

2010 Equipment Theft Report





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AN ALLIANCE WITH A PURPOSE

Through a joint alliance, the National Equipment Register (NER) and the National Insurance Crime Bureau (NICB) continue to make life more difficult for equipment thieves. By combining services and areas of expertise, we're providing an efficient conduit for law enforcement and insurers to identify any type of heavy equipment at any time of day and to help contractors reduce the likelihood of unknowingly purchasing stolen equipment.

This alliance ensures that NER will continue to provide, manage, and expand its database of insurer-supplied theft reports and information about manufacturers, owners, and damaged equipment. NICB will extend the reach and value of that information through its nationwide network of special agents, who are trained in heavy equipment theft and available to respond to law enforcement calls for investigative assistance or identification requests.

Better ownership documentation, accurate equipment identification, proper reporting, and greater site security will continue to increase law enforcement's ability to combat equipment theft. Awareness, education, and training are key components of an overall fraud-prevention plan that may lead to immediate economic benefits for contractors, owners, and insurers.

Through our joint efforts, we're reducing the cost of theft for equipment owners and insurers by increasing the likelihood of recovery and arrest. We're also limiting the ability to fence stolen equipment, thus making heavy equipment a riskier target for thieves.



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report on equipment theft in the United States is based primarily on data the NICB drew from the National Crime Information Center's (NCIC) database of more than 13,000 thefts of construction and farm equipment in 2010 and information reported to ISO ClaimSearch®. We'll publish similar reports every year to help track trends using the growing volume of data available to NER and the NICB.

AIM

Our study provides equipment owners, insurance companies, and law enforcement with information to guide theft-prevention efforts and allocate investigative resources. The study puts the information into context through footnotes, analyses, and conclusions that relate to the protection, investigation, and recovery of heavy equipment.

As in the past, the 2010 report seeks to answer key questions: How much and what types of equipment do thieves steal? Where do they steal equipment from, and where does it go?

DATA SOURCES

The NICB has access to all the data in the NCIC vehicle theft file, and it maintains a mirror image of that file. The FBI; other federal, state, local, and foreign criminal justice agencies; and author courts submit data on stolen vehicles, stolen vehicle parts, and mobile off-road equipment and components. The NICB uses the data to assist insurance companies in recovering stolen vehicle and mobile off-road equipment.

Since 2001, NER has developed databases of heavy equipment ownership and theft information. Owners and law enforcement agencies report thefts directly to NER's database through its website. Insurers report thefts through ISO ClaimSearch, the insurance industry's all-claims database. Through an alliance with the American Rental Association (ARA), NER can capture loss and ownership data from many of the world's largest rental fleets and hundreds of smaller fleets.

Although statistics can't reveal all underlying reasons for the high level of equipment theft, we can draw conclusions from trends and the daily contact that NER staff members have with theft victims, insurers, and law enforcement.

PRESENTATION AND ANALYSIS

We've presented each set of data in graphs or tables to allow easy comparison and to highlight trends. Notes explain data sources and gathering techniques. Analyses discuss the relative importance of the factors that affect each set of results. We provide additional commentary where results suggest a particular action or response.



Theft by State

Top Ten States for Equipment Theft in 2010

State	Thefts
Texas	1,894
Florida	1,211
North Carolina	1,161
Georgia	794
South Carolina	674
California	597
Tennessee	542
Oklahoma	522
Alabama	423
Ohio	388

The top five states account for 43% of all thefts.

The top ten states account for 61% of all thefts.

