

DYING at WORK in CALIFORNIA



the **HIDDEN STORIES**
behind the numbers

Workers Memorial Day

April 28, 2013

WORKSAFE
safety, health, and justice for workers

First mourn. Then work like hell for the living!

Job-related deaths, injuries, and illnesses can be prevented.

This is Worksafe's third annual report on workplace health and safety in California, released in conjunction with Workers Memorial Day. Unfortunately, the story hasn't changed much.

Hundreds of men and women in California died before their time in 2012, just because they went to work. Tens of thousands more were injured, got sick, or came down with a chronic disease, just because they need to earn a living to support themselves and their families.

This report is dedicated again to all those workers and their families, co-workers, and communities who pick up the pieces afterwards.

We also would like to acknowledge our thanks to those who provided guidance and/or contributed information and materials used in this report. This includes:

- ▶ Cal/OSHA staff
- ▶ California Rural Legal Assistance Foundation
- ▶ Jonathan Shapiro
- ▶ Madeline Barab
- ▶ Occupational Health Branch of the California Department of Public Health
- ▶ Southern California Committee for Occupational Safety and Health (SoCalCOSH)
- ▶ UC Berkeley's Labor Occupational Health Program
- ▶ UCLA Labor Occupational Safety and Health
- ▶ United Steelworkers union Local 5, and
- ▶ other Individual health and safety practitioners and advocates.

We also want to thank our patient graphic designer, Yvonne Day-Rodriguez. We couldn't have done it without her.



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INTRODUCTION: TRYING TO SHINE LIGHT

This is Worksafe’s third annual report about the hidden human and economic costs of hazardous work in California. It comes out just before April 28, Workers Memorial Day, a national and international day of remembrance for workers killed, injured, and made ill by their jobs.

Unfortunately, the message remains the same: **going to work takes the lives of hundreds (maybe thousands) of Californians each year, and shortens the lives of tens of thousands.** In 2011, at least 4,600 workers in the country lost their lives on the job; it’s estimated that another 50,000 died from occupational diseases. That means at least 150 workers die each and every day in the United States because of their job.

This happens despite 40-year-old federal and state laws requiring employers to provide healthy and safe jobs for all who work for them.

We’d love to tell the whole story about the effects of unhealthy and unsafe jobs, but we don’t know the true toll. No one does.

Most attention is paid to what’s most visible—the immediate, catastrophic deaths and injuries. Even then, authorities count the numbers differently. The Bureau of Labor Statistics (BLS) uses multiple sources to confirm work-related fatalities (e.g., death certificates, workers’ compensation reports, and state and federal agency reports). It excludes heart attacks and strokes (with some exceptions) and includes traffic-related causes. In this state, Cal/OSHA uses its own records, does not count heart attacks at work as job-related fatalities, and has no

jurisdiction to investigate worker deaths that occur on highways.

One thing is clear. The numbers are not decreasing in a meaningful way. Our list has “only” 195 work-related deaths in California in 2012. It will increase as Cal/OSHA investigations finish, workers’ compensation claims are filed, and arguments about how work contributed to someone’s death are sorted out.

It’s much more difficult to know about the deaths from cancers and other diseases that studies—and workers’ experiences—tell us are linked to our jobs. The disease we feature this year—breast cancer—is one of many. The same is true of many injuries, especially the strains and sprains from ergonomic hazards.

The toll from diseases and injuries reflects under-reporting, doctors who don’t make connections, workers’ compensation systems that don’t recognize links between injuries and illnesses and someone’s job, and more.

There are many other reasons why we don’t know more about the short- and long-term effects of work. Occupational health and safety comes down to who controls the work we do, and the choices they (are allowed to) make. Workers in the U.S. have little power to stand up for their limited rights (workers elsewhere often have more when it comes to health and safety). It’s particularly difficult if you don’t have a union, and (quite rightly) fear losing your job if you report an injury or hazard.

WORKSAFE

Based in Oakland, California, Worksafe is an independent non-profit dedicated to protecting people from job-related injuries, illnesses, and death. Prevention is our goal as we advocate for protective worker health and safety laws, and effective remedies for injured workers. In coalition with unions, workers, community, environmental and legal organizations, scientists, and public health advocates, we engage in campaigns to eliminate and reduce the full range of workplace hazards. We educate policymakers and others about the magnitude of workplace hazards and how they affect working people and communities. Many of our activities focus on low-wage immigrant workers and their experiences.

ON HEALTH AND SAFETY ISSUES

The picture is also incomplete because the U.S. has inadequate systems to track what happens to people during and after their working lives. That makes it difficult to determine the costs, and who pays what. In general, we do know that workers and their families, as well as “society” (i.e., the rest of us), pay much more than employers for the consequences of hazards on the job.

Studies tell us that it takes enforcement to get health and safety changes. If workers can't do that, we must depend on agencies like Cal/OSHA and federal OSHA. Yet their budgets, regulations, and staffing levels are totally inadequate, and industry continues to undermine workers' rights and government enforcement of rules and activities.

Our 10 recommendations focus on what federal and California OSHA need, or need to do, to improve the health and safety picture in this state. We have many more suggestions about other “fixes.” We make them in our ongoing activities.

The saddest part of doing this report is that those on the “inside” know the story all too well. They know about many of the human and financial costs. And they've known them for a long time; for example, the AFL-CIO's annual report, *Death on the Job: The Toll of Neglect*, has been coming out since 1991.

Please share these stories and numbers with your co-workers, unions, employers, neighbors, friends, community groups, faith-based organizations—anyone who'll listen. Share your own experiences, too. Ask others about health and safety on their jobs. Make links between the things we buy, the people who make them, and the environment in which we all live. Just as important, share stories of change and prevention, about lives saved rather than those that end too early.

At Worksafe, we'll do that too. And we'll keep reporting, advocating, and supporting the actions needed to stop the tragic toll in our workplaces. Join us in this important work on behalf of California's 18 million working people.

WORKERS MEMORIAL DAY

Because worldwide, work kills more than war each year.

APRIL 28, 2013, IS THE 25TH ANNIVERSARY OF WORKERS MEMORIAL DAY IN THE U.S.

An international day of remembrance for workers killed and injured by work, it was first proposed by Canadian trade unionists Ray Sentes and Colin Lambert. As a former miner, Lambert lamented the contrast between the lack of memorials for his co-workers, and others who died due to their job, and the public events for “fallen” police officers and firefighters.

April 28th coincides with the passage of Canada's first workers' compensation law in 1914. The canary became the symbol because “it shows that today workers are the canaries—they are “front-line protection for all of us,” Lambert said a few years ago. It appears on memorials, banners, and pins across Canada, where the day is recognized officially by federal, provincial and municipal governments.

The idea has been taken up around the globe. For details about what happens elsewhere, see <http://www.hazards.org/wmd/>. As they say: “Workers Memorial Day. Because worldwide, work kills more than war each year.”

Worksafe has a local event to commemorate the day. Our sister COSH (community occupational safety and health) group in southern California, SoCalCOSH, takes the lead in organizing a week of activities there. For details about what other U.S. groups do, see <http://www.coshnetwork.org/workers-memorial-week-action-0>.

EXECUTIVE SUMMARY: California Workers Are Dying and Getting Hurt at Work, Still.

Our third annual report marks the 25th anniversary of Workers Memorial Day in the United States. As before, the focus is on numbers—the deaths, injuries, illnesses, and diseases in the state caused by work—and a few stories to put faces on the statistics. It paints an important part of the picture about the toll work takes on people in California.

Who's getting sick, hurt, or dying because of their job in California?

We found 195 work-related fatalities for 2012. This is really an estimate of the number of people who died while actually on the job, or very obviously because of it—the fatalities. We expect more will come to light as Cal/OSHA completes investigations and compensation claims are filed. As always, occupational diseases rarely are counted and debates continue about what counts as “work-related.”

This report highlights the 2012 deaths of Eva Macias, Jose Lucero, Regan Johnson, and Richard Din, and gives an update about the earlier death of Sheri Sangji. We also analyze the “final” 360 deaths reported for 2011, compared to 2010's 326. They show “white/non-Hispanic” workers jumped ahead of Latinos in absolute numbers, and slightly fewer young workers were killed at work, while numbers increased for all other age groups except those 65 and older.

Construction deaths in California accounted for 7.6% of the estimated national toll in this sector in 2012. A unique map pinpoints the 42 known to have occurred in California.

Data for reported injuries and illnesses is only available for 2011. They were down slightly from 2010, to 440,900. So too did the rates for days away, job transfer, or restriction (DART), from 2.3 to 2.2 for every 100 full-time employees. There were 29,700 non-fatal work-related illnesses, 75% of which are not explained.

Health care facilities continue to be hazardous for many workers, while many other sectors with higher DART rates come and go between 2010 and 2012. The category “Other foundation, structure, and building exterior contractors” stands out for its 15.9 rate; the next highest (at 7.8) is ornamental and architectural metal work manufacturing and most others are below 6.

We look behind these numbers at the links between low-wage jobs, higher injury rates, and the financial consequences, particularly for women. We also discuss the disease that kills more women than any other—breast cancer—and feature the story of a San Francisco firefighter who survived it.

What hazards cause these injuries, illnesses, and deaths?

Ergonomic hazards account for the largest number of reported injuries. Overexertion (e.g., lifting) is more likely if you're male and Hispanic/Latino, while “repetitive motions involving microtasks” are much more likely if you're female and about even for whites and Hispanic/Latino people.

California workers have a lower rate of transportation-related incidents than the national numbers (33% compared to 41%) and a higher rate of violence (23.7% versus 17%). Contact with objects or equipment is frequent (28,870), and much more common for men and Hispanic/Latino workers. Slips, trips, and falls continue to be common too, with more than 28,000 reported, divided evenly between men and women, and are more often a hazard for Hispanics/Latinos.

What is to be done?

All workers have the right to healthy and safe jobs. It's part of a healthy economy and environment. It's also the law, and the right thing to do.

Yet workplace health and safety often are not taken seriously, the law is ignored until people die, and we still don't have a good handle on the deaths and lives made miserable by work-related illnesses and diseases.

Our recommendations for change

Worksafe marks this year's Workers Memorial Day—April 28, 2013—with recommendations about what needs to be done so California workers have healthier and safer jobs. We focus on federal OSHA and Cal/OSHA, given their important roles in the lives of the state's workers.

The AFL-CIO's annual *Death on the Job* report makes similar recommendations to improve protections for the nation's civilian workforce of 155 million. Virtually all the recommendations in their 2012 report and our *Dying at Work in California 2012* document are still valid.

These 10 recommendations are a starting point. We have many other suggestions, and will come up with more, as we continue to advocate for those healthier and safer jobs. The first three recommendations focus on changes needed at the national level. The next seven look at what's needed in the state.

1. Fund federal OSHA so it can carry out its mission in all 50 states.
2. Expand worker education and training resources.
3. Pass legislation to update the OSHA law.
4. Give Cal/OSHA the resources to do its job.
5. Pass new standards to protect workers from unregulated hazards.
6. Expand the rights of workers and their representatives to fully participate in Cal/OSHA enforcement activities.
7. Protect workers from retaliation for reporting injuries or concerns about hazards.
8. Preserve and improve California's strong "right to know" regulation.

9. Mandate public health tools to track and warn about new hazards.
10. Require that employers fix hazards at similar locations and expand use of corporate-wide settlements.

Examples to inspire change

This year, we highlight two examples of different ways that change is happening around health and safety issues in California.

The first is a regulation that requires employers to actually reduce the dangerous silica dust that their workers used to breathe all the time in some construction tasks. It's one way to implement a slogan from the health and safety movement in the U.S.: "fix the hazards, not the worker."

The second is a combination of lessons from history and a unique union-community coalition, with environmental and occupational health and safety groups. The latest near-miss at the Chevron Refinery in Richmond was the last straw for many in the union, community, and elsewhere who want real change in the industry.

We also check in on several stories from our first two reports. The last piece ties one of those stories to this year's report—focused on the recycling industry—and the need for justice for those who died this year and those who face retaliation for trying to avoid serious injuries and death.

A list of those who died in 2012

This year's list is shorter than the first two years of our reports. That doesn't mean fewer people died at work. It means these are all we were able to find, so far. It's not an official list, but has names and information we garnered from several sources. It's difficult to get a handle on the numbers, even though you'd think it's fairly obvious when someone dies on the job. Like all these lists, it includes few, if any, of the occupational diseases that kill workers slowly.



I. Overview of Injuries, Illnesses, and Deaths

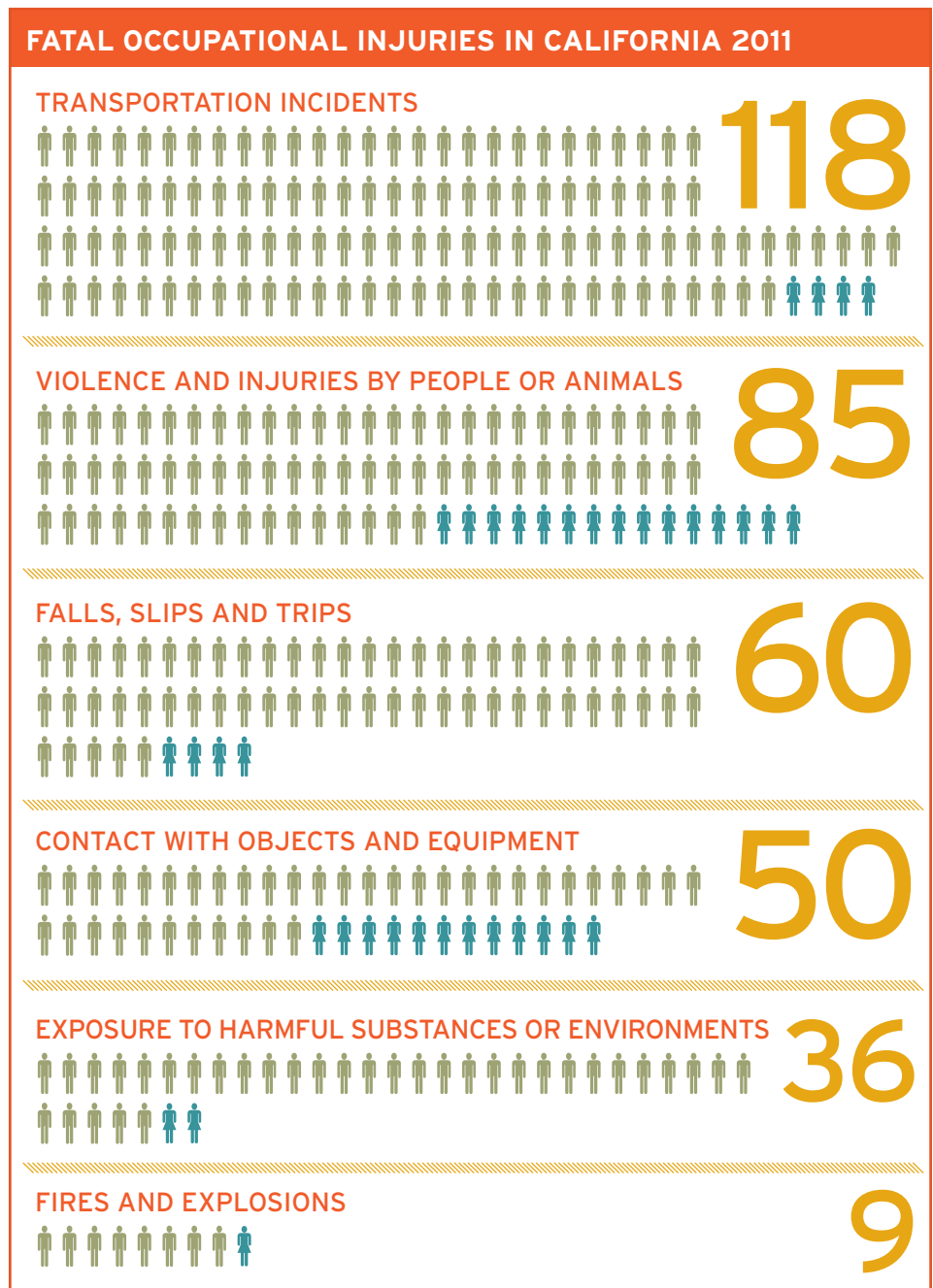
In this section, we examine the most recent data available for workplace injuries, illnesses, and deaths, and identify notable trends across the state. We highlight “high hazard” sectors and discuss particular hazards facing different demographic groups. We also take a look at the latest studies on work-related breast cancer, the links between low wages and health and safety hazards, and the unique dangers women encounter on the job.

Work-Related Deaths up in 2011

At least 360 workers died on the job in California in 2011, the latest year for which preliminary numbers are available from the Bureau of Labor Statistics (BLS). (See the chart at the back of this report for the names and/or circumstances of reported job-related fatalities in 2012.) That's an increase of more than 10% from the final number of 326 reported in 2010.

