

H S M   D D S A   P e e r   E x c h a n g e

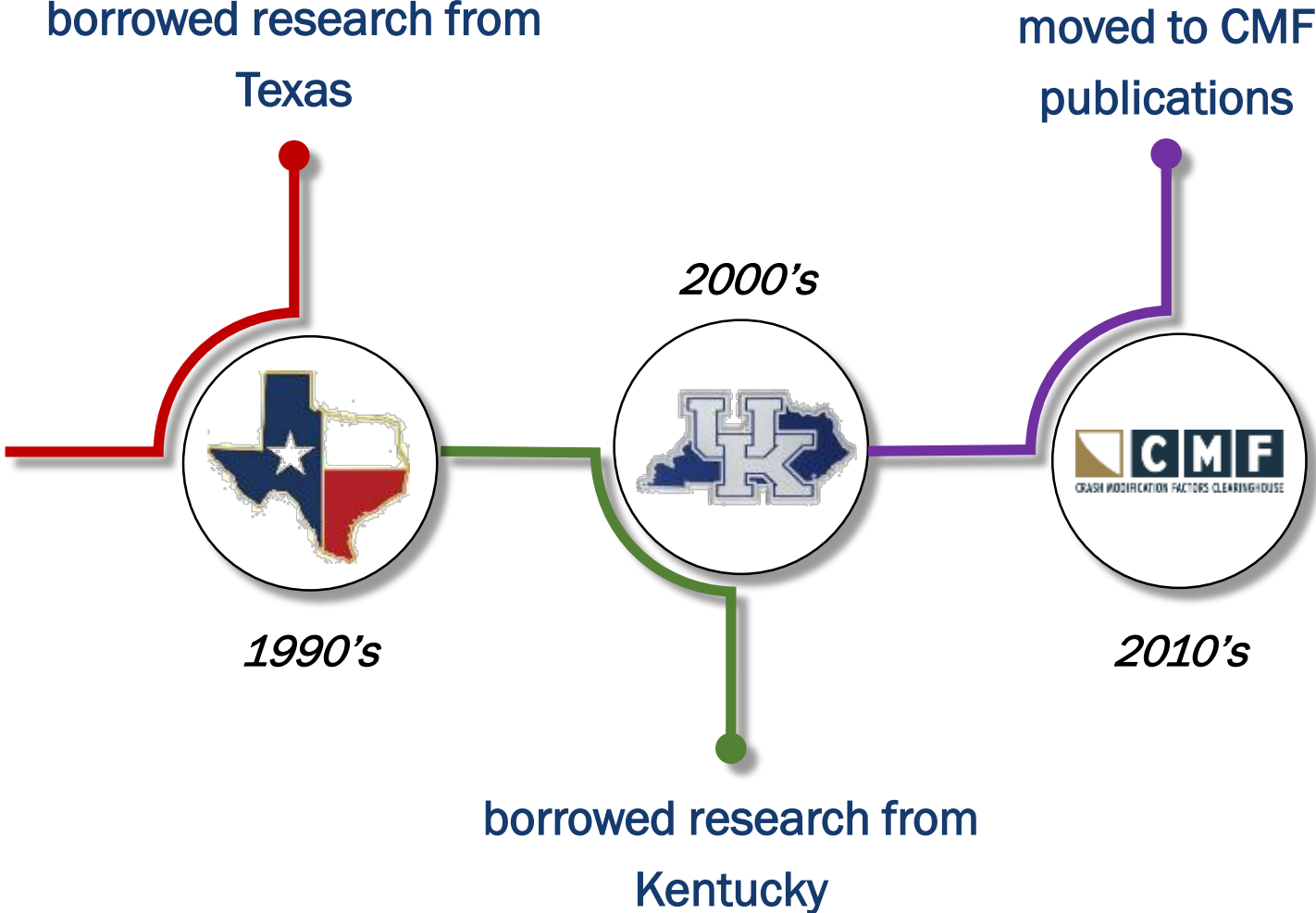
# Utah's CMF List

UDOT Traffic & Safety | 10 July, 2018



- Since the '90s, UDOT has used CMFs (CRFs) to calculate benefit cost ratios (B/C) associated with:
  - Hazard Elimination Program
  - Highway Safety Improvement Program (HSIP)
- UDOT's use of B/C and CMF has evolved over time to include:
  - Evaluation of safety projects
  - Periodic evaluation of design alternatives for high profile projects
  - Quantification of design exceptions