NOTE

1. The list represents 13,374 theft reports submitted to NCIC in 2010.

ANALYSIS

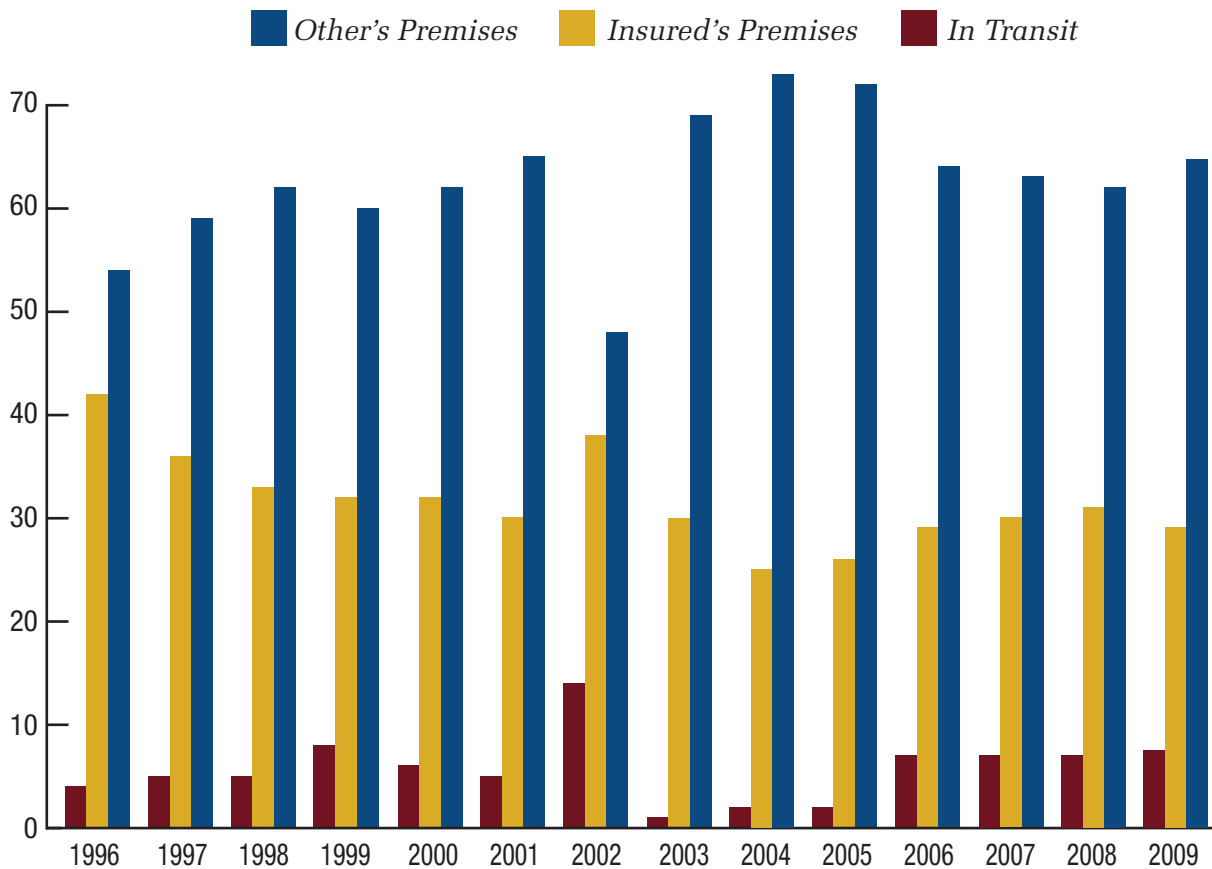
1. Theft levels closely correspond to the amount of equipment in a particular area. In other words, the states with the highest volume of construction and agriculture — and therefore the most machinery — have the largest number of thefts.
2. Organized theft rings are likely to develop in areas with a high concentration of equipment and a large number of potential buyers of used equipment, stolen or otherwise. Higher loss ratios for insurers in certain areas reflect that development.

COMMENT

Sometimes theft hot spots emerge when an organized group of thieves and fences is working in a particular area. NER's regional theft-trend alerts and NICB's ForeWARN alerts highlight such activity. Detecting and thwarting those groups often coincide with a noticeable drop in theft rates. Documented recoveries illustrate that correlation.

Theft by Type of Location

The graph below shows insured losses by the type of location of the theft:



Theft by Type of Location (1996–2009)

NOTES

1. Losses by type of location of theft are displayed as a percentage of all claims.
2. Source is ISO Inland Marine Circular, Contractors Equipment, All Classes.