And it's 360 too many. There are more of these deaths than those which occur right away, ones that aren't reported to Cal/OSHA and aren't investigated (e.g., deaths on state highways, like that of Regan Johnson, profiled on page 27). Deaths from occupational diseases, and lives shortened by illness and injury at work, would expand the list enormously, were they rigorously investigated and counted.

The 2011 numbers are broken down in various ways in the accompanying charts. Like last year, transportation incidents are the main cause, followed by assaults and violent acts. This year, we added information about the numbers of men and women involved. It's clearly important, especially when violence is the cause of death; though not shown here, a higher percentage of women than men are killed in workplace homicides. On the other hand, women work in jobs where catastrophic fatalities are less likely because of the nature of their job hazards.

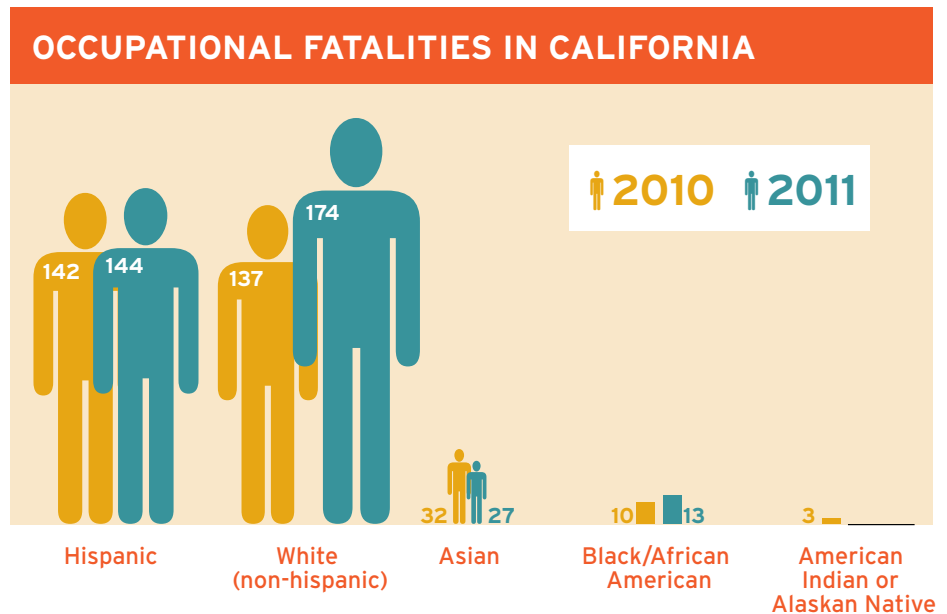
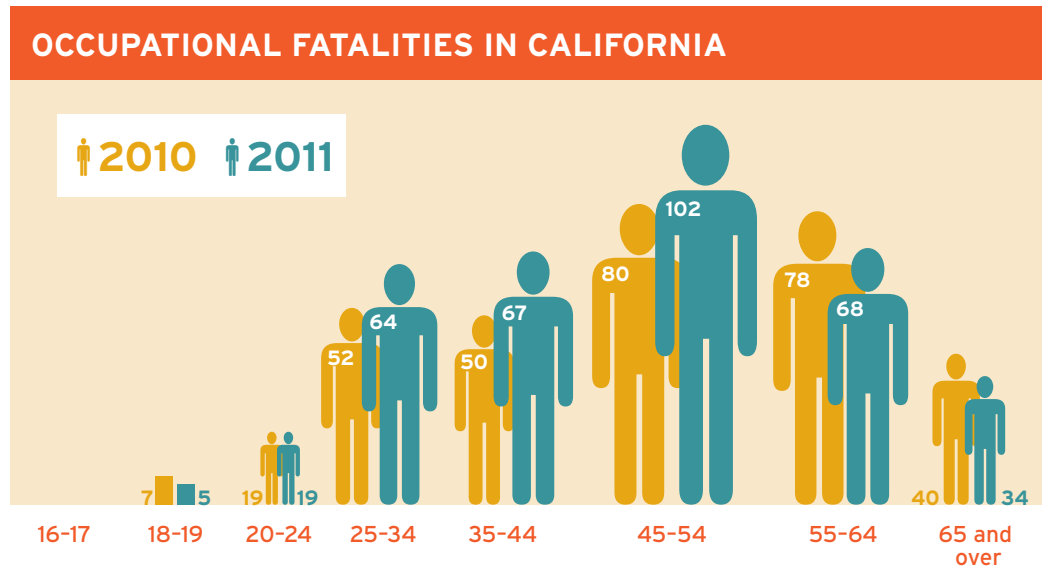


The graphic display of the numbers is missing an interesting comparison with national figures. Two differences stand out, the reasons for which we do not know:

- ▶ a higher percentage of Californians were killed in 2011 by violence of some form (from people or animals)—23.7% compared to 17% nationally; and
- ▶ 33% of the reported work-related deaths in this state in 2011 were from transportation incidents, compared to 41% across the country.

We also compared 2011 and 2010 fatality numbers by heritage/ethnicity and age. Though the trends are clear, it's important to remember that someone's heritage/ethnicity is not reported in a fair number of cases. Even so, "Hispanics/Latinos" are a smaller proportion of the workforce than their deaths would seem to indicate. This group of workers is disproportionately at risk because of the hazards in their jobs.

As for age, there were slightly fewer deaths of young workers (under the age of 24) in 2011 than in 2010. Numbers increased for other age groups, except those 55 and older.



A final note. All this data comes from the BLS's Census of Occupational Fatalities (CFOI). If you want to find out more, you can create your own tables and charts using tools on the CFOI website, <http://stats.bls.gov/iif/oshcfoi1.htm> or the California-specific one at <http://www.dir.ca.gov/dosh/cfoi/cfoi.htm>.

Construction Jobs Keep Killing Workers

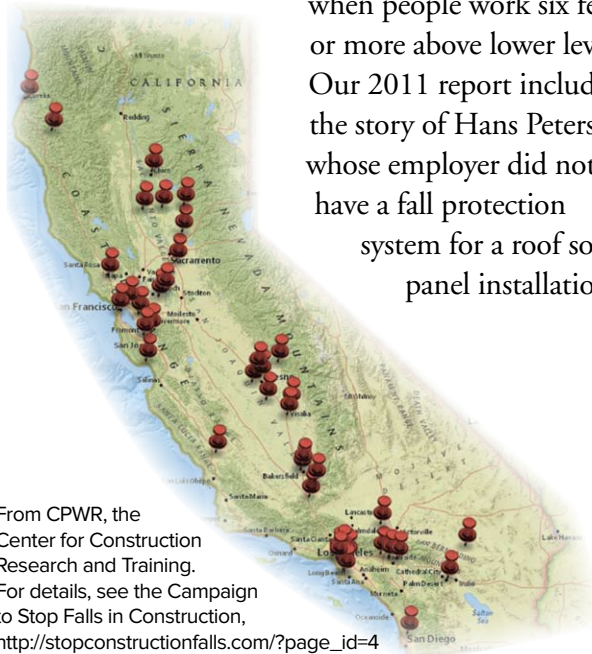
Construction still is an unsafe sector for workers. While the tasks can be rewarding, the odds of dying on the job, going deaf, and dying early continue to be higher than for most other kinds of work.

Using a variety of sources, the construction research group CPWR found 42 California construction workers died in 2012; the map shows where they happened. This number is not the final toll.

In 2011, at least 50 men died on construction sites in California, 13.8% of the known 360 deaths in the state, just like 2010. Almost half were from falls; construction workers account for 38% of all deaths related to falls in the state. Many were off scaffolds.

Studies keep telling us that falls from roofs take the lives of more U.S. residential construction workers than any other cause. They're also more common if you're Hispanic, an immigrant, or working for a small company, according to one study that came out in early 2013.

Something doesn't add up. The law (and common sense) requires employers to provide fall prevention methods, such as harnesses, when people work six feet or more above lower levels. Our 2011 report included the story of Hans Petersen, whose employer did not have a fall protection system for a roof solar panel installation.



From CPWR, the Center for Construction Research and Training. For details, see the Campaign to Stop Falls in Construction, http://stopconstructionfalls.com/?page_id=4

The law also requires proper shoring of construction trenches when people are expected to work in holes that are five or more feet deep (with limited exceptions). Yet, inadequate or non-existent shoring also continues to kill construction workers.

In 2012, 39-year-old Raul Zapata was one of them. As family members watched, he died when a 10 to 12-foot-deep trench collapsed at a Milpitas home. His employer, US-Sino Investment, has appealed the Cal/OSHA citations, for which inspectors proposed penalties of \$168,175. Two of them were “serious and willful.” (The company ignored an order two days earlier to stop work until shoring was installed.)

Like many other workers, Raul probably thought he would lose his job if he complained about the hazard. Although retaliation like this is illegal, it happens far too often. (See our recommendations for more about this.)

Even in unionized settings, construction workers are not likely to complain about hazards or report injuries. Hester Lipscomb and her colleagues reported this in a 2013 paper titled “Safety, incentives, and the reporting of work-related injuries among union carpenters: ‘You’re pretty much screwed if you get hurt at work.’” They pointed to behavior-based “safety” systems that focus on people’s actions, not the hazards, and a “widespread practice” of hiding injuries, rather than reporting them and risking retaliation.

Public Citizen’s 2012 study estimated the total cost of construction fatalities and injuries in the state from 2008 to 2010 was at least \$2.9 billion.¹ A key recommendation: like House Bill 1486, introduced in Maryland in 2013, state policy should require any construction contractor interested in state contracts to document it has excellent safety records and practices before bidding on projects.

¹ Public Citizen. *The Price of Inaction. A Comprehensive Look at the Costs of Injuries and Fatalities in California’s Construction Industry.* November 2012.

What Are the “High Hazard” Industries?

Cal/OSHA uses its High Hazard Industry list to target inspections and offer free consultation services.

Each year, the agency puts the list together after analyzing more serious injuries—the Days Away/Restricted duty/Transfer (DART) rates. Under-reporting of job-related injuries is common. It also varies from one sector to another; one consequence is that jobs dominated by women are less likely to be included.

A DART rate of 2.0 means that sector has at least 200% of the overall industry average, based on statistics from the previous year. For example, one construction industry’s sector—called “Other structure, and building exterior contractors”—stands out in the 2012–2013 list for its DART rate of 16. That means workers in this sector are kept off the job, or placed on light duty, due to injuries at a rate 16 times greater than the average across sectors.

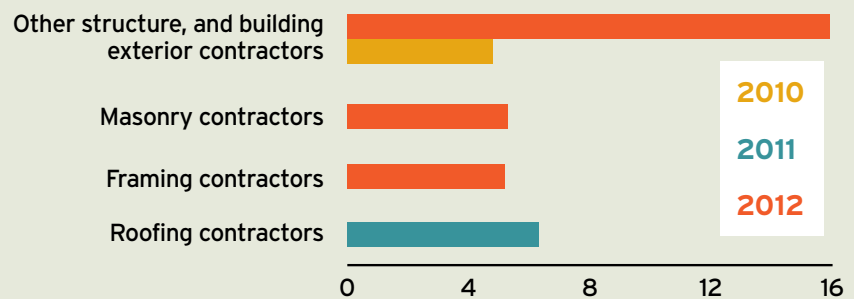
To understand the trends, we compared DART rates for three years.

For the first set of charts, we chose those with rates of 5.0 or more. This makes more visible the ebb and flow of sectors

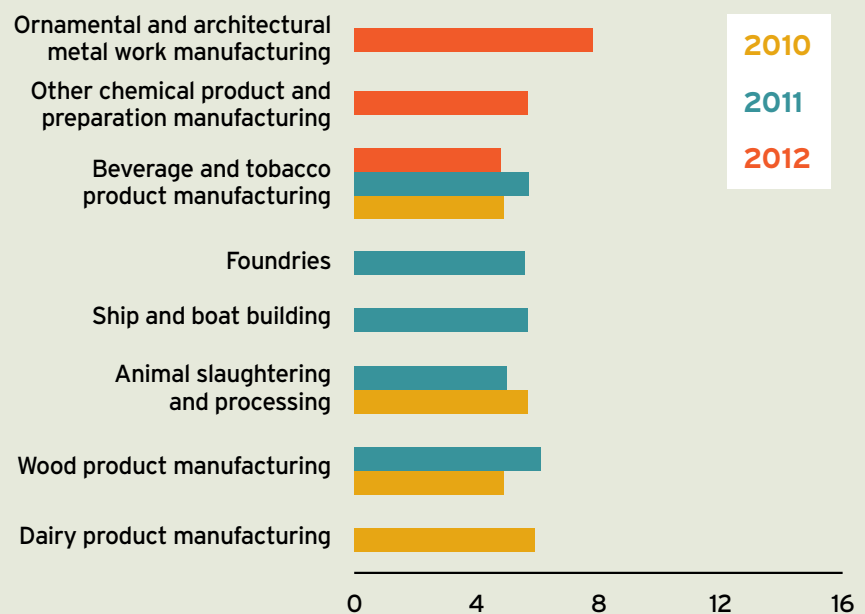
HIGH DART RATES BY INDUSTRY & YEAR

Cal/OSHA uses the DART rates to target “high hazard” sectors and their sub-sectors. They look for Days Away/Restricted duty/Transfer numbers that are more than 2.0, or more than twice the overall industry average. Using numbers from the High Hazard Compliance Unit (<http://www.dir.ca.gov/dosh/hhu.html>) for the last three years, we chose sub-sectors that were particularly high (more than 5.0) for these graphs. They are grouped by industry or large sector and each bar represents one year in which the DART rate was at least five times the industry average.

CONSTRUCTION



MANUFACTURING

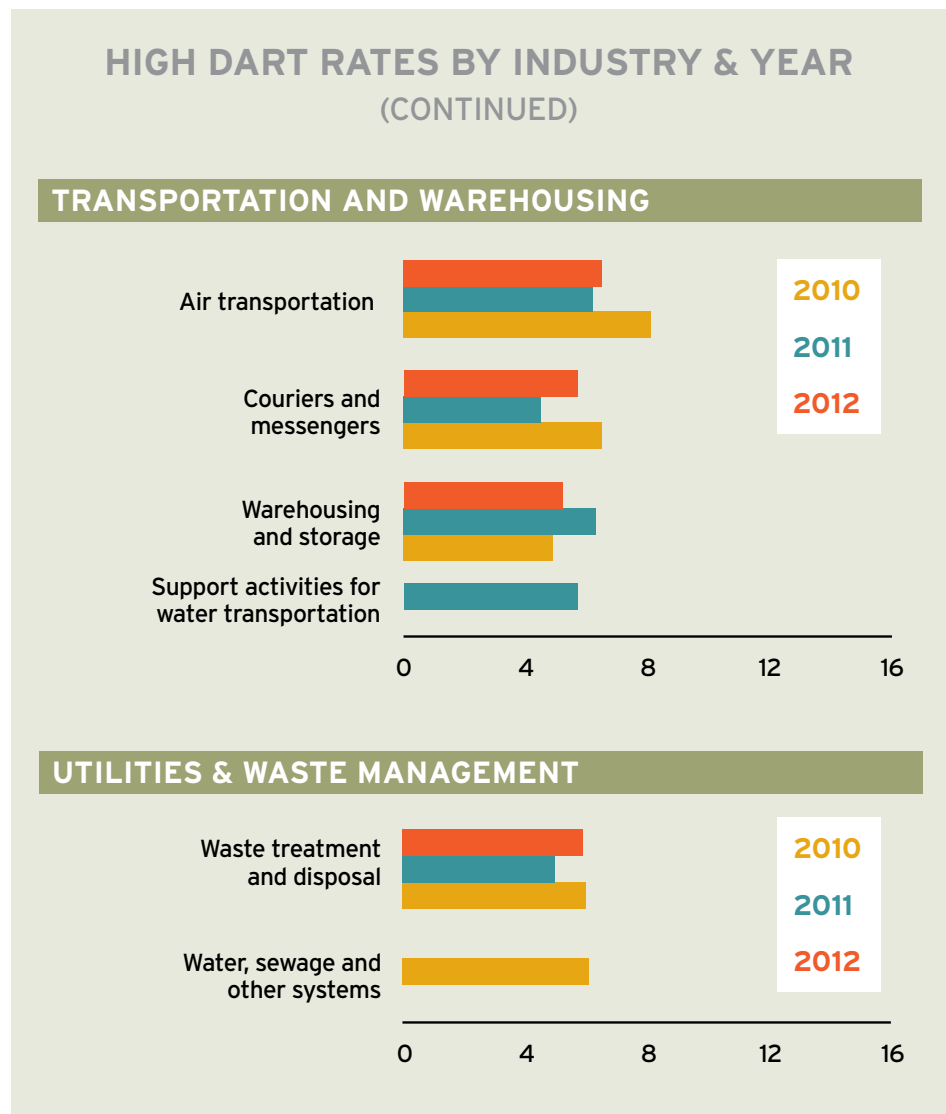


from the lists. We don't know the exact reasons for these changes but hope dropping off or down the list indicates positive changes for the health and safety of workers in the sector.

