



www.CMFClearinghouse.org



U.S. Department of Transportation
**Federal Highway
Administration**

What is a crash modification factor (CMF)?

A CMF is an estimate of the change in crashes expected after implementation of a countermeasure. For example, an intersection is experiencing 100 angle crashes and 500 rear-end crashes per year. If you apply a countermeasure that has a CMF of 0.80 for angle crashes, then you can expect to see 80 angle crashes per year following the implementation of the countermeasure ($100 \times 0.80 = 80$). If the same countermeasure also has a CMF of 1.10 for rear-end crashes, then you would also expect to see 550 rear-end crashes per year following the countermeasure ($500 \times 1.10 = 550$).

About the CMF Clearinghouse

The CMF Clearinghouse, available at www.CMFClearinghouse.org, offers transportation professionals a central, Web-based repository of CMFs, as well as additional information and resources related to CMFs. The CMF Clearinghouse was established to provide transportation professionals:

- A regularly updated, online repository of CMFs,
- A mechanism for sharing newly developed CMFs, and
- Educational information on the proper application of CMFs.

Both CMFs and Crash Reduction Factors are presented in the clearinghouse because both are widely used in the field of traffic safety.



Features of the CMF Clearinghouse

- Use the “Quick search” on the homepage to search by keyword, countermeasure, crash type, crash severity and/or roadway type
- Use the “Advanced Search” feature to search by more parameters, such as intersection type, traffic control, and whether the CMF is included in the Highway Safety Manual
- Submit your own CMF studies to be included in the clearinghouse
- Learn more about applying CMFs in the About CMF section
- Get resources on CMF-related trainings and publications

Rating CMF quality

The CMF Clearinghouse developed a star quality rating system to indicate the quality or confidence in the results of the study producing the CMF. While the reviewers applied as objective as possible set of criteria—study design, sample size, standard error, potential bias, and data source—the star quality rating still results from an exercise in judgment and a degree of subjectivity. The star rating is based on a scale (1 to 5), where a 5 indicates the highest or best rating.



How can I use the CMF Clearinghouse?

Visit the CMF Clearinghouse at www.CMFClearinghouse.org to:

- Learn more about CMFs
- Identify potential countermeasures
- Obtain the expected effectiveness of countermeasures
- Compare alternative treatments
- Get information on trainings related to CMFs
- Find resources on cost-benefit analysis



The screenshot shows the CMF Clearinghouse website. At the top, there is a navigation bar with links for "About CMFs", "Find CMFs", "Submit CMFs", "Resources", and "Contact". Below this is a "Quick Search" section with a search box and dropdown menus for "name by countermeasure category", "name by crash type", "name by crash severity", and "name by roadway type". There is also an "Advanced Search" link and a "Search CMFs" button. To the right of the search section is a featured article titled "National Reference Desktop Reference for Crash Reduction Factors" with a sub-headline "Developed by the Federal Highway Administration, the Desktop Reference is a compilation of CMFs relating to intersections, roadway departure and other non-intersection crashes, and pedestrian crashes." Below the search section is a "Recently Added CMFs" section with a table of entries:

| Countermeasure | Physical Description | Crash Type | CMF |
|----------------------|--|--------------|-----------|
| Design diamond | Physical Description of all-way left on red road | Right-of-way | CMF: 0.96 |
| Physical Description | Physical Description of all-way left on red road | Right-of-way | CMF: 0.73 |
| Physical Description | Physical Description of all-way left on red road | Right-of-way | CMF: 0.87 |



The CMF Clearinghouse is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center.