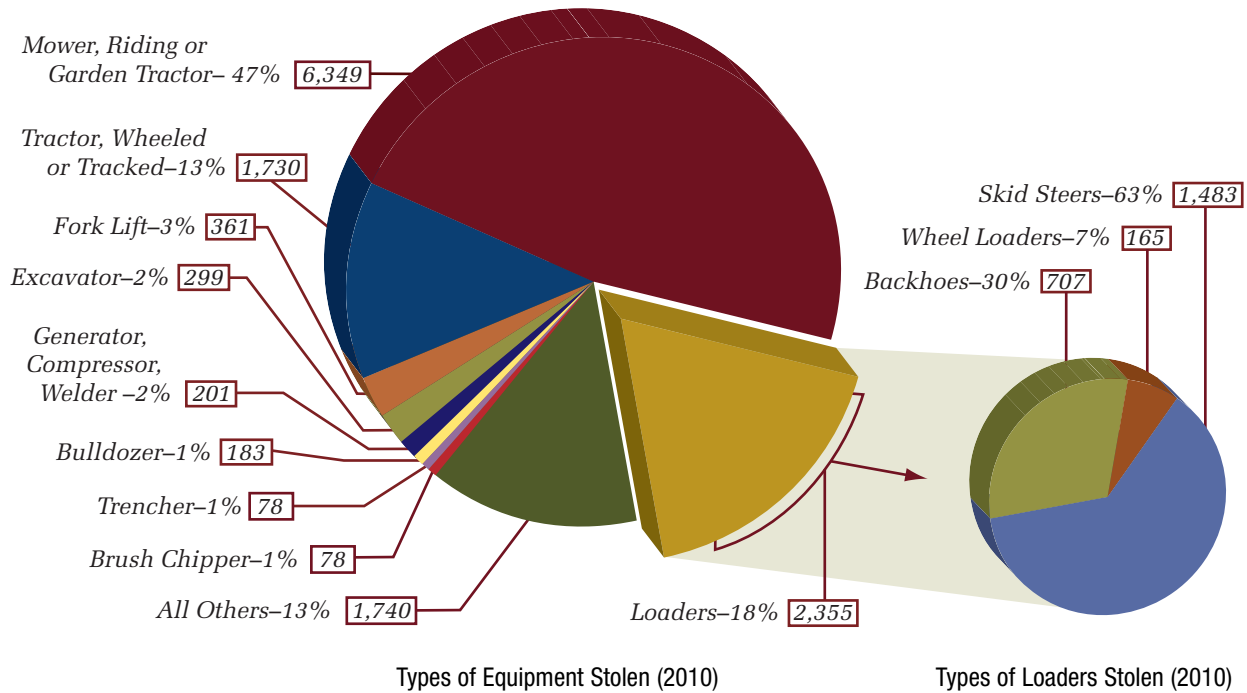
ANALYSIS

With regard to theft by type of location, two factors should be considered: the location where the equipment spends the most time and the level of security at each type of location. Most often, equipment is stolen from a work site, labeled on the graph as “Other’s Premises.” Those work sites usually have lower levels of physical security than an “Insured’s Premises,” which is often a fenced-in compound.

COMMENT

It’s not enough to focus solely on the security of premises and work sites. Equipment users should secure machines, even if they can do so only temporarily. For example, a user could surround mobile equipment with hard-to-move objects when the equipment is not in use.

Types of Equipment Stolen



NOTES

1. The chart represents 13,374 theft reports submitted to NCIC in 2010.
2. The "Excavator" category includes both full-sized and compact or mini-excavators.
3. The inclusion of landscaping equipment—mainly commercial riding mowers—reduces the percentage of all other categories.
4. The top five types of equipment account for 83 percent of all losses. In 2009, the top five represented 84 percent of all thefts.
5. "Tractor" is a broad category, including compact, utility, and agricultural tractors.
6. More than 50 types of equipment make up the "All Other" category. They include graders, scrapers, wood chippers, and rollers. Unidentified construction and farm equipment represents the majority (more than 500) of the "All Other" category.
7. Loader breakout is an estimate based on thefts reported to NER.