For example, bakeries and tortilla manufacturing had a DART rate of 5.2 in 2010 and has not re-appeared in the last two years. On the other hand, beverage and tobacco product manufacturing DART rate was high all three years, up to 5.7 in 2011 and falling to 4.8 last year. (It also appears on our second list because it met the criteria there too.)

The second chart, on page 13, alphabetically lists high hazard sectors in the last three years that have about 25,000 workers or more. This is important because lots of people are getting hurt doing these jobs, even if the DART rate does not get above 5 (our arbitrary cut-off for this analysis, and much higher than Cal/OSHA's).

Finally, we must point out that nursing and residential care facilities are increasingly hazardous workplaces for hundreds of thousands of workers. Safe patient handling is one solution for the ubiquitous ergonomic hazards in this sector. Violence also is a more common hazard in this sector than many others. This is also the only sector on the High Hazard lists from any of the three years in which women dominate the workforce.



IT'S NOT JUST THE RATE: THE NUMBER OF WORKERS AFFECTED MATTERS

This chart looks at the DART rates that were less than 5, still made the “high hazard” list in 2010, 2011, or 2012, and had about 25,000 or more employees. Many people are affected by the hazards in these sub-sectors and sectors, making solutions an important public health priority.

INDUSTRY GROUP	INDUSTRY ACTIVITY	2012		2011		2010	
		DART	EMPLOYEES	DART	EMPLOYEES	DART	EMPLOYEES
Agriculture	Vegetable and melon farming			4.6	32,408	4.8	28,700
Construction	Foundation, structure, and building exterior contractors					4.8	129,300
Health Care	Nursing and residential care facilities	5.2	252,011	4.8	242,700	4.7	234,800
Manufacturing	Primary metal manufacturing					4.7	24,300
	Bakeries and tortilla manufacturing					4.5	40,400
	Beverage and tobacco product manufacturing	4.8	41,823	5.7	42,713	4.9	44,300
	Fruit and vegetable preserving and specialty food manufacturing	4.7	28,103				
Other Services	Drycleaning and laundry services			4.5	34,966	4.8	39,000
Retail Trade	Food and beverage stores					4.7	339,500
Waste Management	Waste management and remediation services					4.6	41,100
Wholesale Trade Retail Trade	Grocery and related product merchant	4.3	96,257				
	General merchandise stores	4.3	280,538				

What Is Hurting California Workers?

The numbers can be overwhelming, and they still don't tell us what's going on. They're the statistics about non-fatal work-related injuries and illnesses that employers report to the Bureau of Labor Statistics (BLS).

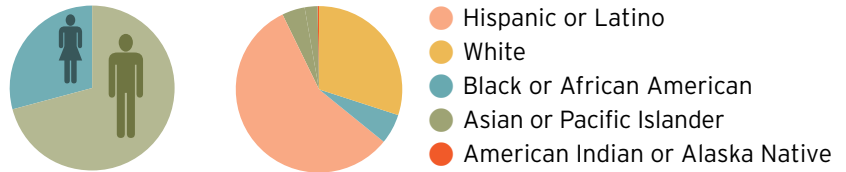
According to the BLS survey, in 2011 California employers reported:

- ▶ 440,900 injuries and illnesses, 55% of which involved days away, job transfers, or restrictions;
- ▶ that rates of recorded injuries and illnesses (calculated for 100 full-time workers) went down from 4.2 in 2010 to 4;
- ▶ that the rate for days away, job transfer or restriction (DART) went down from 2.3 to 2.2, although days away were the same (1.2); and
- ▶ 29,700 cases of non-fatal work-related illnesses.

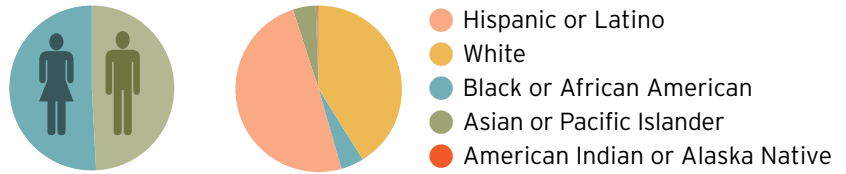
These numbers miss a lot of what happens to California workers. They also aren't analyzed to learn more.

Public health prevention suffers. Cal/OSHA special emphasis programs may be missing important injuries and illnesses. With more accurate information, the Department of Public Health's Hazard Evaluation System and Information Service (HESIS) might issue different alerts to employers and workers. Other government agencies and organizations cannot make well-informed decisions or advocate as well for changes.

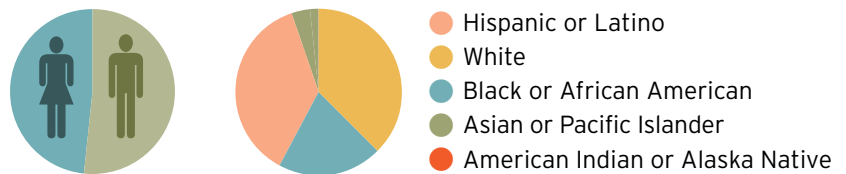
Contact With Objects Or Equipment 28,870



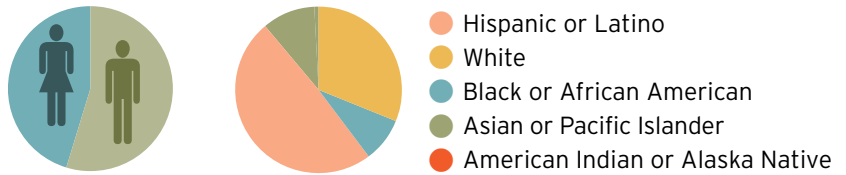
Falls, Slips, and Trips 28,210



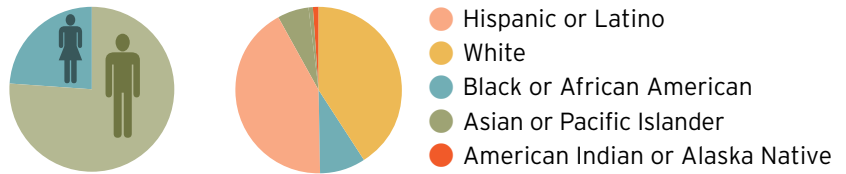
Violence and Other Injuries by Persons or Animals 7,650



Exposure to Harmful Substance or Environment 6,530



Transportation Incidents 5,860



In many cases, race/ethnicity is not reported. These charts reflect the cases for which this information was available.

For example, Michigan researchers reported in 2013 that there really were at least 2.46 times more job-related amputations in that state than the BLS reported. The reasons: relying on employers for information, rather than also using other sources such as doctors and hospitals, and ignoring the self-employed (a growing part of the workforce).

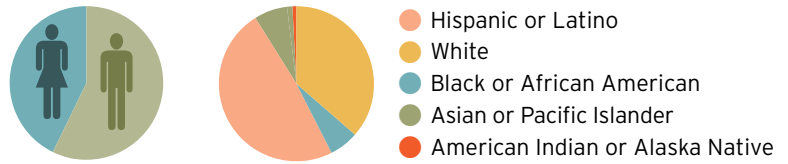
Were there a similar difference in California, there would have been at least 763 amputations in 2011, not 310.

Amputations are pretty obvious acute injuries, and it's pretty clear when they happen at work. If they are not reported, what happens about less obvious injuries? What about the strains and sprains (including back disease) that is the most common category of work-related injury? They are much easier to dismiss as occurring away from work; injured workers also tend to keep going through the pain, for many reasons.

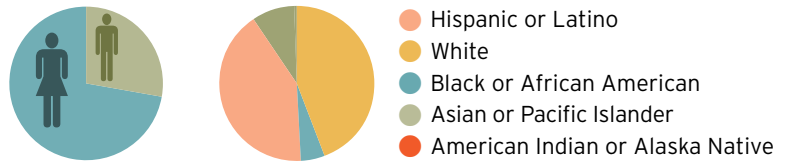
As we said last year, no one analyzes the data to find out what's behind 75% of the unclassified occupational illnesses and diseases the BLS reported for California in 2011. "Doctors First Reports" go to Cal/OSHA with information about the type of illness and, if it's known, what workplace factors (hazards) were behind it. (Doctors must promptly report all work-related illnesses to the agency.)

But there is no one at Cal/OSHA with the special training to properly analyze the reports, BLS data, and other information about what's happening in California workplaces. The public health department's Occupational Health Branch has staff who can do that. Both parts of the government lack funding to do this important work.

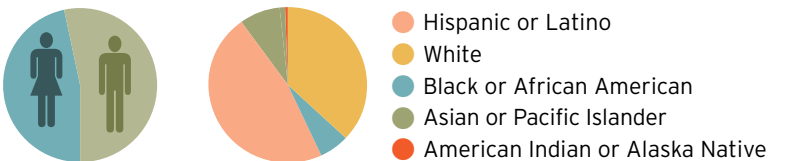
Overexertion 53,430



Repetitive Motions Involving Microtasks 7,990



Total for Ergonomic Injuries 61,420



Who's getting hurt and by what?

This year, we looked at the sex and heritage/ethnicity breakdowns of injuries by the reason provided (again, by employers). The "new eyes" tell a story that's reported in numerous studies:

- ▶ women's jobs often involve "repetitive motions involving microtasks," while men tend to do the heavy lifting (captured in "overexertion");
- ▶ men and women do different jobs, reflected by the hazards they face and the injuries that result;
- ▶ Hispanic/Latino workers have more than their fair share of hazards, and therefore injuries;
- ▶ racism is an important component of violence, as is sexism and domestic violence that spills into the workplace; and
- ▶ ergonomic hazards (overexertion plus repetitive motions) are far too common and aren't going away, despite the current "repetitive motion injury" regulation in the state.

What do you see?

Bureau of Labor Statistics <http://www.bls.gov/iif/oshstate.htm#CA> including <http://data.bls.gov/pdq/querytool.jsp?survey=cs> and <http://www.dir.ca.gov/OPRL/Injuries/Demographics/2011/Menu.htm>

As Low-Wage Jobs Increase, More Women Are Getting Hurt, Ill, And Killed

They're the people who keep us going, providing invaluable services and help for us, our children, and our families. But the wages are low and injuries are likely. When the two combine, the consequences can be disastrous.

More and more low-wage workers are immigrants and women. The work they do is becoming more common, as public sector and other mid- and higher-wage jobs disappeared in the economic recession and its aftermath. (During the recession, 21% of lost jobs were lower-wage ones; they are almost 60% of jobs gains in the "recovery.")

It's estimated that between one-fifth and one-third of the U.S. workforce are now in jobs considered low-wage. The sectors that grew the most during the "recovery" include retail salespersons, food preparation workers, laborers and freight workers, restaurant servers, personal and home care aides, and office clerks and customer representatives. Most of these jobs are dominated by female workers.

Hazards are common in these jobs, so injuries, illnesses, and sometimes deaths follow. When this happens, low-wage workers and their families are particularly vulnerable to financial ruin. Only 19% have paid sick leave protection, and not all workers are covered by workers' compensation. Nationally, several million farm workers and domestic workers are excluded altogether from this and other basic labor protections.

Two reports that came out in 2012 help to paint more details of this picture.¹

Paul Leigh of UC Davis studies the cost of work-related deaths, injuries, and illnesses.² Last year, he looked at low-wage occupations. He defined them as ones that paid annual, full-time, and median wages at or below the poverty line for a family of four. With the latest data from 2010, he found 65 occupations with median wages at his cut-off of \$11.18 an hour. (This means that up to half of the workers in each occupation earn less.)

He also estimated the numbers and costs of injuries, illnesses, and fatal diseases and injuries. The top 20 low-wage jobs had 77% of the 1.73 million injuries and illnesses. The estimated costs were \$39.1 billion every year, the same as the annual national cost of strokes.

Liz Borkowski and Celeste Monforton used Leigh's data to connect wages, health and safety hazards and their effects, and the financial consequences for low-wage workers and their families. They say Leigh's estimates are definitely helpful, but the picture is still not complete (e.g., because of under-reporting of work-related injuries and illnesses, doctors failing to connect illnesses with jobs, the exclusion of some costs, and so on).

The researchers point out the costs would be much more for workers earning higher wages, while the consequences are worse for low-wage workers. They conclude:

Improvements in workplace health and safety can prevent injuries and illnesses from occurring in the first place. A stronger safety net can reduce the likelihood that missing a few days of work will spell missed rent payment children going hungry.

¹ Paul Leigh published *Numbers and Costs of Occupational Injury and Illness in Low-Wage Occupations* in December 2012. It came out at the same time as the policy brief by Liz Borkowski and Celeste Monforton, "Mom's Off Work 'Cause She Got Hurt: The Economic Impact of Workplace Injuries and Illnesses in the U.S.'s Growing Low-Wage Workforce."

² See Worksafe's *Dying at Work in California 2012* for a story about his 2011 study.

There's more to the story, too. As the accompanying chart adapted from Borkowski and Monforton's paper shows, many of these jobs are done by women. (We calculated the percentages by matching as many of the top 20 low-wage jobs as possible with Standard Occupational Classifications and sex data from the BLS.) The occupations in which women make up more than half of the workforce are service jobs with many hazards for musculoskeletal disorders, as well as falls, slips, and trips, contact injuries, and violence (e.g., sexual harassment, bullying).

WORK IS DANGEROUS TO WOMEN'S HEALTH AND SAFETY ESPECIALLY IN LOW-WAGE JOBS

OCCUPATION	TOTAL EMPLOYMENT	MEDIAN HOURLY WAGE	WOMEN	NONFATAL INJURIES AND ILLNESSES
Childcare Workers	631,240	\$9.34	94.70%	26,505
Maids & Housekeeping Cleaners	877,980	\$9.32	89.00%	143,157
Home Health Aids	924,650	\$9.91	88.20%	59,500
Personal Care Aides	820,600	\$9.49	86.10%	55,289
Cashiers	3,314,870	\$9.05	73.30%	80,690
Waiters & Waitresses	2,289,010	\$8.93	71.10%	59,982
Counter Attendants, Cafeteria, Food Concession, & Coffee Shop	441,830	\$8.90	65.70%	17,464
Combined Food Preparation & Serving Workers, Including Fast Food	2,799,430	\$8.76	61.30%	97,739
Food Preparation Workers	775,140	\$9.27	59.20%	70,336
Packers & Packagers, Hand	666,860	\$9.55	56.50%	36,238
Bartenders	512,230	\$9.06	55.20%	18,085
Retail Salesperson	4,270,550	\$10.10	51.90%	195,961
Counter & Rental Clerks	420,070	\$10.93	49.00%	5,660
Cooks, Restaurant	947,060	\$10.61	40.50%	76,548
Stock Clerks & Order Fillers	1,782,800	\$10.52	36.00%	114,374
Janitors & Cleaners, Except Maids & Housekeeping Cleaners	2,068,460	\$10.75	33.20%	170,836
Dishwashers	504,280	\$8.83	21.10%	27,264
TOTAL	22,494,060			1,255,628

Adapted from Liz Borkowski and Celeste Monforton's policy paper, with additional information from the Bureau of Labor Statistics (BLS).

What's going on?

Women's work is not "safe." Once largely invisible, their hazards and the consequences are the subject of increasing numbers of studies and reports.

They tell us that women face job-related injury and illness because of the types of work available to them ("occupational segregation"), an increase in informal, part-time, and irregular work, and long working days when family responsibilities (particularly caretaking) are added to paid work. We know from various studies that "women's work" also has hazards because:

- ▶ the jobs are repetitive, monotonous, and stressful (compared to men's, which largely involves "heavy" manual, technical, and managerial tasks);
- ▶ it often involves caring for others, and putting patients/clients before themselves;
- ▶ young women are more likely than men to be physically assaulted at work; and
- ▶ as men age, they move into jobs with fewer hazards or risks, while women's exposure levels are the same for their working life.

Even when they have the same job title, men and women almost always have different tasks. This means the specific hazards they face are different, and the safety and health consequences are, too. Think of male and female cleaners, for instance, or how "retail" work is different for men and women.

We also are learning that female immigrant workers tend to face more hazardous conditions than other women at work. Hotel housekeepers and home care aides are two examples. Those who are unionized are fighting back, particularly in California.

LOW WAGES ARE DIRECTLY LINKED TO YOUR BLOOD PRESSURE.

Workers between 25 and 65 with the lowest wages have a higher risk of hypertension than those with the highest ones. Paul Leigh at UC Davis got those results using the data about low-wage workers in another study, reported in the *European Journal of Public Health* in December 2012.

