



'Reaching Higher' for the Safe Use of Mast Climbing Work Platforms

Consensus Recommendations for a Popular Construction Access System

The Challenge

Mast climbing work platforms (MCWPs) are power-driven platforms, which travel on vertical towers that reach higher and carry heavier loads than traditional scaffolds. MCWPs have been reported to improve productivity because they are relatively quick to set up and can position workers at optimal working heights to reduce shoulder and back injuries. They were first introduced in the U.S. in the 1980s and initially use was relatively rare. During the last twenty years, use of MCWPs increased and continues to grow. MCWPs are safe and reliable when erected and used correctly. But when they fail, the results can be catastrophic, involving multiple deaths and serious injuries. An industry estimate puts the number of MCWP near misses at seven or eight per day.

Regulations covering MCWPs are limited. The Occupational Safety and Health Administration (OSHA) regulates them under the scaffold standards, which only refer to the American National Standards Institute (ANSI) 1993 MCWP standard as part of a non-mandatory appendix. The OSHA standards do not address the unique problems associated with MCWP use.



Memorial for three workers killed in a mast climber collapse.

Photo credit: Jay Janner/American Statesman, December 2009.

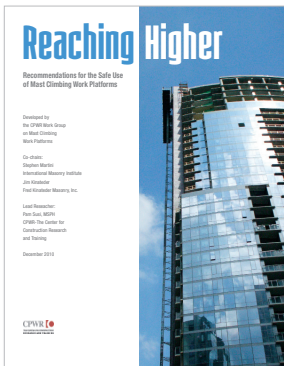
The Response

In 2006, CPWR established a Mast Climbing Work Platforms Work Group. Coordinated by Pam Susi, CPWR's Director of Exposure Assessment, the Work Group includes contractors, labor representatives, scaffold manufacturers, safety researchers, trainers, and staff from OSHA and the National Institute of Occupational Safety and Health (NIOSH).

The Work Group examined OSHA sources and news reports, and documented 12 incidents that resulted in 18 deaths and a number of serious injuries from 1990 to 2010. In each case, workers either fell from great heights or were struck by platforms or other components. The Work Group identified the lack of mandatory, standardized training tailored for this type of scaffold as a major underlying reason for these preventable MCWP-related injuries and deaths.

The Results

The Work Group's four-year process of research, information sharing, and consensus building culminated in 2010 with the publication of a white paper, *Reaching Higher: Recommendations for the Safe Use of Mast Climbing Work Platforms*. The report's detailed recommendations are intended for OSHA and other safety regulators, training providers, and those who specify and contract MCWP work. Recommendations include:



- Institute training for instructors and those who erect, dismantle, operate the power system, or work on a MCWP. *Reaching Higher* includes detailed content for a four-hour awareness-training program.
- Make sure that qualified people are keeping MCWP equipment safe.
- Determine the specific qualifications and roles of jobsite owners, project managers, safety officers, operators, and users to improve site safety and oversight.
- Update OSHA standards in accordance with *Reaching Higher's* recommendations.

An outgrowth of the Work Group's effort was a NIOSH study to identify fall prevention strategies and solutions for MCWPs using advanced engineering.

The CPWR IMPACT

Reaching Higher's recommendations are raising awareness and encouraging the adoption of safe practices.



■ In 2011, the Masonry Research-to-Practice (r2p) Partnership used *Reaching Higher* as a key source for a new website, <http://www.cpwr.com/mastclimbers.html>, which is a clearinghouse for information and resources on MCWPs. The recommendations are also part of a four-hour MCWP awareness training program for the masonry industry.

■ In December 2010, representatives of the MCWP Work Group presented its findings and

recommendations to OSHA's Advisory Committee on Construction Safety and Health (ACCSH). As a result, ACCSH members recommended mast climbers as a topic for further consideration and attention by OSHA.

- The American National Standards Institute, (ANSI), which issues voluntary standards, is using *Reaching Higher* as part of its A92.9 Mast Climbing Work Platform Sub-Committee's on-going efforts to update the standard.
- CPWR has distributed more than 2,000 print copies of *Reaching Higher*, including just under 1,000 copies to OSHA who distributed them for use by their compliance officers, trainers, and other staff. Other stakeholder groups have requested copies for internal use and distribution to their constituents.
- Articles and links to electronic versions of *Reaching Higher* have appeared in numerous industry and safety publications including *Scaffold & Access* magazine, *Occupational Health & Safety* magazine, *OH&S Online*, *Masonry* magazine; *LifeLines Online*, *ICE Voice*, and the *BAC Journal*. Tens of thousands of stakeholders have used the report.

"The recommended MCWP user safety awareness training program was designed to provide members with a basic knowledge of do's and don'ts in using mast climbers before they get to the jobsite. It keeps them prepared."

— Mike Kassman, National Safety Coordinator,
International Masonry Institute

What made it a success?

Reaching Higher is a recognized industry resource for MCWP safety. Elements that led to this recognition and the high level of consensus among very different organizations included:

- CPWR's stature across all construction groups, which facilitated formation of a Work Group that included representatives of all stakeholders.
- Collaboration with NIOSH and OSHA, which led to further research on fall prevention by NIOSH and prompted OSHA to review the adequacy of existing standards relative to mast climbers.
- The intensive fact-finding process undertaken by the Work Group to learn from research, case studies, and each other about the realities of MCWP use, management, and regulation.

"When used correctly, mast climbers can be safer and more ergonomically sound than other scaffolds, but when they fail, they really fail – resulting in a catastrophe."

— Travis Parsons, Senior
Safety and Health Specialist
Laborers' Health and Safety
Fund of North America