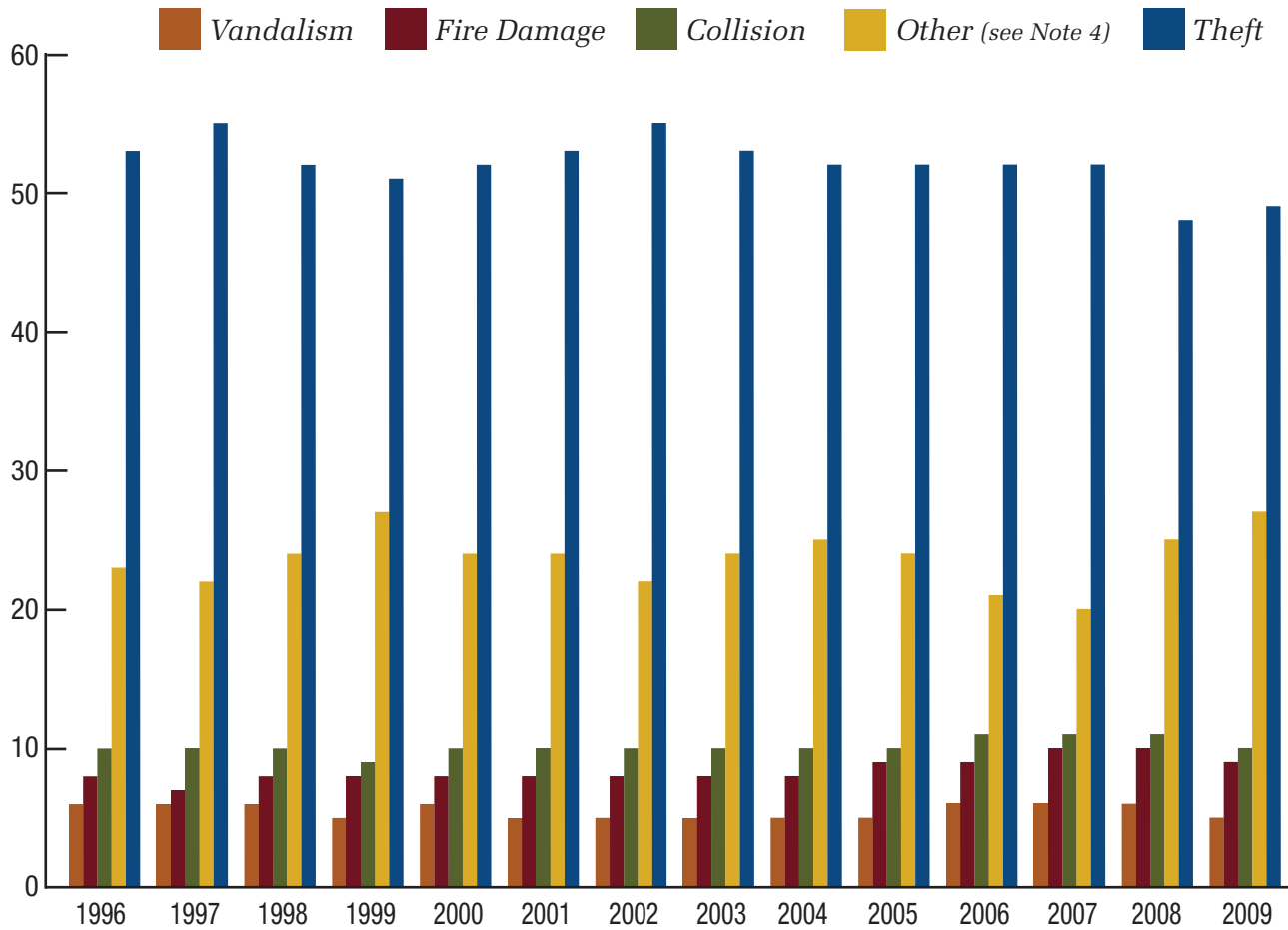
ANALYSIS

1. Two key factors determine the type of equipment that thieves are most likely to steal: value and mobility. Value is the primary factor, except for items too large to move on a small trailer. For instance, large bulldozers are valuable but seldom stolen, as they are difficult to move.
2. Another factor to consider is the number of each type of equipment in circulation. For example, skid steer loaders account for more than 30 percent of new construction equipment sold in the United States in the last five years.
3. Bulldozers and wheel loaders are the most valuable types of equipment in the top ten, but backhoes and skid steers are easier to transport and have multiple job site applications. Therefore, they represent a greater percentage of thefts.
4. The types of high-value equipment reported stolen frequently have wheels, such as wheel loaders.

COMMENT

Equipment owners should consider mobility of equipment, as well as value, when planning security efforts.

Frequency of Theft Compared with Other Risks



NOTES

1. Frequency of risk is displayed as a percentage of all claims.
2. Source is ISO Inland Marine Circular, Contractors Equipment, All Classes.
3. We base the figures on frequency, not value. Theft still tops the list by value, although by a smaller margin.
4. "Other" includes claims involving windstorm, hail, water damage, flood, volcanic action, and earthquake.