Again, women fared differently than men, as did younger workers in general. The link between their wages and hypertension (high blood pressure) was especially strong among women and persons between the ages of 25 to 44.

Perhaps more impressive, the solution was obvious. When wages doubled, the odds of being diagnosed with hypertension went down by 16%. It reduced the risk of the diagnosis by 1.2% in two years and 0.6% for one.

Women and younger workers get the most benefit from higher wages. For younger workers, getting twice the wages led to a 25% to 30% decrease in the odds of the hypertension diagnosis. When women's wages were doubled, there was a 30% to 35% decrease in the risk.

A Call to Action

Put Breast Cancer Out of Work!

“Where did I do wrong?” It’s a common response as more and more women—especially younger ones—hear the dreaded diagnosis: breast cancer. Too often they blame themselves; it’s what they ate, drank, smoked, or just the luck of the draw.

Thanks to recent reports and studies, women are learning to ask other questions: “Is there a connection between my job and this cancer?” “What’s needed to prevent breast cancer?”

The statistics are scary. The diseases (breast cancer takes different forms) are the leading cause of cancer deaths for American women between 20 and 59. They are the most common cancer for women around the world. A 2013 study¹ about trends between 1976 and 2009 found that increasing numbers of women under 40 are being diagnosed with metastatic breast cancer (it’s spread to other parts of the body). Marin County outside San Francisco has one of the highest rates in the world.

Something serious is going on. The cause is likely a combination of environmental, genetic, hormonal, and lifestyle influences; genetics is only one part of the puzzle. The good news is that more authorities are saying: let’s try to prevent breast cancer by looking to our environments—at work, home, and in the community.

In November 2012, a Canadian study² with disturbing results got international media coverage. Women making plastic auto parts and food cans were five times more likely to get breast cancer—before menopause—than other women. Whatever their age, women working in those sectors for 10 or more years, as well as bars/casinos, metal working manufacture, and farming had “statistically significant” increases of breast cancer. (There could be connections with other jobs, but methods currently used to study diseases make it hard to find them.)



Source: United Steelworkers/BlueGreen Alliance Putting Breast Cancer Out of Work.

¹ For details, see <http://newsatjama.jama.com/2013/02/26/author-insights-incidence-of-advanced-breast-cancer-appears-to-be-increasing-in-young-us-women-2/>

² There are links to the studies, layperson’s materials about it, prevention materials, and information about the original breast cancer ribbon at <http://www.cwhn.ca/en/media/womenplasticsandbreastcancer>.

A related study² described the many toxic chemicals used or present in these jobs, and how they are known to cause serious—and sometimes deadly—diseases and other health effects.

For example, the “toxic soup” in plastic auto parts work contains substances known to cause cancer (e.g., vinyl chloride, acrylonitrile, styrene) and disrupt hormones (e.g., bisphenol A/BPA, phthalates and brominated flame retardants).

Chemical endocrine disruptors (EDs) also are linked to breast cancer; they mimic human hormones and interfere with how the “real thing” controls a wide variety of body functions. Almost 800 chemicals are known or suspected of interfering with the endocrine system; most have not been properly tested to find out more.

Three months later, a U.S. committee of breast cancer specialists said the same thing in “Breast Cancer and the Environment: Prioritizing Prevention” (<http://www.niehs.nih.gov/about/boards/ibcercc/>). Their conclusion: “Prevention is the key to reducing the emotional, physical, and financial burden of breast cancer.” The most promising path to less breast cancer is to prevent environmental exposures to hazards in workplaces and other environments. That’s the research to fund, they said.

Preventing breast cancer also was the theme of an international report right after the U.S. one (“State of the Science of Endocrine Disrupting Chemicals 2012”). Sixteen experts called the connection between hormone-mimicking chemicals and human health problems “a global threat” that must be addressed. They said it’s important to focus on reducing exposure to these kinds of chemicals.

The messages are consistent: prevent breast cancer by dealing with an important source—the workplace. It’s not just chemicals. The International Agency for Research on Cancer (IARC) decided in 2007 that shift work, especially when it includes nights, probably causes breast and other cancers.

Prevention is possible

The Blue-Green Alliance—its members include unions and environmental organizations—talks about “breast cancer-free cars and trucks” and production practices that use less or non-toxic chemicals. It calls for “a national Blue-Green effort to transition and expand American manufacturing to making products that are healthier for the workers who make them and the families that use them.”

With the United Steelworkers Union (USW), the Alliance launched a campaign, “Putting Breast Cancer Out of Work.” It’s linked to the ChemHAT database (<http://www.chemhat.org>), available online to provide information about the hazards of chemicals, possible alternatives and a range of background and take-home information.

Clean Production Action, which focuses on green chemistry and reducing the use of toxic chemicals, also has called for action around work-related breast cancer. In 2012, the NGO put out “The Guide to Safer Chemicals.” It sets out principles, tools, strategies, and examples to reach the goal.

The Breast Cancer Fund also has a number of projects and campaigns on the go. They are part of the Women Firefighter Biomonitoring Collaborative. “Cans Not Cancer” is designed to persuade food can manufacturers to remove BPA linings and to encourage consumers to go for glass or non-BPA-lined containers. It’s just one example of how workers and consumers can reduce the use of hazardous chemicals.

Why Do San Francisco Female Firefighters Seem to Have High Breast Cancer Rates?

Anita Paratley was 46 when she got the breast cancer diagnosis. The former truck driver and social worker had been a firefighter in San Francisco for about 13 years.

“My first reaction was no, it can’t be. Not me,” she says. Anita underwent a false negative mammogram, ultrasound, and a biopsy before her initial feeling that something felt wrong proved to be right. Yet she didn’t smoke, had always exercised, and more: “I felt like I always held up my end of the bargain.”

Anita loves her work. “I’m like a social worker with an axe. It’s a helping profession ... I really enjoy going to work after 23-and-a-half years.”

Anita, the company captain in the Richmond District, has been breast cancer-free for almost 10 years. She’s one of more than 200 women in the department. She knows that 12 to 15 of them have had breast cancer; one has died. All the women except one were in their 40s.

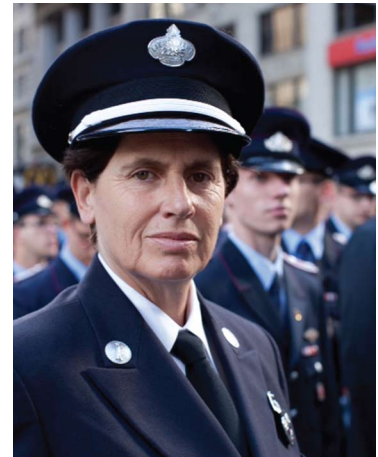
After getting a gene test to confirm that her cancer did not run in her family, she started wondering what else could have caused the disease.

“Then I realised that I’d raised my right hand and swore to serve (as a firefighter) ... It just made sense that it probably was the job.”

She was good about wearing protective equipment at fires—until the “overhaul,” the clean-up and checking for hot spots. It can take hours. And it’s the time that the plastics and other materials are smouldering, giving off hazardous gases and soot. Carcinogens are common. (The first recognized occupational carcinogen was coal soot; in 1779, English surgeon Percival Pott linked it to scrotal cancer in chimney sweeps.)

“When you don’t see the heat and the smoke dies down, you think you’re safe,” she says. Before she knew this wasn’t true, she remembers smelling soot coming out her skin, even after a shower at the fire hall. “To this day, I can still smell it, because you do absorb it, inhale it if you weren’t wearing your SCBA (breathing gear).” And she wears her SCBA the entire time now.

Anita is not letting cancer define her life. She’s decided to support fellow workers with cancer, however she can. She’s also active in the Women Firefighter Biomonitoring Collaborative, which has applied for funds to study what chemicals San Francisco female firefighters encounter on the job and determine links to breast cancer and other diseases. The team includes the SF Firefighters’ Cancer Prevention Foundation, United Fire Service Women, Commonwealth Breast Cancer Fund, Silent Spring Institute, and a UC Berkeley researcher.





II. The Stories Behind the Statistics

In this section, we step back from the data to focus instead on several individual workplace incidents in which lives were lost. As the title of the report suggests, we want not only to identify trends in workplace health and safety in California but also to honor and recognize the personal costs to Californians and their families when people die at work, or because of it.

RICHARD DIN

The VA Failed to Protect its Lab Workers ...



At 25, it was his first big job after graduating from UC Berkeley's College of Natural Resources in August 2011. It was at the Northern California Institute for Research and Education (NCIRE), located at the San Francisco Veterans Affairs (VA) Medical Center. He lived with his girlfriend and friends on Treasure Island.

Within five months, the Taiwan native was doing research about a vaccine for a particularly nasty type of meningococcal meningitis. The disease is caused by several types of similar bacteria; it is fatal in 1 in 10 cases. A family tragedy inspired his interest in infectious disease.

Co-workers described him as smart, polite, fastidious, careful, a by-the-book researcher. He was following his dream.

But six months after he started down that path—on Workers Memorial Day 2012 (April 28)—Richard Din was dead. His death made news around the world because it was caused by the bacteria he was studying—*Neisseria meningitidis*. There were only 17 hours between his first symptoms and the multiple organ failure that ended his life.

Right after Richard's death, the interim site chief at the VA and an infectious disease specialist, Dr. Harry Lampiris, said lab workers were expected to wear gloves and gowns and do their work using a safety cabinet. "Laboratory safety is always an ongoing concern, and I'm sure this will lead to some changes in our practices," he told San Francisco media on May 3.

Serious changes were needed. Lab staff working with these bacteria should be vaccinated, according to guidelines from the Center for Disease Control (CDC). One reason: half of U.S. lab workers who are known to have been infected with meningococcal disease died, compared to much lower rates in the general public. All were working with the bacteria in a similar way to the practices at the San Francisco VA.

Richard did not have one; neither did his co-workers. There was no vaccine for the strain that killed him—

that's what he was trying to find—but vaccination would have protected Richard and his colleagues from other types of meningococcal bacteria in the lab.

Cal/OSHA and federal OSHA started to investigate Richard's death. (The federal agency got involved, and took over, because the VA is a federal institution.)

The federal agency listed three serious violations in its February 21, 2013, "notice of unsafe and unhealthful working conditions." The notice is like a Cal/OSHA citation; however, OSHA cannot give financial penalties to other federal agencies.

The notice said that the VA and NCIRE did not give their employees vaccinations or training about symptoms of the disease (although they had been working with meningitis bacteria for more than 20 years). The lab workers also did not have to use safety cabinets, which provide ventilation and other protection to avoid contact with dangerous bacteria and other hazards. The notice said the VA must change all three practices.

"(T)his senseless loss" could have been prevented, Cal/OSHA's chief, Ellen Widess, said when the notice came out. "This is why Cal/OSHA adopted a standard (the ATD or Aerosol Transmissible Diseases standard) in 2009 to protect workers from diseases, such as meningitis, that can be contracted through contaminated air in laboratories."

"Richard Din died because the VA failed to supervise and protect these workers adequately," the San Francisco federal Occupational Safety and Health Administration (OSHA) regional administrator said in a press release. "Research hospitals and medical centers have the responsibility as employers to protect workers from exposure to recognized on-the-job hazards such as this."

... And So Did UCLA

The University Settles the First Health and Safety Felony Charges Against a U.S. Academic Lab

Ignoring health and safety can lead to court cases and expensive settlements when an employee dies. The University of California is learning this the hard way.

The academic institution accepted a plea agreement in July 2012 to drop charges filed as a result of the January 16, 2009, death of 23-year-old Sheharbano (Sheri) Sangji. The L.A. district attorney filed three felony charges each in late 2011 against the university and a UCLA professor. They are the first such criminal charges about an academic lab incident in the United States.

The charges were filed at the last minute after intense pressure from Sheri's family, her union (University Professional & Technical Employees, Local 9119 of the Communications Workers of America—or UPTE-CWA), Cal/OSHA, lawyers, and the group United Support and Memorial for Workplace Fatalities (USMWF).

Two years earlier, Cal/OSHA's Bureau of Investigations (BOI) recommended that Professor Patrick Harran and UCLA be charged with involuntary manslaughter and felony labor code violations. The Cal/OSHA investigator concluded: "Dr. Harran permitted Victim Sangji to work in a manner that knowingly caused her to be exposed to a serious and foreseeable risk of serious injury or death."

Sheri died 18 days after her clothing caught fire while she worked as a lab research assistant for UCLA organic chemistry professor Patrick Harran. A chemical sensitive to air (t-butyl lithium) burst into flames during an experiment and set her synthetic sweater on fire. Without a protective lab coat, Sheri had severe burns to about half her body. Investigators found that she was not properly trained about handling the chemical.

Born and raised in Pakistan, Sheri graduated from Claremont's Pomona College in 2008. She took a \$46,000-a-year position in Harran's lab while applying to law schools, and had been on the job less than three months. Her acceptance to UC Berkeley's School of Law arrived on the day of her funeral.



"The regents acknowledge and accept responsibility for the conditions under which the laboratory operated on Dec. 29, 2008," part of the plea agreement said. They also agreed to implement comprehensive health and safety measures and endow a \$500,000 scholarship in Sheri's name. In return, the charges against the university were dropped.

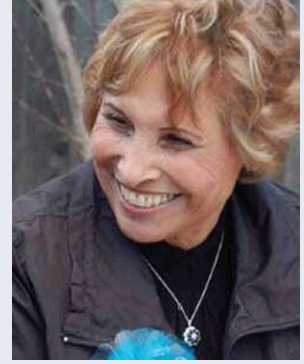
The charges said the university and Harran willfully violated occupational health and safety standards, leading to Sheri's death. UC was charged with failing to correct unsafe working conditions in a timely way, to require clothing appropriate for the work being done, and to provide proper chemical safety training. Each violation could have brought a \$1.5 million fine.

"UCLA and the regents have finally admitted that they wronged Sheri terribly," Sheri's sister, Naveen, said. "Our family's pain will not diminish, but our hope, of course, is that no one else has to suffer the way Sheri did and that such tragedies are avoided in the future."

Harran faces four-and-a-half years in prison for the charges against him. He has another preliminary hearing on April 26, 2013, where the judge may decide whether to bring the case to trial.

EVA MACIAS

Recycling Industry Giant Appeals Fines After Woman's Death



Evangelina Macias loved to work. In fact, the 66-year-old known as Eva needed to work, says her elder daughter, Maria. A native of La Palma Michoacan, Mexico, she arrived in the United States in 1969. Eva worked most of the time after that, as she and her husband, Victor, raised three children.

For about 30 years, Eva worked in an East Bay plant making wood for number 2 lead pencils. When it closed, she was hired at Waste Management's Davis St. material recycling and transfer plant in San Leandro. It is North America's largest recycling company. Eva thrived there for 13 years, working as traffic director (a flagger), directing the public to drop-off areas.

It all ended on June 18, 2012. At about 3:00 p.m., she was hit and run over by a front-end loader driven by a co-worker. The man was a 22-year employee in the small department where everyone knows one another.

The 5-foot-three-inch woman was wearing a reflective sweater, hardhat, and glasses. But the bucket on the loader was off the ground high enough so that the operator couldn't see people walking in front of him. Six members of the public were on the site, emptying trucks of recycling materials. Two saw the loader hit Eva, snagging her shirt and lifting her in the air before she fell to the ground and was run over.

Eva died that night in hospital. She left behind her husband, children, five grandchildren and nine siblings.

"We miss her very, very much," Maria says. "I miss everything—our dinners together, the family being together. It's different now. Everything's different."

Eva needed to keep busy. "That was one of the reasons we couldn't get her to retire," Maria says. The independent-minded woman loved to work. She was loving, had lots of friends, and loved her family very much. "She was perfect," Maria says.

After an investigation, Cal/OSHA issued four citations on December 7, 2012. The inspector found that Eva died as a result of company failures that involved:

- ▶ overly informal driving rules in the public area of

the site, about which employees weren't trained and which the employer didn't enforce; and

- ▶ a lack of a traffic control system with devices to protect employees who are on foot from moving equipment.

The company's verbal rules said front-end loader operators could travel forward with buckets a maximum of 24 inches in the air, to ensure operators can see where they're going. Cal/OSHA issued a citation for a general violation about this, saying the employer did not instruct front-end loader operators every year about legal requirements and the informal rule. Nor did they document giving these instructions. The proposed penalty was \$750.

The inspector also issued two serious violations. He found that Waste Management:

- ▶ did not have and maintain an effective Injury Illness and Prevention Plan (IIPP), specifically about enforcing the verbal rule about how high the bucket could be as the loader moved forward; and
- ▶ did not have a traffic control system to deal with the hazard of moving front-end loaders, and broke other rules about how equipment was operated.

For each one, he proposed a fine of \$25,000. The total proposed penalty for Eva's death was \$50,750. The company is appealing. The process can take years.