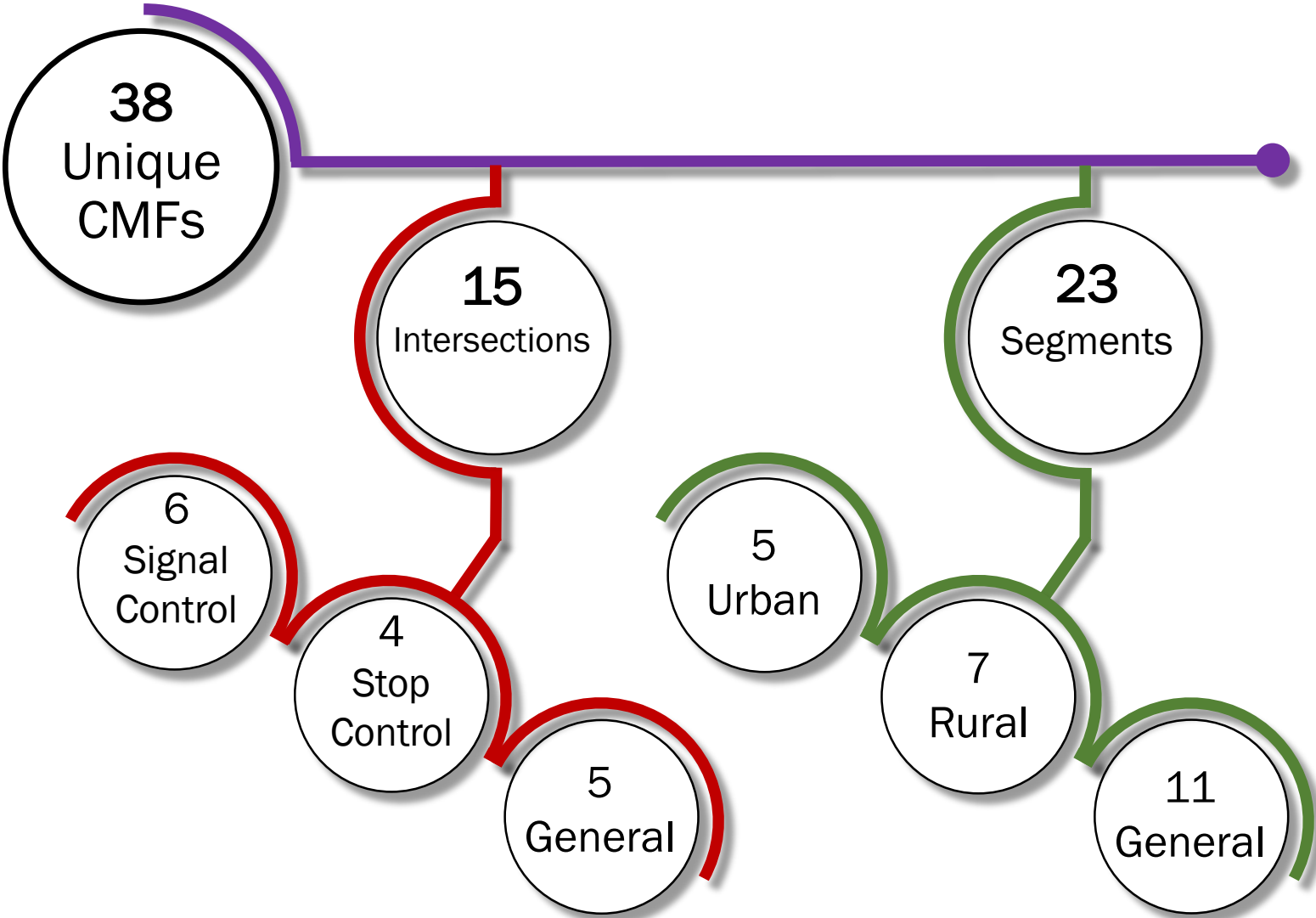
# Timeline of UDOT's CMF List



- Search on “rumble” as the Clearinghouse countermeasure name:
  - 689 CMFs in total
  - 348 CMFs for shoulder rumble strips
  - Values range from 0.9 to 0.21 for SV-ROR all severity level.
- Constantly changing
- Consistent process
  - Varied backgrounds, training, and experience
  - CMF application
  - Apples to apples comparisons

1. Review Current CMF list
  - Check references
  - Look at source reliability
  - Review research for selected studies
2. Remove outdated CMFs
3. Add CMFs that have become a focus
4. Simplify application for automation purposes
5. Republish new CMF list

# UDOT's CMF list



## Information Included

- Manner of Collision
- Countermeasure
- Crash Events Addressed
- Service Years
- Unit
- Unit Cost
- Facility Characteristics
- CMF by Crash Severity
- Std. Error
- Reference Link
- Comments

## Rural Segment Example:

Run off road left

Install centerline rumble strips

Roadway departure crashes to the left  
10

mile

\$10,000 - \$30,000

Undivided

0.86 all severities

0.05

<http://www.cmfclearinghouse.org>

SOURCE: Highway Safety Manual  
(AASHTO, 2010) Table 13-46 by  
manner of collision.

# When “not on UDOT’s list”

- CMF clearinghouse
  - Compare using clearinghouse tools
  - Prioritize by Star ranking
  - *The Handbook of Road Safety Measures*
  
- Consider other countermeasures that address similar crash characteristics
  
- Request UDOT approval



The screenshot shows the CMF Clearinghouse website. At the top, it says "CMF CRASH MODIFICATION FACTORS CLEARINGHOUSE". Below that is a navigation menu with links: "Home", "About Us", "How to Use", "Contact Us", "Help". A secondary menu lists: "About the CMF Clearinghouse", "Using CMFs", "Developing CMFs", and "Additional Resources".