COMMENT

Theft is the most frequent cause of loss, but it is also the type of loss that good prevention most dramatically affects. In other words, the level of risk varies greatly between an equipment owner who takes precautions and one who does not.

Equipment owners and fleet managers can reduce the likelihood of theft and improve the chances of recovery by taking simple preventive steps that are both cost-effective and measurable.

Theft by Manufacturer

Manufacturer	Thefts
John Deere	3,082
Kubota	1,147
Caterpillar	871
Bobcat	858
Case	343
Cub Cadet	327
International	272
New Holland	229
Ford	150
Takeuchi	97

NOTE

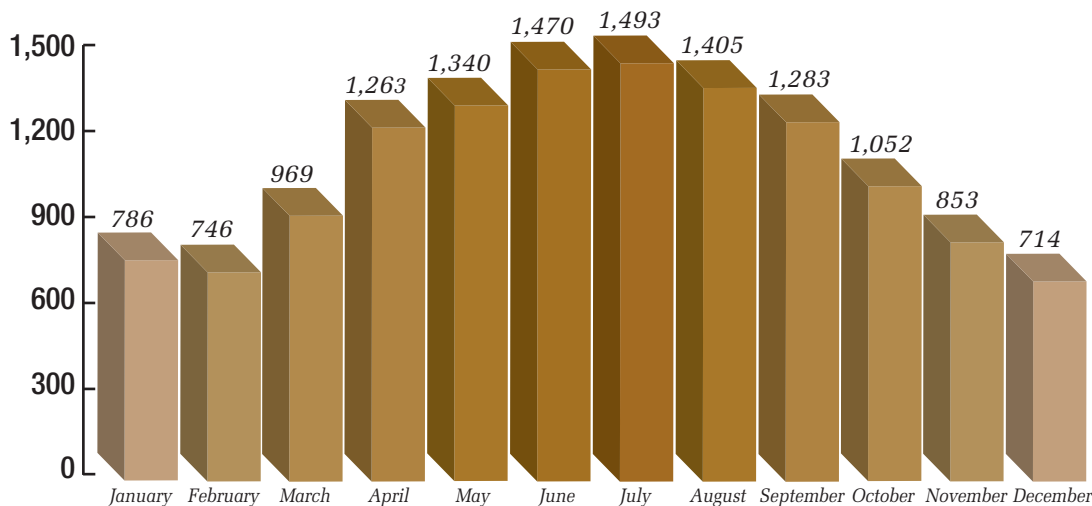
1. Source is the total number of thefts reported to NCIC during 2010.

ANALYSIS

1. While all makes of off-road equipment have little or no standard equipment security, the manufacturers on the above list make the most compact, and thus most easily stolen, equipment. The list does not necessarily follow the entire market share of all heavy equipment manufactured.
2. If two pieces of equipment are equally easy to steal, a thief is more likely to steal the one that has greater value. Age, condition, and brand determine equipment's perceived value.

Theft by Month

The graph below illustrates equipment losses by the month of reported theft date in NCIC.



NOTE

1. Source is the total number of thefts reported to NCIC during 2010.

ANALYSIS

Theft levels closely correspond with peak construction periods. In other words, the months with the highest volume of theft are the ones that have increased equipment activity due to cooperative weather, longer days, and the end of a crop growth cycle. As equipment owners move items between jobsites and fields, there is greater risk, exposure, and opportunity for theft. There is an additional likelihood that thefts may go unnoticed for a longer period of time when equipment is stolen off-premises or in transit than when equipment is stolen from an owner's yard.

Model Year of Equipment Stolen

Equipment produced in the last five years accounted for 56 percent of thefts reported to NCIC in 2010.

Year	Thefts
2010	2,102
2009	1,482
2008	1,428
2007	1,309
2006	1,147
2005	1,113
2004	710
2000	627
2003	515
2002	403

NOTES

1. Source is the total number of thefts reported to NCIC during 2010.
2. Each piece of equipment manufactured in 2010 faced potential theft for only part of the year—from the date sold to December 31.
3. Results may be skewed slightly because owners often misstate the date of manufacture. For example, a buyer may list a 2009 model purchased in 2010 as a 2010 model.

ANALYSIS

The newer a piece of equipment, the more likely it is to be stolen. If given the choice between two similar pieces of equipment, a thief will choose the newer, more valuable one, because they are equally easy to steal.