Meanwhile, International Longshore & Warehouse Union (ILWU) Local 6, which represents these workers, has initiated a safety certification program for recycling workers, hoping to focus on the dangerous conditions in waste processing operations. As Fred Pecker, Secretary-Treasurer of Local 6, notes: "It is unconscionable for a corporation as large and dominant in the garbage industry to try and avoid responsibility for making sure their employees return to their families at the end of each workday."

REGAN JOHNSON

A Young Worker Dies Working in Freeway Construction

Regan Johnson died on July 11, 2012. A hit-and-run driver hit her on Highway 99 around 2 a.m., while she worked as a flagger on a freeway construction project.

The 24-year-old young worker was arranging reflective cones on the road. The allegedly-drunk driver was trying to pass cars that were slowing down for the construction work. After hitting Regan, the driver fled the scene. Ten hours later, California Highway Patrol found and arrested a suspect. (Cal/OSHA does not investigate fatalities or other incidents that occur on state highways.)

Regan graduated as class valedictorian from Kingsburg High School, and later graduated with honors from Fresno State. Her dream was to take over the family business, running the Big Creek General Store.

Motor vehicle-related incidents are consistently the leading cause of work-related fatalities in the U.S. They account for about 35% of those reported by the Bureau of Labor Statistics (BLS). Between 2003–2009, motor vehicles hit and killed an average of 347 pedestrian workers a year (i.e., people who are walking or working outside equipment).

Flaggers' job hazards include roadway vehicles and construction machinery. Noise from passing vehicles makes it difficult for them to hear back-up alarms. Congested work zones add to the chaotic work environment. Employers may not provide enough signs to warn drivers before the construction zone begins, high-visibility apparel, training to deal with hostile drivers, or take similar precautions. In some jurisdictions, laws require concrete barriers and other devices to protect workers.

In California, Cal/OSHA has special requirements about flaggers working at night, and about training in general. They refer employers to the 2006 edition of the "California Manual on Uniform Traffic Control Devices for Streets and Highways" for training specifics and other safety measures.

Workers 24 and under are considered young workers. They have the highest job injury rates and are more than twice as likely as older adults to be hurt at work: every year, 795,000 young workers in the country are hurt seriously enough to end up in a hospital emergency room.

The BLS reported 370 young worker fatalities in 2011 nationally. It's estimated that 11 died in California in 2012.

Regan was a young worker doing one of the most dangerous jobs in California. It's a relatively common job for young workers on road construction sites. Her death brings up lots of questions: Should she have been doing this task? What barriers should have been there? Should this work be done at night? What else must be done to protect road construction workers?

SAFE JOBS FOR YOUTH MONTH HIGHLIGHTS YOUNG WORKERS' HAZARDS AND SOLUTIONS

In California, we are taking steps to protect young workers. May is Safe Jobs for Youth Month, an annual public awareness campaign to highlight the importance of preventing young people getting hurt or killed on the job. The month is used to raise community awareness about child labor and workplace health and safety. The poster shown above won the contest that is part of these efforts.

Youth can play a unique role in educating their peers and others in their communities. That's the approach the UC Berkeley Labor Occupational Health Program (LOHP) uses in its annual Young Worker Leadership Academy.

Teams of teens from across the state attend a three-day event funded by the Commission on Health and Safety and Workers' Compensation. The program teaches them about workplace hazards and their rights and responsibilities at work. It is a forum to plan specific actions in their communities. Past actions include holding health and safety activities in schools and community centers, designing informational brochures and videos, and winning new school policies to provide working teens with health and safety information through the work permit process.



This is the winner in the 2013 Safe Jobs for Youth Month poster contest. (http://www.youngworkers.org/safe_month/2013%20Posters.html)

JOSE LUCERO

To Lose One Lucero Is a Tragedy. But Not to Notice it Is a Crime.

By Jonathan Shapiro, Esq.

At the next Academy Awards they will run the photos of Hollywood greats who died over the past year.

They won't include a photo of Jose Lucero. Lucero is not the Hollywood type the producers want you to remember.

Lucero was part of a crew hired to remove the MTV Movie Awards Setup from the Gibson Amphitheater at Universal City Walk. He fell six stories from the steel girders that hold light and sound equipment above the stage. He was just 22 years old.

Unlike the celebrities working the red carpet, Lucero did real work at the Academy Awards, the backbreaking kind, hauling equipment up and down ladders, placing it so that the pretty people looked their prettiest.

He was a rigger, four years on the job, a member of Local 33, IATSE. You never heard of him or gave him a thought because you weren't supposed to. He was one of the hidden people, the ones behind the scenes who built the scenes. Their job is to make rich and famous people look good. You know why? So they can get even more rich and famous.

You aren't supposed to think about that either.

How hidden are guys like Lucero? He fell to his death on a Wednesday. Nobody in the media picked up on it until Saturday. And even then, they only gave it a few seconds of radio time, a few inches of web space.

Show business is like a lot of American businesses. It employs thousands, generates billions, and makes a small number of people exceedingly rich and powerful. It's also built on the backs of people like Lucero, the ones you never think about.

If you work in show business you know just how blue-collar the industry is. On any production, the vast majority of the workers are skilled trades people, union men and women, working the longest, hardest hours, and getting paid the least for their efforts.

This is not new. It has always been so. The story of Hollywood is the story of labor issues, of strikes and stoppages, and the uneasy friction between production

companies and their employees. If some in Hollywood during the 1930s and 1940s were attracted to the idea of Communism, it wasn't because they were pro-Soviet. It was because they were conscious of the gross disparity in compensation between the few above the line and the many below.

This disparity is not unique to Hollywood. Throughout corporate America, the stars of the office suites have never been richer or more famous. CEO compensation has skyrocketed over the last decade. Business media celebrate their ability to increase profit and stock value. Meanwhile, the hidden people, the 99%—the workers—have seen their wages decline, their benefits slashed, and their job security vanish.

And they are the lucky ones. At least they have jobs. Like Lucero, thousands of them pay for that privilege with their lives. In 2009, more Americans were killed on the job than in the wars of Iraq and Afghanistan combined.

I never met Lucero. But as a television producer, it has been a privilege to work with men like Lucero. They get to work before the writers or performers and they are still there long after we go home. Their energy and commitment is inspiring. Being canceled is bad. But the worst part of it telling the crew guys they don't have a job. And yet each time it has happened, the crew had the best attitude, telling me not to worry, they'd find something.

When the song "Hooray for Hollywood" says "there's no people like show people, they smile when they are low," it means these people, the Luceros. There would be no show business without them.

Sort of like the rest of American business.

To lose one Lucero is a tragedy. But not to notice it is a crime.



Jonathan Shapiro is a former federal prosecutor. He is the creator and producer of several network television shows. He wrote and produced "The Practice" and "Boston Legal" for five years. He gave Worksafe permission to re-print this article, which appeared in a number of publications, including the *LA Weekly* and *Huffington Post* in June 2012.

Missing Joe: A Digital Story

Preventing Deaths from Falls Through Skylights

"Everybody seems to think that we're invincible. At least I used to think that." So begins a digital story about Jose Magallanes, a roofing supervisor in California who died tragically in April 2011 after he fell through a warehouse skylight while on the job.

Jose—or "Joe" as he was called by his former workmates—was 45 when he died working for his employer of 25 years. He left behind a wife and two young daughters.

Tony Garcia, Joe's co-worker, begins the video by describing how losing Joe was a blow that continues to affect him.

"Joe was ... he was my top foreman. Safety-wise, he was one of those more cautious persons that we actually have here. But if it could happen to him, it could happen to anybody. And I realize that me coming home is not guaranteed anymore."

"I feel bad because he has family like I do," said Julio Labrado, another former co-worker.

The desire to help others work safely and come home each day spurred Tony and Julio to recreate the events in a digital story produced by the California Fatality Assessment and Control Evaluation (FACE) program. The moving video will be used by roofers and others in trainings to prevent similar fatalities from occurring. The video goes live for Workers Memorial Day on April 28, 2013. (It is timely, as at least one person died in 2012 after falling through a skylight.)

In the video, Tony and Julio describe what happened the day Joe lost his life. The three of them were together on a flat roof while Tony vacuumed up roof rock. Joe was moving the hose out of the way when he likely stepped backward and either tripped or lost his balance before he crashed through the skylight and fell 30 feet to the warehouse floor below.

Investigators from the FACE program include recommendations on how to work safely around



*Former co-workers of Jose Magallanes:
Julio Labrado (left) and Tony Garcia (right)*

skylights, which are considered a "roof opening" and a serious hazard, leading to injury or death if workers fall through. The video recommends that employers implement and maintain a fall protection program that includes any one of the following measures for employees working within six feet of a skylight:

- ▶ skylight screens or covers;
- ▶ guardrails; or
- ▶ a personal fall arrest or restraint system.

"He was the greatest roofer I know and look what happened," said Tony.

The digital story is the third produced by the California FACE program. The latest video and a previous digital story about a solar installer who died when he stepped backwards off a roof have been promoted by the Federal OSHA and NIOSH Campaign to Prevent Falls in Construction. NIOSH, the National Institute for Occupational Safety and Health, provides funding and coordination of the FACE program in nine states.

California FACE Digital Stories:
<http://www.cdph.ca.gov/programs/ohb-face/Pages/Stories.aspx>

California FACE Program:
<http://www.cdph.ca.gov/programs/ohb-face>

The Campaign to Prevent Falls in Construction:
<http://stopconstructionfalls.com>



III. What Is to Be Done?

In the following section, we start with 10 policy recommendations to better protect the health and safety of California workers. This is followed by two examples to inspire change. One is a regulation that is based on the premise of fixing the hazard, not the worker. The second is a union-community coalition responding to the latest near-miss at a California refinery. We also provide brief updates on some of the issues we've featured in our past reports.

Finally, as we have done in each report, we include a chart of California workers that we know lost their lives in the past year. As in previous years, the chart is incomplete—the data is not always available, some fatalities may or may not have been work-related, fatalities go unreported, and occupational illnesses cost far more lives than catastrophic events but receive far less attention.

Still, we compile these lists as best we can to honor those we've lost, because we must. We must recognize those who never returned home to their families after simply going to work, and we must re-commit ourselves to making sure these preventable tragedies end.

Ten Changes to Protect People at Work in California

All workers have a right to healthy and safe jobs. It's part of a healthy economy and environment. It's also the law, and the right thing to do.

In the United States, the Occupational Safety and Health Administration (OSHA) uses a variety of tools to achieve this. It enforces the law, provides funding and oversight of state programs, does free employer consultations, and provides and funds health and safety training. In California, OSHA is responsible for state workers employed by the federal government (e.g., military personnel, longshore, postal service, flight crew workers). OSHA also provides matching funds for the state's Cal/OSHA enforcement and employer compliance assistance programs.

This report gives a glimpse about the toll of workplace hazards, with data and stories from California. It's clear that much needs to be improved. Workplace health and safety often are not taken seriously, the law is ignored until people die, and we still don't have a good handle on the deaths and lives made miserable by work-related illnesses and diseases.

Worksafe marks Workers Memorial Day with recommendations about what needs to be done so California workers have healthier and safer jobs. We focus on federal OSHA and Cal/OSHA, given their important roles in the lives of California workers. Our recommendations are based on lessons and experiences from our work.

The AFL-CIO's annual *Death on the Job* report makes similar recommendations to improve protections for the nation's civilian workforce of 155 million. Virtually all the recommendations in their 2012 report and our *Dying at Work in California* 2012 report are still valid.

There is much to do. These 10 recommendations are a starting point. A strong, well-funded federal OSHA program is good for California workers. Our first three recommendations focus on changes needed

at the national level. The next seven look at what's needed in the state.

1 Fund federal OSHA so it can carry out its mission in all 50 states.

The current OSHA budget averages only \$3.75 per worker per year. Yet a recent study estimated the costs of work-related injuries and illnesses is at least \$250 billion per year. Like other studies, it showed that workers and their families bear much of those costs.

The Obama Administration has started to restore the Bush Administration budget cuts. But these incremental increases are still far short of what's needed to ensure healthy and safe working conditions for U.S. workers. A larger OSHA enforcement budget would increase funds to Cal/OSHA, leading to stronger enforcement of California jobs covered by OSHA and the state agency.

The Occupational Safety and Health Act became law more than 40 years ago. Since then, the number of workplaces and number of workers under OSHA's jurisdiction has more than doubled. At the same time, the number of OSHA staff and OSHA inspectors has been significantly reduced.

Federal OSHA staffing was highest in 1980, with 1,469 federal OSHA inspectors (including supervisors). The ratio of OSHA inspectors per 1 million workers was 14.8. By 2011, at most there were 2,178 federal and state OSHA inspectors enforcing the law at approximately 8 million workplaces. They did fewer inspections than in 2010. At its current staffing and inspection levels, it would take federal OSHA 131 years to inspect each workplace for which it is responsible.

Taken together, there was approximately 1 inspector for every 71,166 civilian workers in the U.S. The

International Labor Organization (a United Nations agency governed by representatives of employers, unions, and governments) benchmark for industrialized countries is 1 labor inspector for every 10,000 workers.

Each year, federal OSHA audits the California program to ensure it is “at least as effective” as federal OSHA. As Cal/OSHA marks its 40th year in 2013, it still lacks final accreditation from OSHA for its state-run program—primarily because the state is far below the benchmark level for compliance inspectors.

2 Expand worker education and training resources.

There is a huge imbalance between the amount of money that federal OSHA allots for employer compliance assistance and what it gives for worker training.

In FY 2012, OSHA allocated more than \$134 million for employer compliance assistance programs (including almost \$58 million to state plans). Worker training and capacity building got only \$10.7 million. That means 92% of the funds allocated for programs went to assist employers and less than 8% goes to help workers.

Federal OSHA should provide as much money for education and training grants targeted to workers as it now gives to employer compliance assistance services.

Furthermore, the federal agency needs to require state plans to provide worker training programs. Currently, they only require them to have programs to help employers. Employers do need help, but recent studies show that many workers aren't even aware of their basic workplace health and safety rights, including protection from retaliation for reporting injuries or hazards. This glaring oversight must be corrected.

3 Pass legislation to update the OSHA law.

The OSHA law needs a comprehensive update. Little has changed in the 40-plus years since Richard Nixon signed it. Standards are out-of-date. New hazards have no “rules.” Lessons about workers' rights are missing.

Senator Patty Murray has recently introduced the Protecting America's Workers Act. Included are provisions to expand the rights of workers and ensure a role for family members during investigations of loved ones killed on the job. If passed, California would be required to follow suit and pass similar provisions within six months. Tougher penalties and coverage for over 8 million public sector workers are also included in the bill.

4 Give Cal/OSHA the resources to do its job.

Cal/OSHA is supposed to make sure employers obey health and safety laws and regulations, enforcing life-saving rules for about 16 million workers in approximately 1.4 million workplaces.

It's impossible to do this without sufficient resources. The agency needs the money and staff to do all aspects of its job.

One of Cal/OSHA's critical tasks is responding after a major incident, fatality, or a reported imminent danger. There are time limits in the law and regulations about how quickly inspectors must get to the site. That's because it's their job to gather information, determine the underlying causes, and ensure that workers are protected.

At a minimum, the Department of Industrial Relations should authorize Cal/OSHA to hire about 100 more inspectors. That is the number the agency proposed to federal OSHA. Other Cal/OSHA programs also need to be beefed up to support the increased work of the new inspectors and to fulfill its other duties. This includes handling employer

INSPECTOR SHORTAGE

California now has fewer inspectors than in the last decade. An estimated 164 are available to cover the whole state, in contrast to the 267 positions specified in the state's approved grant proposal to federal OSHA. There remains an urgent need to hire more bilingual inspectors.

Cal/OSHA has more comprehensive laws than federal OSHA, starting with the Injury and Illness Prevention Plans (IIPPs). Other unique health standards in the state include heat stress, infectious diseases, repetitive motion injuries, and permissible exposure limits (PELs) for chemicals. Lock-out/tag-out safety regulations are stronger in California and permit systems covering trenching, tower cranes, tunneling, pressure vessels, elevators, notification systems for asbestos work, and other special hazards are more protective than federal requirements.

The state clearly needs more inspectors than the federal ratio to enforce all these health and safety laws and regulations. On its own, enforcing the heat stress standard accounted for more than one-third of all Cal/OSHA inspections in each of the last three years.¹ With each one hotter than the previous year, this trend is likely to continue.

So far, the agricultural sector has been the priority. However, after two of the three confirmed heat illness cases occurred in the construction sector, Cal/OSHA wants to target more of its enforcement resources in this sector in the coming heat season. There also is

BY ANY MEASURE, CAL/OSHA IS SIGNIFICANTLY UNDERSTAFFED TO CARRY OUT ITS MISSION TO PROTECT THE SAFETY AND HEALTH OF CALIFORNIA'S 14.5 MILLION WORKERS.