The main content area features a search bar with the text "Search for:" and a search button. Below the search bar is a dropdown menu labeled "in:" with "Geographic Area" selected. A "Search CMFs" button is also present.

To the right of the search bar is a banner for "State CMF Lists" with the text: "See the CMFs that various states have decided to use statewide to improve their consistency of practice." Below the banner is a grid of social media icons.

At the bottom of the page, there is a section titled "Recently Added CMFs" with a table of entries:

Project/Location	Crash Type	Crash Severity	Crash Year(s)	Crash Measure
Provo, Utah median	CMF 0.71	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.72	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.73	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.74	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.75	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.76	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.77	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.78	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.79	CMF-A	2011-13	Median
Provo, Utah median	CMF 0.80	CMF-A	2011-13	Median





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[About the CMF Clearinghouse](#) | [Using CMFs](#) | [Developing CMFs](#) | [Additional Resources](#)

[Home](#) > [Resources](#) > [State Selected CMF Lists](#)

## State Selected CMF Lists

Several states have developed their own internal state CMF lists. Generally, the states compiled these lists so that there would be consistency in CMF use across their state. These CMFs were identified from the CMF Clearinghouse as well as other resources. The information below may be helpful for other states who are considering developing their own state CMF list.

### [Ensuring Consistency in Decision Making: Why and How Your State Should Develop a State CMF List](#)

This two-page flyer summarizes the benefits of developing a state CMF list and some of the potential questions to consider.

### Links to State CMF Lists

The table below provides links to lists of state selected CMFs. These lists represent the CMFs that are being used in the respective state. Generally, the states compiled these lists so that there would be consistency in CMF use across their state. These CMFs were identified from the CMF Clearinghouse as well as other resources.

State	Contact
<a href="#">Colorado CMF List</a>	David Swenka <a href="mailto:david.swenka@state.co.us">david.swenka@state.co.us</a>
<a href="#">New York CMF List</a>	Rob Limoges <a href="mailto:Robert.Limoges@dot.ny.gov">Robert.Limoges@dot.ny.gov</a>
<a href="#">North Carolina CMF List</a>	
<a href="#">Oregon CMF List</a>	Christina McDaniel-Wilson <a href="mailto:christina.a.mcdaniel-wilson@odot.state.or.us">christina.a.mcdaniel-wilson@odot.state.or.us</a>
<a href="#">Pennsylvania CMF List</a>	
<a href="#">Texas CMF List</a>	Darren McDaniel <a href="mailto:Darren.McDaniel@txdot.gov">Darren.McDaniel@txdot.gov</a>
<a href="#">Utah CMF List</a>	Scott Jones <a href="mailto:wsjones@utah.gov">wsjones@utah.gov</a>
<a href="#">Wisconsin CMF List</a>	

- [About the Clearinghouse](#)
- [How to Develop and Use CMFs](#)
- [How to Develop and Use SPFs](#)
- [Trainings](#)
- [Highway Safety Manual](#)
- [Resources for Countermeasure Selection](#)
- [Resources for Cost Benefit Analysis](#)
- [Resources for Behavioral Countermeasures](#)
- [International Resources](#)
- [Publications](#)
- [CMF Update \(e-Newsletter\)](#)
- [In the News](#)
- [Webinars](#)

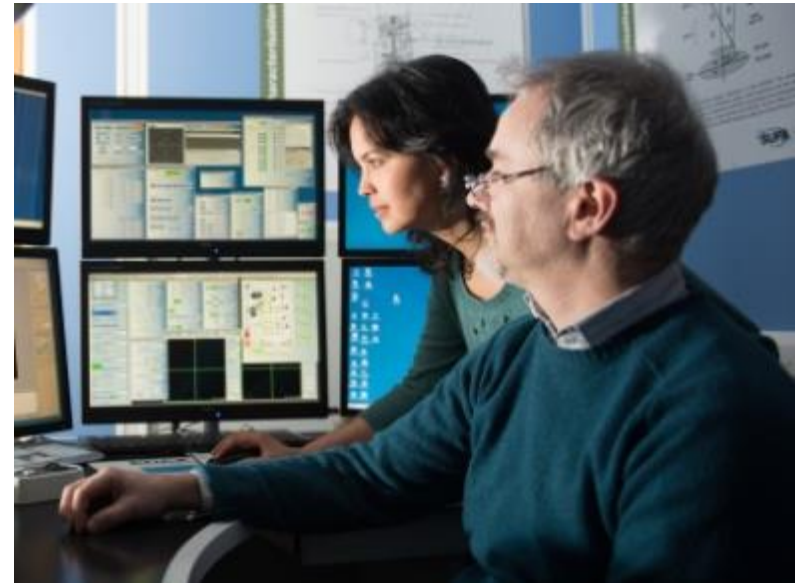
<http://www.cmfclearinghouse.org/statesselectedlist.cfm>

## Researcher

- Seeks facts
- Develop tools to investigate unknowns
- Investigate all known conditions
- Find new conditions
- Develop new tools
- Suggest further study

## Practitioner

- How do I get the job done?



# CONTACTS

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