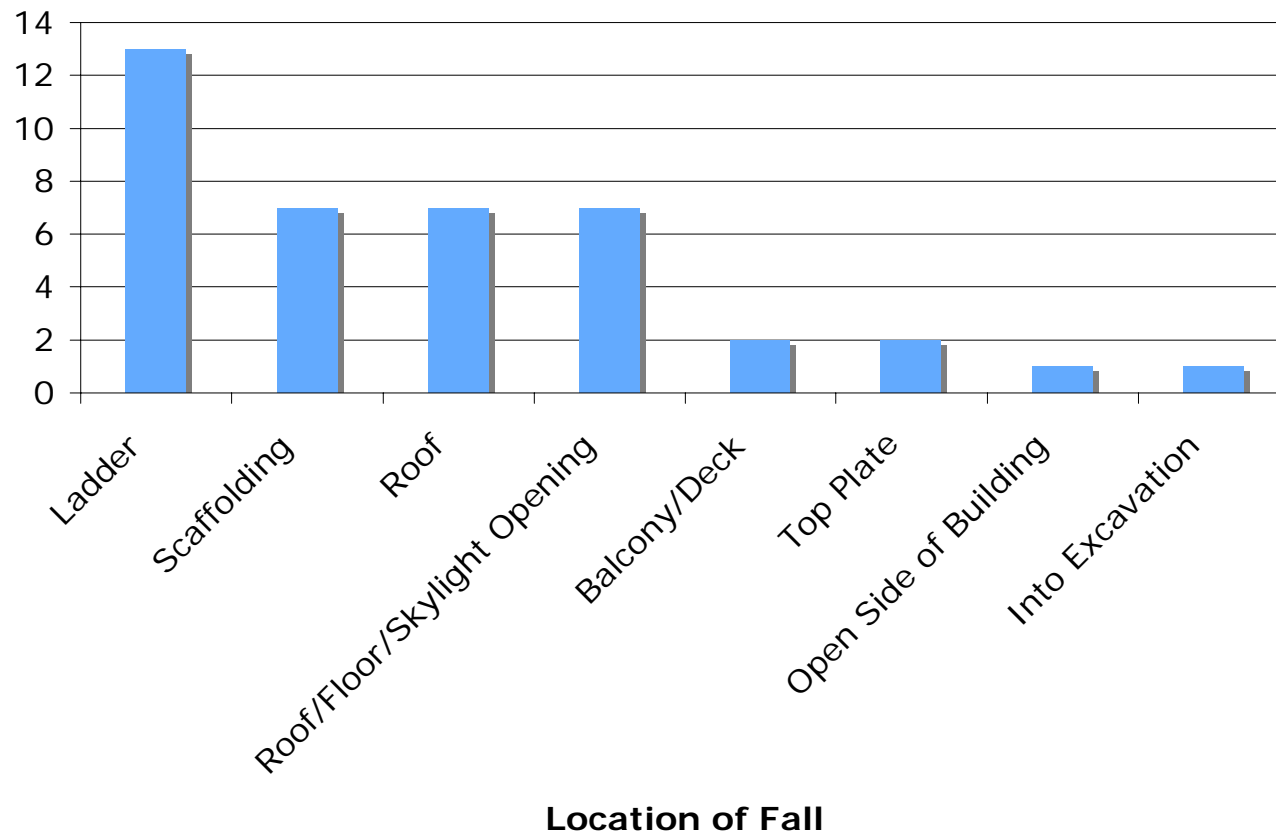
Falls from Elevation in Construction

- 48 fatal falls out of 137 construction fatalities in Washington 1998-2006
- Between 1998-2005 Over 50% of fatal falls were from less than 20 ft



Distance of Fall (feet)	Fatalities
1 – 9	5
10 – 19	16
20 – 29	12
30 – 39	4
Over 39	2
Unknown	1

Fatal Construction Falls by Location of Incident



Preventing Construction Falls

- **Identify fall hazards.** All tasks that expose workers to a potential fall should be identified.
- **Perform risk assessment/job hazard analysis.** Assess the risk level of falls to employees. For example, for a given task consider the height at which work will be done, type of surface, experience and knowledge of workers, and nature of task.
- **Train employees.** Train employees to recognize and avoid unsafe conditions.
- **Control the risk.** Can a safer method be substituted? Where workers are exposed to a fall hazard- implement measures to ensure their safety.



Preventing Falls: Ladders

- Can the work be done in another, safer manner?

If not:



- Use the type and length of ladder that provides the safest application for the work being done.
- Set up straight ladders and extension ladders using the “4 to 1” rise to run rule to obtain the most stable working position.
- Ensure that the ladder remains stable by appropriately using ladder footings, stabilization and site preparation.
- When straight ladders are used to access an upper landing, secure the ladder at the top and bottom.
- Straight ladders should extend at least 3 feet above the upper landing surface.
- Maintain 3-points of contact with a ladder while climbing. Do not carry tools and materials up ladder.
- Do not stand on the top two steps of a stepladder.
- Follow manufacturer’s recommendations.

Preventing Falls - Scaffolding

- Scaffolds must be erected, moved, or dismantled under the direct supervision of a competent person.
- Manufacturer's instructions must be followed when erecting scaffolds.
- Footings or anchorages for scaffolds should be sound, rigid and capable of carrying the maximum intended load without settling or displacement.
- Anyone working on or from a scaffold needs to be protected from falling by using guardrails, personal fall restraint, or fall prevention systems.

Preventing Falls - Roof/Floor/Light Openings

- When working in the vicinity of temporary roof openings, precautions must be taken to protect the worker, such as using guardrails, safety nets, or a fall prevention/arrest system.
- Temporary roof openings may be securely covered and labeled with a warning sign.
- Guardrails or covers over skylights must be installed before construction work begins and remain in place until work is completed.
- Skylights should never be stepped on or leaned against, as they may not be strong enough to support the weight of a person.
- Cut holes immediately prior to installation.
- Safe access and egress must be provided.
- Physical fall protection is preferred for roof work.

THANK YOU!

- 58 Construction Fatality Narratives, Data, and Publications on Hazards Available:

www.Lni.wa.gov/Safety/Research/FACE

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