Current active inspectors (estimated)	164²
Inspectors authorized in proposal to OSHA	267³
Inspector needed in California to match the OSHA ratio (1/59,000 workers)	247
Inspectors needed in California to match the ILO benchmark (1/10,000 workers)	1,457

growing concern about heat hazards inside buildings (e.g., warehouses). Taken together, this will be a huge challenge for the agency, given current understaffing.

1 Cal/OSHA Chief Ellen Widess reported that Cal/OSHA has conducted more than 3,000 heat safety inspections per year for the past three years; "UFW's Latest Salvo on Heat Illness," *Cal/OSHA Reporter*, October 25, 2012. UFW sued the agency late last year, claiming that it wasn't enough. The mobility and remote locations of agricultural work and geographical distances in the state make it difficult for the agency to respond quickly during heat waves.

2 Van Derbeken, Jaxon. "Chevron Refinery Safety Under Microscope." *San Francisco Chronicle*, March 8, 2013. <http://www.sfgate.com/news/article/Chevron-refinery-safety-under-microscope-4337384.php>

3 Chart from California grant application to federal OSHA, Appendix E, 23(g) Personnel Funding Breakout Chart. Other sources list this number lower, at around 205.

appeals, setting new standards, and investigating retaliation complaints. Filling clerical vacancies with administrative staff is certainly more cost-effective than having highly-skilled inspectors fill this gap; that's what's happening now.

5 Pass new standards to protect workers from unregulated hazards.

Most early Cal/OSHA and federal OSHA standards focused on hazards in manufacturing and construction; there's still a lot of work to do in these key sectors. But today, service and transportation sectors have many of the highest injury and illness rates. Women are bearing the brunt of a lot of job-related hazards, as are new immigrants and others whose first language is not English. Health and safety regulations and laws need to catch up to this reality.

Some of this work has started. The Occupational Safety and Health Standards Board and Cal/OSHA health staff are working on regulations to protect:

- ▶ all workers from toxic chemicals by updating label and material safety data sheet rules to meet new global criteria while preserving the strengths of California's current hazard communication system (see item #8);
- ▶ workers exposed to toxic chemicals (particularly lead) by continuing work to update the PELs based on current science and knowledge;
- ▶ hospital workers from back and other musculoskeletal disorders (MSDs) by requiring safe patient handling programs;
- ▶ hotel room cleaners from heavy lifting, awkward postures, and heavy work demands;
- ▶ adult film industry workers from sexually transmitted diseases; and
- ▶ agricultural workers from hazards related to working at night.

Other hazards need to be covered. Ergonomic hazards in two specific occupations are the focus of current efforts, but many other groups of workers face ergonomic hazards (e.g., warehouse workers, food processing employees, nursing home and other health care staff, retail workers, and office personnel).

Cal/OSHA and the OSH Standards Board need sufficient staff and resources to require prevention and reduction of these serious hazards. To do this, they also need access to professionals with a range of technical expertise. Cal/OSHA should use its authority to contract with the Occupational Health Branch in the California Department of Public Health for access to physicians, toxicologists, ergonomists, senior industrial hygienists, and others to fill its current gaps.

6 Expand the rights of workers and their representatives to fully participate in Cal/OSHA enforcement activities.

Workers and their representatives—whether from a union or other organization—need to be full participants in all activities related to enforcement. They have to be part of filing complaints, Cal/OSHA walk-around inspections, negotiations to ensure that hazards are eliminated, and any appeals. This is common and accepted in other countries.

Cal/OSHA can't cover all 1.4 million California workplaces. Nor do inspectors know the ins and outs of particular jobs, and the hazards that go with them.

This means that all workers need the right to a voice on the job—not just those with union contracts. One way to do this is by expanding the legal definition of who can represent workers, especially with new forms of worker organizations. More progress is needed at both government levels to make this policy a reality.

7 Protect workers from retaliation for reporting injuries or concerns about hazards.

The Division of Labor Standards Enforcement (DLSE) handles complaints about retaliation, including health and safety ones. The Division needs to implement the recommendations in the 2012

OSHA audit of its program. The program is supposed to lead to timely and competent investigations of worker retaliation claims. Investigators and their supervisors need ongoing training and mentorship to improve their job performance. Only then will workers truly have the protection they need to use their right to report injuries and to speak up about job hazards without fear of losing their job.

DLSE RETALIATION PROCESSES STILL NEED FIXING

All workers have legal protection from retaliation for using their health and safety rights; this includes the right to report an injury or a hazard to their employer or a government agency, or to request a Cal/OSHA inspection.

OSHA and states like California have “whistleblower protection” programs. California’s is in the Division of Labor Standards Enforcement (DLSE), part of the Division of Industrial Relations (DIR). (Cal/OSHA is in the same Division.)

Last year, federal OSHA did detailed audits of all state plan retaliation (“whistleblower”) programs. This was welcome news in California, where recent superficial audits indicated serious problems for workers seeking justice. Worksafe told OSHA about our concerns, based on real-life experiences. We also provided our analysis of problems and urged federal OSHA Region IX (which has responsibility for Cal/OSHA) to look beyond the paperwork to determine how the system really worked.

The August 2012 audit results revealed that many issues identified in OSHA’s 2010 audit remain. Despite the efforts of the current Labor Commissioner, Julie Su, to improve DLSE’s operations, issues pre-dating her appointment continue, including:

- ▶ Failure to:
 - conduct adequate interviews of parties and witnesses;
 - obtain and analyze evidence properly; and
 - investigate complaints in a timely fashion.
- ▶ Inadequate documentation, case reports, and training of investigators and supervisors; and

- ▶ Problems related to notifying and communicating with key parties.

Worksafe continues to work closely with a coalition of legal aid organizations and DLSE to find solutions to address these issues.

Responding to the audit, DLSE’s corrective action plan says it will take, or has taken, the following actions:

- ▶ Increase training of its investigators to incorporate issues identified in the audit;
- ▶ Issue new directives to investigators to interview all complainants and company officials in all whistleblower cases (all investigators now have a digital recorder to record such interviews);
- ▶ Adopt federal OSHA’s process of having closing conferences and issuing final investigation reports (done in October 2011);
- ▶ Establish procedures for accepting oral complaints; and
- ▶ Run a pilot program in the Los Angeles area, in conjunction with law school employment clinics, to decrease the current DLSE backlog.

DLSE also has a new “triage” system to prioritize and address retaliation complaints. One factor considered is whether the retaliation complaint is connected to a health and safety complaint reported to Cal/OSHA.

Worksafe will continue to monitor DLSE’s implementation of this corrective action plan, looking for positive changes in processing whistleblower cases.

8

Preserve and improve California's strong "right to know" law.

It can take decades from when companies or researchers know about the hazards of a toxic chemical to when government agencies gather enough political will and evidence to pass a health-based standard to protect people—on the job or in the community.

While we wait for these actions, it is critical that people have the right to know the names of these chemicals and the signs and symptoms of exposure. This matters to workers, their medical providers, emergency responders, water boards, and public health agencies, including those responsible for health and safety.

The information about chemical names and their hazards also is critical for downstream or supply chain users—the companies that purchase chemicals to make their own products or for employees to use. Forward-thinking companies need this information to make responsible choices in shifting to less or non-toxic alternatives.

Many consider the "right to know" a human right, and it is enshrined in health and safety laws around the world. In the United States, it's called the Hazard Communication or HazComm Standard.

California led the way in "right to know" legislation in the U.S., passing the nation's first Hazard Communication Standard in 1981; OSHA followed in 1988. Other countries had similar legislation in the 1970s or followed the U.S. examples.

The "right to know" movements led to development of an international hazard identification system, the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Ten years in the making, the first version of the international agreement came out in 2003. The United Nations facilitated negotiations that included representatives of governments, unions, consumer groups, and employers/manufacturers from around the world.

It was an opportunity for workers and consumers to improve their "right to know" by expanding the scope of information disclosure, including previously-exempted products (e.g., pesticides and pharmaceuticals), and integrating workplace, consumer, environmental, and transportation hazard information in one document. And it helps workers in less developed countries finally have the "right to know" when they work with hazardous chemicals.

In classifying and labeling chemicals, the GHS goal is to improve—not reduce—the level of protection for workers and to maintain the right of governments to retain or add stronger provisions. That matters in California in 2013.

California's Hazard Communication regulation needs to incorporate new federal GHS requirements that make chemical information easier for working people to understand and use. But the state has the right, responsibility, and authority to keep, and add to, its stronger provisions about the "right to know." Worksafe is taking the lead in advocating for these better rules, in coalition with unions, environmental groups, and public health individuals and organizations. Meanwhile, the chemical industry and its allies are trying to pressure Cal/OSHA, the Standards Board, and the Brown Administration to reduce protections in California by harmonizing to the minimum possible.

9 Mandate public health tools to track and warn about new chemical hazards.

The California Department of Public Health (CDPH) has a mandate to warn workers and employers when new toxic chemical information becomes available. Its Hazard Evaluation and Information System (HESIS) was set up in 1979 as part of California's "right-to-know" activities.

From experience, HESIS learned it cannot give proper warnings without the authority to find out where toxic chemicals are imported into, or used within, the state.

With others, Worksafe is supporting a legislative bill, SB 193, to deal with this problem. The bill requires chemical manufacturers and suppliers to tell the state health agency where they distribute a particular chemical of concern in California, on request. Other confidential business information is protected.

10 Require employers fix hazards at similar locations and expand use of corporate-wide settlements.

When employers are cited for serious hazards, Cal/OSHA should require them to check and correct the same hazard in all the company's locations in the state. These corporate-wide settlements would provide an opportunity to make sure each facility's Injury and Illness Prevention Plan (IIPP) is really working, and deal with hazards before they cause (further) injuries, illnesses, or deaths.

For example, poor preventive maintenance of pipes was behind the massive fire and explosion at the Chevron Richmond refinery in August 2012 (see page 46). EPA reports about refineries in other states describe similar hazards. The union representing many U.S. refinery workers keeps weekly records about refinery mishaps,

The hazards found in Richmond should be fixed there, and at other Chevron facilities such as the El Segundo refinery. Similarly, farm labor contractors cited for failure to have an effective heat stress prevention program in one location should be required to fix the problem at each place they work.

Don't Let Silica Dust You!

California's Rules Show a Different Route to Stop Hazards

It pays to be ahead of the crowd. That's one lesson from California's approach to silica dust. The state's unique regulation focuses on work practices and controls, making it easier for many employers to reduce silica levels, and for Cal/OSHA inspectors to cite them if they don't.

These days, a construction worker working around silica dust is more likely to develop chronic obstructive pulmonary disease (COPD), rather than silicosis. This contrasts with the acute silicosis deaths of about 1,500 workers who worked on the Hawk's Nest Tunnel at Gauley Bridge, West Virginia in the early 1930s.

Over the years, studies, reports, recommendations, and investigations have documented both silica's hazards and prevention practices.

So it's hard to believe that silica still is dismissed as "just dust." It's hard to believe that workers still get lung diseases and die because of working around silica. And it's hard to believe that workplace practices still do little to reduce or prevent workers breathing the dust or taking it home to their families on work clothes.

Silica was a big issue when the Occupational Safety and Health Act and the mining health and safety law were passed in the early 1970s. Forty-some years later, the White House has sat on a federal OSHA proposal

WHAT'S SILICA?

Silica usually is found in concrete and masonry products (e.g., brick, block, mortar, natural or manufactured stone, tile, and terra cotta). The crystal-shaped type is most dangerous. The dust comes from cutting, grinding, pulverizing, and mixing these kinds of materials. Nearby workers and the public can breathe it, too. "Take home" dust can harm family members.

for a more modern silica regulation put forward more than two years ago. In 2012, health and safety advocates, unions, and their allies organized petitions and letters to the White House, wrote reports about the need for new rules, and put pressure on OSHA, Congress, and others to get the proposed standard out the door.

California didn't wait for the federal law to change. After lots of pressure from unions and public health advocates, it passed a regulation in 2008 that focuses on better work practices and controls. Usually, regulations about toxic substances lower Permissible Exposure limits (PELs)—limits for how much of it can be in the air that workers breathe.

The dust control regulation (Section 1530.1 in the state's health and safety regulations) took a more direct route. Performance-based rather than prescriptive, it simply states that in operations where powered tools or equipment cut, grind, core, or drill concrete or masonry materials, there must be a system to effectively reduce dust getting in the air.

The only way around this is for the employer to do air measurements that show the task does not result in workers breathing more than the PEL. However, the worst kept secret is that, in general, employer-conducted air sampling is on the decline and

WHAT DOES SILICA DUST CAUSE?

Breathing in the dust leads to health problems, mostly in the respiratory system. Inhaling crystalline silica can cause lung diseases such as silicosis (a scarring of the lungs), pulmonary tuberculosis, and chronic obstructive pulmonary disease (COPD). It also causes cancer and, in uranium mines, may increase the odds of getting cancer.

very little of it is done in construction. With budget constraints (and the 2013 sequestration), Cal/OSHA doesn't have the staff to do the eight-hour sampling required to be able to determine if the PEL has been exceeded.

Many of the state's contractor industry leaders, unions, and tool manufacturers embraced the change to treat silica dust seriously. They worked to identify methods, tools, and equipment that trap the dust and/or wet it down before workers can breathe it or get it on their clothes. They have held trainings and seminars to educate their members or workers.

The pictures show the results. Silica dust controls do work.



WHO WORKS WITH SILICA?

Construction workers are most likely to work with silica. When they use power tools to cut, grind, core, or drill concrete or masonry, they are likely to be surrounded by clouds of silica dust. Dry cleaning methods (e.g., regular sweeping) can stir up the dust. Industrial painters and people cleaning brick buildings deal with silica in abrasive sandblasting. Outside construction, other industries/tasks where workers are exposed to silica include:

- ▶ mining or tunneling;
- ▶ quarrying (e.g., drilling, crushing stone, chipping, or grinding);
- ▶ grinding or polishing pottery;
- ▶ foundry work and blast furnaces;
- ▶ cement and glass manufacturing;
- ▶ cutting or manufacturing heat-resistant bricks; and
- ▶ dental laboratory technicians (it's in dentures and other devices).

Fracking, or hydraulic fracturing is becoming more common across the United States, including California. It uses silica sand in drilling for natural gas. This major new hazard to workers and communities led to a 2012 hazard alert from the federal Occupational Safety and Health Administration (OSHA) and the National Institute of Occupational Safety and Health (NIOSH).



Based on a 2011 survey of construction industry stakeholders, recommendations made included:

- ▶ **Pre-construction planning that includes dust control.** Dust controls will be used more often, and with greater ease, when pre-construction project planning requires use of the dust reduction tools and equipment, or less toxic substances. Property owners and those project designers/planners can influence this.
- ▶ **Education focused on smaller and medium-size contractors.** More targeted education will help smaller contractors. It can come from dust control tool makers' sales representatives, contractors' organizations, workers' compensation staff, Cal/OSHA, the California Department of Public Health, and construction unions.
- ▶ **More Cal/OSHA enforcement, especially for small and medium-size contractors.** Citations set the tone about expectations and can force change. Selective enforcement will motivate the reluctant small and medium-size (SME) contractors to use dust controls. SME contractors need special attention in both education and enforcement.

- ▶ **Better tool design and flexibility.** Users say the tools to reduce dust can be poorly designed. Some block workers' line of sight, so they can't use the dust control systems properly and see what they're cutting. Dust attachment systems also are difficult to maneuver. Tool manufacturers need to involve trades workers when they modify tools and design dust controls.

Some great new resources can help contractors, unions, and workers find solutions for better silica dust control practices. Check out the Center for Construction Research and Training (CPWR) website about silica dust control solutions at <http://www.silica-safe.org>. Federal OSHA has new tool-specific dust control fact sheets in English and Spanish at <http://www.osha.gov/dsg/topics/silicacrystalline/construction.html>. Finally, good research studies about controlling silica dust exposure also are available (<http://www.silica-safe.org/whats-new/research>).

These photos courtesy of the NJ Department of Health and Senior Services' NIOSH-funded Silicosis Surveillance Project and CPWR: Center for Construction Research and Training.

The Richmond Chevron Refinery Fire

Inevitable and Preventable

Twelve refinery workers responded to a report of a leak in a section of piping at the Richmond Chevron refinery on August 6, 2012. They knew they had to evaluate the leak while the pipe was under pressure with explosive gases. It wasn't too unusual.

What they didn't know was that the small leak—the result of corrosion—would suddenly become a catastrophic pipe failure that engulfed them in flammable vapor. They ran as the pipe burst, avoiding death by sheer luck. The vapor cloud didn't reach an ignition source for about 30 seconds. When it did, it created a massive fireball and a 1,000-foot column of smoke and toxic fire gases.

Some 15,000 residents sought medical attention for symptoms related to smoke exposure. Neighboring fire agencies sent equipment and firefighters to battle the blaze. Taxpayers once again picked up the tab for the refinery managers' poor attention to preventive maintenance.

Cal/OSHA and the federal Chemical Safety Board (CSB) investigated. The state agency issued citations and record fines of almost \$1 million. The CSB report is expected in late April 2013.

"This was a near-miss that was totally preventable," says Ron Espinoza, sub-director for District 12 of



the United Steelworkers union (USW). "It also was inevitable, given the way these companies are running the refineries. The companies haven't been doing preventive maintenance, and it's getting more and more dangerous."

Between the Chevron fire and March 2013, California refineries had 41 new incidents—about two a week. Each time, toxic substances went into the air, endangering the lives of workers and nearby residents.

It's "profit vs. risk" for the refinery industry

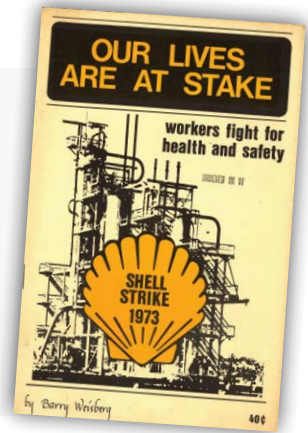
"The industry's record pretty much sums it up," said Mike Smith, USW Local 5 business representative. "These so-called accidents are not accidents at all. They're what happens when an industry doesn't pay attention to safety."

There's a long and consistent history behind this. In 1973, Shell workers in Martinez, California, went on strike for health and safety language in their union contract. The strike ended with joint health and safety committees, and much more.

"At least now we can refuse and have a say in investigating events; we have a say in our health and safety," says Ray Jones, a USW rep at the plant. "It's

They run the plant until it falls apart. They operate on the theory of running the calculated risk. By calculated risk, they mean that they will run a unit until it falls apart, then repair it fast. This is cheaper to do every six months or three months than preventative maintenance.

—A Shell Martinez worker, quoted in *Our Lives Are At Stake. Workers Fight for Health and Safety. The Shell Strike of 1973* by Barry Weisberg.



still a struggle getting the government agencies to work effectively when we need help. Thanks to that strike in '73, we have some rope to help ourselves.”

“This ‘profit vs. risk’ decision-making process is standard practice in the industry now,” he says. “Each time, the industry contritely buys its way out of the spotlight and crafts a new way to spin its failings until the next disaster.”

In 1997, a worker was killed at Tosco’s Avon Refinery in Martinez when a heat exchanger blew apart. Investigators blamed management decisions. Two years later, four workers at the same refinery burned to death and a fifth narrowly escaped. This time, investigators cited the ignored lessons of 1997.

The pattern is common across the country. The USW tied the findings of a 2013 federal report on ExxonMobil’s Baton Rouge, La., refinery to the Chevron explosion: “[T]he lack of mechanical integrity in refinery equipment has been a contributing cause in many of the worst accidents this industry has experienced.”

A union-community coalition responds to the Richmond fire

In response to the Richmond fire, a cross-cutting coalition has been organizing. It includes USW Local 5, the USW national office, Communities for a Better Environment (CBE), the Asian Pacific Environmental Network, the Natural Resources Defense Council, the BlueGreen Alliance, and UC Berkeley’s Labor Occupational Health Program (LOHP). A similar coalition—led by USW Local 675, neighborhood activists, CBE, and the UCLA Labor Occupational

Safety and Health Program (LOSH)—is organizing in Southern California.

The Richmond coalition has been active in the Governor’s Interagency Task Force on Refinery Safety. In a summary report, LOHP provided the views of labor, community, and fire agency leaders, gathered during five months of meetings.

The report concludes that “the evidence... suggests that health, safety and environmental performance remains tangential—not central—to the primary mission of the refinery industry.” It recommends nearly 20 policy actions and calls for a host of immediate actions, including a thorough assessment of corrosion damage in the industry and improvements in air monitoring systems.

“We should think of the near-miss in Richmond as the beginning of real change in this industry,” says Charlotte Brody of the BlueGreen Alliance. “This industry needs to be managed more efficiently and with the best safety practices to protect workers and communities. California can, and should, set a better example for the nation.”

The community and coalition heard from Cal/OSHA and the CSB at an April 5th meeting. Next steps include following up on the report recommendations, Cal/OSHA’s citations (which the company is fighting), and the CSB report. The Board’s interim report recommends changing regulations to force refineries to reduce hazards using the best available technology and fixing hazards when they are found. Cal/OSHA also needs to change how it inspects refineries, the CSB said. (One reason is that the agency is understaffed.)

Updates on Past Reports

This is Worksafe’s third annual report about work-related fatalities, injuries and illnesses, workplace hazards, and struggles to advance health and safety rights on the job. It’s a good opportunity to look back at some issues we profiled in past years and provide updates.



WAREHOUSE WORKERS

Warehouse Workers Resource Center (WWRC) continues its campaign to improve the working conditions of warehouse workers in Chino. It reached a successful conclusion with the warehouse, National Distribution Centers, Inc., and staffing agency, Tri-State Staffing, both of which received citations for health and safety violations last year. WWRC was honored at Worksafe’s 30th Anniversary event in February 2013.

Despite the retaliation that ultimately cost Santos Casteñeda his job (see our 2012 report), he continues to organize with WWRC and Warehouse Workers United (WWU) to improve working conditions in the Inland Empire. The groups’ current efforts focus on high indoor heat and ergonomic injuries.

CONFINED SPACES

In our 2012 report, we focused on the issue of confined spaces (typically enclosed areas that are difficult to get in and out of) and the dangers they pose to workers. In 2012, Cal/OSHA instituted a program to specifically combat a surge in fatalities related to such spaces. The agency conducted nearly three times as many inspections with related violations in 2012 as opposed to 2011. This special emphasis program continues in 2013.



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HOTEL HOUSEKEEPERS

The fight for respect and preventing ergonomic injuries in hotels continues. In 2012, UNITE-HERE filed a petition for a hotel housekeepers ergonomics standard with the Occupational Safety and Health Standards Board. The Board set up a Cal/OSHA advisory committee, which has held two meetings (the last in February 2013). The agency has heard from the housekeepers, their union, researchers, Worksafe, other health and safety activists, and tool makers about the hazards, prevention methods, and the need for changes. Industry representatives continue to deny the hazards exist and oppose any changes. It's unclear when Cal/OSHA will decide what to recommend to the Board.

WORKPLACE VIOLENCE

Unions representing health care workers in California—Service Employees International Union (SEIU) and American Federation of State, County and Municipal Employees (AFSCME)—continue to press for contract language and practices that prevent all forms of workplace violence. For example, it's the main topic of SEIU Local 121 RN's Workers Memorial Day education session on April 30, 2013.

On another front, with Worksafe's support, the Legal Aid Society—Employment Law Center is co-sponsoring a bill to prevent employers discriminating against women who are survivors of domestic violence, sexual assault, and stalking. It also requires employers to provide reasonable safety accommodations to victims.



WASTE RECYCLING

Karla Campos and other recycling workers, also profiled in 2012, continue to fight for justice on the job. Their case, which resulted in citations against American Reclamation, is now making its way through the Cal/OSHA appeals process.

In northern California, Evangelina Macias's death at a Waste Management recycling facility (see page 26), contributed to the creation of the Sustainable Recycling Campaign in the Bay Area. Led by the International Longshore and Warehouse Union (ILWU) Local 6, the coalition includes Worksafe, the Labor Occupational Health Program (LOHP), other labor groups, and members of the environmental, faith, and immigrant rights communities.

In southern California, waste recycling workers and their allies continue their "Don't Waste LA" campaign. Its major goal is to push the city to demand health and safety standards of companies entering into waste management, as well as a living wage and whistleblowing protection. The campaign recently had a major victory when the L.A. City Council voted that these standards need to be put in place.

Honor Recycling Workers

Fix the System Behind Their Deaths

In this report, we honor the life of Eva Macias, who was tragically crushed to death at a San Leandro Waste Management facility in June 2012 (see page 26). Another recycling worker, 34-year-old Eduardo Martinez Baraja, was also crushed to death in November, at Super Link Plastics in Oakland.

These deaths remind us why workers in the waste management industry need stronger protections. Waste treatment and disposal workers have the fourth highest occupational injuries and illness rates in the state. They are more than double those of private industry overall, at 7.5 incidents per 100 full-time workers.

As we strive toward increased recycling, zero waste, and a green economy, our society cannot ignore employers' obligations to protect the lives of the workers who generate their profits and do the dirty work.

Our 2012 report featured the story of Karla Campos, a 25-year-old single mother of 2 who worked at a waste sorting facility in Los Angeles. She and her American Reclamation co-workers were paid minimum wage with no benefits, through a temporary staffing agency. Despite hazardous working conditions, workers had no health and safety training and inadequate personal protective equipment to prevent some harm.

When Karla and several other workers decided to complain to Cal/OSHA, the company immediately targeted her. A few months later, she reported finding an improperly-disposed bucket of used medical syringes. The next day, she reported fracturing her tailbone at work; she was fired within hours. It is clear that the company retaliated against Karla for exercising her right to report hazardous working conditions and a work-related injury.

Last year, Cal/OSHA issued citations against American Reclamation, its subsidiary, and its

temporary staffing agency; proposed fines totalled nearly \$40,000. The companies have appealed, denying the serious hazards ever existed. Waste Management also appealed the proposed fines of \$50,750 for hazards related to Eva Macias' death.

American Reclamation workers still face almost all the same hazards, yet they continue to tirelessly fight for their basic health and safety rights. Their struggle for healthy, safe, and dignified jobs is not an isolated case. It is symptomatic of a system in which industries routinely exploit and endanger workers' lives to cut costs and increase profits.

How can we ensure that workers' rights are a significant part of the discussions about municipal Zero Waste goals and growing the green economy? How will employers be held accountable for worker health and safety when they violate regulations, and reduced fines and minimal "fixes" absolve them of responsibility?

How can workers be expected to use their right to act when retaliation is so common and whistleblower protection is inadequately enforced? High road competition within the waste industry is possible. So is eliminating work-related fatalities and many hazards.

All it takes is a stronger enforcement mechanism to incentivize employers to obey Cal/OSHA's life-saving regulations. We also need more inspectors in Cal/OSHA's Enforcement Unit and DLSE's Retaliation Complaint Unit, with a streamlined referral system between the two units. And we need more occupational health and safety advocates in the community and organized labor to monitor and shape this accountability system, standing behind workers who may be afraid to speak up.

Truly green jobs are good for the environment and the people doing them. We need a system that respects both.

Remembering Those We Lost in 2012

The following chart lists 195 California workers who died on the job in 2012. It is a partial list only, using information we were able to fully or partially confirm. Our sources include data from Cal/OSHA, federal OSHA, media reports (particularly the *Cal/OSHA Reporter*), and the website the Weekly Toll, maintained by United Support and Memorial for Workplace Fatalities.

The reality is that many workers' deaths on the job remain hidden from public view, or classified as non-work-related. This list does not include military fatalities overseas or most traffic-related deaths of people at work. Nor does it include the vast majority of the estimated 6,500 people who die each year in California from work-related disease. It's organized by date.

FATALITIES IN 2012 A PARTIAL LIST

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
1	1/2	William Atijera	65	Long Beach		Heart attack
2	1/4	Leo Christano	57	San Luis Obispo	Inmate firefighter	Died of heat illness after a training hike
3	1/4	Joseph Maier	48	Santa Fe Springs	Warehouse worker	Caught between a truck and the loading dock
4	1/11	Ernesto Zazueta	41	Turlock	Auto mechanic	Vehicle fell on worker when a jack broke
5	1/11	Angel Figueroa Castro		Garden Grove		Suffered a cardiac arrest while operating a jackhammer
6	1/12	Martin U. Lara	50	Nevada City	Tree trimmer	Decapitated by a wood chipper
7	1/19	Steve Saggiani	47	Long Beach	Longshoreman	Crushed by a 40 foot shipping container
8	1/23	Steven Ebert	56	Rancho Cordova	Cordova Recreation and Parks	Shot while in his car
9	1/23	Andy Troncale	52	Arcadia	Firefighter	Died of job-related colon cancer
10	1/26	Juan Esparza Ruiz	52	Trinidad	Owner of a tree service	Crushed as cut logs rolled together
11	1/26	Shou Song Bai		Rosemead		Fell from pallet loaded with merchandise
12	1/28	Raul Zapata	39	Milpitas	Carpenter	Died in a home construction trench collapse
13	1/30	Nicole M. Parker	23	Irvine	American Nostalgia	
14	1/30	Gordon Woodard	41	El Cajon	Southern California Soil and Testing	Struck in the head while turning an airplane propeller
15	2/2			Huntington Beach	California Yacht Services	Drowned while cleaning a boat at the harbor
16	2/5	Erick Sanchez		Kerman	Dairy worker	Fell over a guard railing to a concrete floor
17	2/8	Ronald J. Clapperton	62	Rancho Cucamonga	Steelworker	Died of a heart attack at work
18	2/13	George Brooks	50	Castro Valley	Laborer	Fell from an unsecured wooden crate elevated by a forklift

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
19	2/20	Steve Ruggles		Mountain Pass	Cypress Transportation	Died of a heart attack at work
20	2/22	Cosme Toledo	45	Sacramento	Carwash worker	Struck by a vehicle exiting the car wash
21	2/29	Earl Anthony Dunn	32	Compton	Postal worker	Pinned against his vehicle by another driver
22	2/29			Fresno	B&B Well Drilling	Killed when a 300-pound clamp fell on him
23	2/29	Mark Ratledge	35	Cottonwood	Firefighter	Struck by out-of-control driver during storm
24	3/6	Mike Siebold	50	Visalia	A. Epstein and Sons International	Had an aneurysm while driving
25	3/9	Jonathan Marino	22	Stanford	Sanitation worker	Struck by unattended trash truck
26	3/11	Gordie F. Varney	55	Sacramento	CAL FIRE Heavy Equipment Operator	Job-related colon cancer
27	3/14	Dwayne Alexander	49	Los Angeles	L.A. Jobs Corps counselor	Stabbed by student
28	3/15	Ariel Munoz-Garcia	30	Berkeley	Plant worker	Suffered head injury when hand grinder broke apart and sent shrapnel flying
29	3/16	Francisco Corado	27	Rancho Cucamonga	Oscar's Painting	Found dead from carbon monoxide poisoning inside a facility with two other workers
30	3/16	Oscar Aguirre	44	Rancho Cucamonga	See above	See above
31	3/16	Jahiron Aaron Mejia-Morales	24	Rancho Cucamonga	See above	See above
32	3/23	Vays Dzhanyayez	34	Chino	Truck driver	Killed while offloading material from truck
33	3/24	Reed Keith	60	Lancaster	Shop owner	Fatally shot at his computer store during a robbery
34	3/29	Conway Bevins	57	Blythe	CR England Global Transportation	Tractor rolled over worker while checking tires
35	3/29	Ramon Arthur Gibson	73	Santa Fe Springs	Hathaway Ranch and Museum	Crushed under overturned tractor
36	3/30	Jesus Salcedo	56	Colton	Tow truck driver	Hit by a vehicle while securing his tow truck
37	4/2	Kathleen Ping	24	Oakland	Administrative assistant	Killed during shooting spree at Oikos University
38	4/2	David Bisol	60	Santa Barbara	Executive director of Santa Barbara Historical Museum	Suffered fatal head injuries after falling down 20 steps
39	4/3	David Bailey	50	Saugus	Fire fighter	Died of a heart attack at work
40	4/3	Michael Shotwell	38	Mettler	Mericle Mechanical Inc.	Fell through a skylight
41	4/4	Connor Penhall	21	Corona	Road worker	Hit by drunk driver
42	4/9	Fernando Morales	47	Chino	Mechanic	Crushed by a tow truck while working on it
43	4/10	Steve Miller	55	Irvine	Masonry worker	Died of a probable stroke at a construction site
44	4/12	Robert Paris	53	Modesto	Stanislaus County Sheriff's Deputy	Shot while serving an eviction notice

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
45	4/19	Luis Emilio Zepeda	26	Wilmington	Truck driver	His truck moved forward while refueling
46	4/19	Jose Reyes	32	Helendale	Laborer	Struck by a forklift
47	4/20	Jennifer Luis	50	Santa Maria	Home support worker	Struck head on a bathtub
48	4/20	Gregory Thomas	57	Fellows	Truck driver	Struck and killed while trying to stop his truck from rolling downhill
49	4/28	Richard Din	25	San Francisco	Lab worker	Died from exposure to infectious bacteria
50	5/1	Marco Cadenas		Rio Vista	Paul Graham Drilling and Service	Had difficulty breathing and chest pains after welding in a confined space, and later died at the hospital
51	5/1	Robert Bonebright		Fontana	USF Reddaway	Hit by a tractor used to move containers
52	5/3	Daniel Kesterson	48	Colusa	Laborer	Killed in wall collapse during demolition work
53	5/7	David Pini	52	Soquel	Construction worker	Bulldozer rollover
54	5/8	Felix Morales	52	Seward, AK	Fisherman	Boom truck tipped over. Victim was from Lawndale, CA
55	5/9	Abdul Saladuhuddin	62	Sacramento	Roofer	Collapsed on roof
56	5/9	Kenneth Avarette	55	Stockton	Mike Campbell & Associates	Found dead from possible heart attack inside a 53-foot Hyundai refrigerated trailer
57	5/9	Cory Thomas		Fresno	Laborer	Died of heat illness on a construction job
58	5/10	Byron Lopez-Orozco	23	Beverly Hills	Construction worker	Asphyxiated when a trench collapsed
59	5/15	Brad Capps	37	Chino	Construction worker	Fell 20 feet onto concrete
60	5/18	Phillip Brian Weeks		Ontario	Maintenance worker	Electrocuted while changing a device used to stabilize current
61	5/19	Colin Klausner	35	Livermore	Sous chef	Collapsed while leaving an event
62	5/20	Alan Thomas	51	Los Angeles	Bus driver	Shot and killed by lone gunman
63	5/21	Juan Lerma		Navarro	Logger	Killed by a falling tree
64	5/22	Fidel Ramirez	62	Wilton	Farm worker	Collapsed in February while picking grapes and later died
65	5/28			Burbank	Trucker	Pinned between hatch of belly dump truck while cleaning
66	6/1	Maximo Lopez Barajas	56	Huron	Farm worker	Collapsed and died while pruning trees
67	6/2	Terie Colecchi	49	South Redondo Beach	Bouncer	Beat to death on the job
68	6/4	Javier Meza		Los Gatos	Tree worker	Killed when a felled tree slid down the side of hill
69	6/5	Kurt Allen Clark	53	Lincoln	Construction worker	Killed when a wall under demolition collapsed on him
70	6/5	William Ojers III	52	San Pedro	Abhe & Svoboda	Died from possible heart attack while sand blasting diesel fuel tanks
71	6/5	Peter Monti	45	Oroville	Logger	Killed when the chain on an excavator broke and struck his head

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
72	6/6	Jose Lucero	22	Universal City	Stagehand	Fell 60 feet from scaffolding while working inside an amphitheater
73	6/7	Alberto Reyes De Jesus	37	Watsonville	Farmworker	Collapsed while loading boxes onto a flatbed truck
74	6/8	Arturo Cuellar		Carlsbad	FlorExpo	Crushed between a truck trailer and loading dock
75	6/8	Robert Garcia	35	Los Angeles	Tree trimmer	Become tangled in a palm tree
76	6/11	William "Willie" West		Contra Costa	Firefighter	Job-related cancer
77	6/12	Mai Feng Su		Oakland	In-home caregiver	Crushed when a bedframe collapsed on her
78	6/13	Roberto Lasarte	31	Los Angeles	NOSWerks	Bottles of nitrous oxide exploded
79	6/13	David Bock		Hemet	A-1 Construction and Remodeling	Collapsed while building an addition onto the back of a residence
80	6/19	Cesar Martinez	24	Arvin	Oilfield worker	Killed in explosion while dismantling an oil tank pipe
81	6/18	Evangelina "Eva" Macias	66	San Leandro	Waste management worker	Struck by front-end loader
82	6/19	Luis Roberto Minjarez	51	Bakersfield	Demolition worker	Fell from a collapsing elevated basket
83	6/21	Jim Odom	69	Brentwood	Owner of a contracting business	Fell eight feet to the ground off of a ladder placed on a rolling scaffold
84	6/22	Jose Gonzalez	35	Hollister	Farm worker	Collapsed while weeding an asparagus field and died at hospital
85	6/23	Hollis Franks	66	Alameda	Firefighter	Job-related lung cancer
86	6/30	Raul Lopez	38	Sherman Oaks	Restaurant worker	Fatally shot at work
87	6/30	Jesus Carillo	47	Fresno	Vallarta Food Enterprises, Inc.	Found unresponsive inside walk-in refrigerator and later died at the hospital
88	6/30	Paul Peterson		Benicia	Speciality Sales, Inc.	Kit car he was driving crashed into a concrete wall
89	7/4	Edgardo Perez Sanchez		Alaska	Trident Seafoods	Collapsed at seafood plant. Worker was a California resident.
90	7/5	Jorge Herrera		Pleasanton	Horse jockey	Died after being thrown from horse at the Alameda County Fair
91	7/9	Liborio Garcia	45	Watsonville	Farm worker	Collapsed from aneurysm while picking fruit
92	7/11	Regan Johnson	24	Pittsburg	Construction worker	Struck and killed by a vehicle while shifting traffic cones
93	7/12	Antonio C. Hernandez			Farm worker	Collapsed while removing irrigation rubber drip tubing from the ground
94	7/13	Soledad Randon	59	Irvine	Residential care worker	Died of an aneurysm caused by a blood clot
95	7/16	Todd Walker	47	Quincy	Logger	Crushed by log that rolled off truck
96	7/22	Ricardo Zamora	58	Torrance	Road worker	Hit by drunk driver
97	7/22	Ramon Lopez	56	Torrance	Road worker	Hit by drunk driver
98	7/22	Everardo Sanchez		Fontana	Trucker	Caught between truck's pneumatic and hydraulic bottom gates while repairing bottom of dump sand truck

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
99	7/23	Ron Billings	25	Standard	Lumber mill worker	Crushed in a machine
100	7/23	Francisco M. Cancero		Helm	Terra Nova Ranch	Crashed into a parked tomato transport trailer while driving an ATV motorcycle to the field
101	7/27	Curtis Wayne Zahourek	47	Blocksburg	Construction worker	Died while working on an electrical structure
102	7/27	Daniel Ramirez		Paramount	Carlton Forge Works	Struck by flying metal
103	7/27			Bridgeville	PG&E Subcontractors	Fell approximately 80 feet from structure
104	7/27	Min Gu Jung	42	Pleasanton	Global Classic Collection, Inc	Fell 18 feet through a skylight to a concrete garage floor
105	7/28	Constancio Romero		Arcadia	Tree trimmer	Electrocuted by a powerline
106	7/30	William Portillo	69	Galt	Bimbo Bakery	Crushed by a rack of baked goods
107	8/1	Robert Bisou		Paramount	Elevator worker	Fell 26 feet while repairing an elevator
108	8/2	Robert Phillips		Rancho Dominguez	Fox Transportation	Suffered fatal head injuries after being run over by a transport truck
109	8/10	Gene Knutson		Los Angeles	Tower Imaging Medical Group	Collapsed in his office
110	8/15	James Seim	65	Pasa Robles	Construction worker	Discovered dead at construction site
111	8/16	Juan Antonio Aparicio-Vargas		Salinas	Ramco Enterprises	Slipped and fell under moving forklift
112	8/17	Hilario Gonzalez		Holtville	Farm worker	Found unconscious in tractor
113	8/17	Calvin Davion Edwards		Seeley	Inmate employee at Calipatria State Prison	Struck by a vehicle while performing assigned duties on an Off Reservation Work Detail.
114	8/18	James Randolph	44	Hemet	Inmate employee working for Department of Forestry and Fire Protection	Died of heat illness in sleeping quarters
115	8/19	David Williams		Dana Point	Earthtone Designs	
116	8/21	David Ward Jones	33	Palm Desert	Construction worker	Died of heat illness
117	8/22	Joshua D. Ruff	23	Placerville	Winery worker	Crushed in a wine press
118	8/29	Joshua Silva	59	Beacon Harbor	Construction worker	Crushed between concrete staircase and trench
119	8/30	Reuben Orosco		Bell	Hai Chang Inc.	Caught between truck and loading dock
120	8/30	William Calabrese	20	San Diego	Fireworks America	Killed in fireworks incident at minor league baseball game
121	9/4	Kenyon Youngstrom	37	Vallejo	California Highway Patrol officer	Shot during a traffic stop
122	9/4	Saul Pablo Benavides		Huron	Farm worker	Sustained head trauma when operating an all terrain vehicle in a pistachio orchard
123	9/5	He Sook Chi	68	San Francisco	Little Village Market	Fell down stairs when entering workplace

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
124	9/5	Roger Elliot		Penn Valley	Owner-operator of an excavator	Struck and killed by a chain on an excavator bucket while changing a truck tire
125	9/11	Robert Munoz		Sanger	Temporary winery worker	Died from exposure to ammonia
126	9/13	Calvin Pitto	54	Manteca	Winery worker	Ran over by another driver while unhitching a trailer
127	9/14	Antonio DeLucas-Mira		San Gabriel	Tree trimmer	Fell approximately 40 feet
128	9/15	Clemente C. Galan	52	Modesto	Truck driver	Collapsed while standing at a guard shack
129	9/17	Jose Romero		Fillmore	Coast Frost Protection	Fell from a wind machine
130	9/20	Oscar Peredia		El Nido	Dairy worker	Killed when struck by a front-end loader
131	9/21	Miguel Angeles Hernandez	40	Soledad	Vineyard worker	Collapsed while hand-digging a trench up to five feet
132	9/21	Isabel Ramirez	44	San Bernardino	Anita's Mexican Food Corporation	Found unresponsive on the restroom floor
133	9/22	U Zaw Aung	60	San Francisco	Flight Aviation Services	Crashed into a parked private jet while driving food-service truck
134	9/22	Mike Bridger	48	Los Angeles	Worker for Silver Bullet Production Co.	Drowned while cleaning a 20-foot-deep dive tank on a movie set
135	9/22	Thong Han Quach		Westminister	Westminister Superstore	Killed when a scissor-lift used to change lightbulbs toppled over
136	9/22	Gerson Hernandez	27	Los Angeles	Tree trimmer	Trapped under palm fronds while trimming palm tree
137	9/26	Hortencia Ugasalvarado		Hillsborough	Steven Barkoff	Fell from attic to garage floor while working at private residence
138	9/26	Loren Bucher		Alturas	Eagle Peak Rock & Paving Inc.	Killed when bulldozer went into gear while he was adjusting throttle
139	9/27	Victor Calderon Perez	48	Lemoore	Farm worker	Worker was run over and killed by a cotton hauling trailer
140	9/27	Renee Curiel		Near Canyon Dam	Tree trimmer	Struck and killed by a branch while cutting down trees
141	10/1	Everardo Cazarez	51	Soledad	Farm worker	Collapsed and died of a heart attack in 95-degree weather
142	10/1	Marco Garcia Rodriguez		Sacramento	American Rain Gutter	Fell approximately 22 feet from scaffold
143	10/1			Long Beach	Tow truck driver	Crushed when a motorhome worker was struck by another vehicle
144	10/2	Jaime Gomez	36	Arbuckle	Farm worker	Killed when a pickup truck struck equipment he was working on
145	10/2	Daniel Harris		Simi Valley	Fly A Kite Productions	Found dead at a quarry after leaving movie set
146	10/3	Barry Snelson	54	Oildale	Power plant worker	Killed when a water tank he was inside of fell
147	10/5	Leonardo Perez		Corcoran	Dairy worker	Suffered a cardiac arrest while driving a tractor and went into a canal
148	10/11	Adolfo Figueroa	42	Los Angeles	Construction worker	Crushed by a steel beam while working on the 405 freeway

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
149	10/11	Jose Malena	62	Santa Fe Springs	Seafood plant worker	Found dead inside an industrial oven
150	10/12	John James Cobos		Los Angeles	Firefighter/paramedic	Job-related cancer
151	10/12	Ryan Everly	35	Perris	Tow truck driver	Crushed when a car he was connecting to a tow truck rolled over
152	10/12	Dennis Cowley	57	Prather	Handyman	Killed when the side wall of an excavation collapsed
153	10/16	Mario Trabado		Ontario	Truck driver	Killed when truck tractor cab fell
154	10/16	Jose Martinez		Hacienda Heights	Wildwood Mobile Country Club	Fell from moving golf cart
155	10/16			San Diego	Force Environmental	Fell through a plastic cover on an open roof atrium about 25 feet to the concrete floor below
156	10/17	Frank Noia		Hayward	XTRA Lease LLC	Found unresponsive after replacing a mud flap on a flatbed trailer
157	10/18	Amador Gudino	33	Live Oak	Construction worker	Fell 14 feet while working on a residential construction
158	10/22	Juan Navarro	33	Running Springs	Truck driver	Jumped or was ejected from out-of-control truck
159	10/23	Corwin Hardham	38	Alameda	Sole operator of wind power electricity business	Discovered unresponsive on the floor of his office
160	10/24	Mark Arnett	51	Oakland	Crane worker	Crushed by crane while inspecting it at the Port of Oakland
161	10/24	Ronald Feldman		Los Angeles	US Foodservice Inc.	Employee collapsed when he went to meet a customer
162	10/30	Jose Lopez	58	Laguna Woods	Gardener	Hit by a vehicle from behind while on a lawnmower
163	11/2	Ernesto Rodriguez Gomez	29	Ventura County	Farm worker	Killed from blunt-force trauma when his shirt caught in an auger while digging post holes
164	11/2	Jose Noriega	55	Portola	Heavy equipment operator	Excavator tipped over into lake while victim was rebuilding a boat launch
165	11/5	Rigoberto Venegas		Oakland	Roofer	Worker died after falling from roof
166	11/5	Oracio Contreras		Stanton	All Metals Processing	Fell into a tank of anodizing solution
167	11/6	Manuel Verdin	34	Fresno	Poultry plant worker	Shot and killed by co-worker
168	11/6	Salvador Diaz	32	Fresno	Poultry plant worker	Shot and killed by co-worker
169	11/7	James Chvala, Jr.	25	Bakersfield	Construction worker	Struck by vehicle while on a trench crew
170	11/7	James Mike		Twentynine	Far Western Anthropological Group	Collapsed while surveying land
171	11/8	Jose Oscar Nunez Saldania		Trona	Truck driver	Pinned between a tractor and frame of a trailer
172	11/12	Fernando Quezada		Fontana	Industrial facility worker	Killed when steel cable snapped and recoiled

	DATE	NAME	AGE	LOCATION	OCCUPATION/EMPLOYER	INCIDENT
173	11/15	Eduardo Martinez Barajas	34	Oakland	Recycling worker	Killed by toppled forklift
174	11/16	Richard Dobrozdravic	55	California City	Kett Engineering	Killed by tree that fell off backhoe
175	11/19	Mateo Murrillo	69	Jamul	Ranch worker	Fell from tree
176	11/21	Arturo Ortiz	40	Fresno	Mechanic	Sustained fatal injury when the automobile he was working on fell on him
177	11/27	Cristobal Berrios	58	Grand Terrace	House painter	Killed when extension ladder and scaffold collapsed
178	11/28	David Gonzales	58	La Habra	Retail worker	Collapsed in aisle
179	11/30	Tommy Gene Flippo Jr.	57	West Sacramento	PG&E worker	Suffered blunt force trauma when his utility truck crashed into a traffic pole
180	12/2	Terrell Horne III	34	Redondo Beach	Coast Guard employee	Killed by suspected smugglers
181	12/3	Christopher Winter		San Francisco	Wells Fargo	Choked on food at lunch
182	12/8	Shaun William Riddle	27	Cadiff	Tow truck driver	Struck and killed by train while clearing a stranded vehicle
183	12/9	Juan Sepulveda		Caruthers	Farm worker	Killed by falling tree
184	12/11	Gregory Sulger	54	San Jose	Maintenance employee	Killed when his pickup truck rolled down an embankment
185	12/12	Ivan Barahoma	48	Long Beach	All Seasons Painting	Died at hospital after falling two stories from a ladder
186	12/12	Bernard Kellogg	35	Visalia		Found deceased after operating a water well drilling unit
187	12/13	Bernardo V. Zelaya Diaz	47	Sunnyvale	Roofer	Fell 20 feet off of a roof
188	12/14	Jose Lopez	50	Santa Ana	Janitor	Collapsed in parking lot
189	12/17	Javier Sevilla		Fresno	Farm worker	Killed in a vehicle collision in an agricultural field
190	12/17	Jose Rodriguez	30	Richmond	Recycling worker	Crushed when the cab and rollbar of a yard mover malfunctioned
191	12/24	William Foster	53	Truckee	Ski patrol member	Killed during a controlled avalanche
192	12/26	Jose Plancarte	51	San Francisco	Construction worker	Fell from scaffolding
193	12/27	Juan Cervantes		Los Angeles	Car wash worker	Struck by van exiting a car wash
194	12/31	Bobby Chubbuck		Lake Forest	Honey Baked Ham Co.	Found unresponsive by co-workers
195	12/31	Saul Villa		Westminister	Gardener	Suffered a heart attack while mowing lawn

WORKSAFE

safety, health, and justice for workers

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