Those results are in stark contrast to larger trends in automobile theft, where older models account for more stolen cars. Newer cars carry more sophisticated anti-theft technology. Heavy equipment design, however, emphasizes productivity instead of security. The necessity for multiple operators leads to little or no anti-theft technology. Many heavy equipment manufacturers installed as few security features on 2010 models as they did on 1980 models.

Top 10 Cities for Equipment Theft

City	State	Thefts
Houston	TX	166
Miami	FL	146
Conroe	TX	94
Columbus	GA	81
Oklahoma City	OK	79
Tampa	FL	73
Tacoma	WA	70
Charlotte	NC	69
Raleigh	NC	69
Phoenix	AZ	66

NOTES

1. Source is the total number of thefts reported to NCIC during 2010.
2. Eight of the top ten cities are in the top ten states for theft. Six of the top ten cities are in the top three states.

ANALYSIS

It is not surprising that cities with the greatest number of thefts are often located in states that rank among the top ten for theft. The cities tend to be in states that are near the southern border, that possess a major port, that are experiencing construction booms, or that include all these factors.

The Cost of Equipment Theft

At present, there is no centralized, accurate, or exhaustive database that includes every loss. NER examines detailed theft reports from specific groups or areas that accurately report theft — such as fleets, industries, or regions — to make assumptions and develop trends. Then we apply those trends to the entire market share of that specific area to build a national figure.

Annual estimates of the cost of equipment theft vary from \$300 million to \$1 billion, with most estimates in the range of \$400 million.

NOTES

1. The estimates don't include the theft of tools or building materials or the damage to equipment and premises caused during a theft.
2. The estimates don't include losses from business interruption, including the cost of rentals, project-delay penalties, and wasted workforce and management time.

ANALYSIS

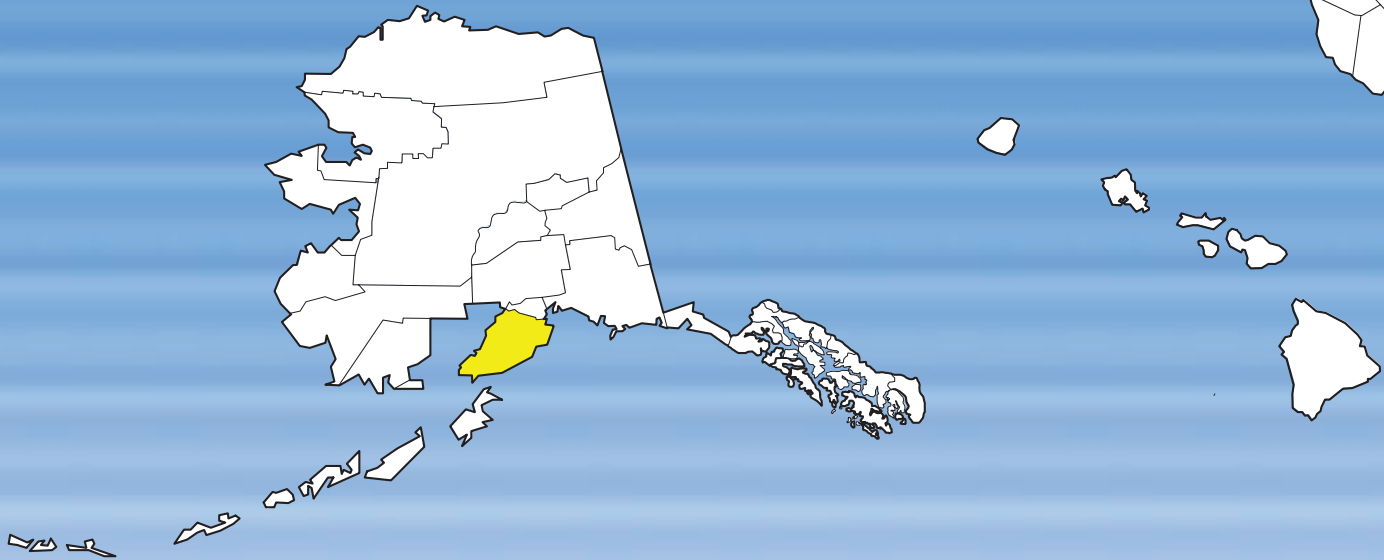
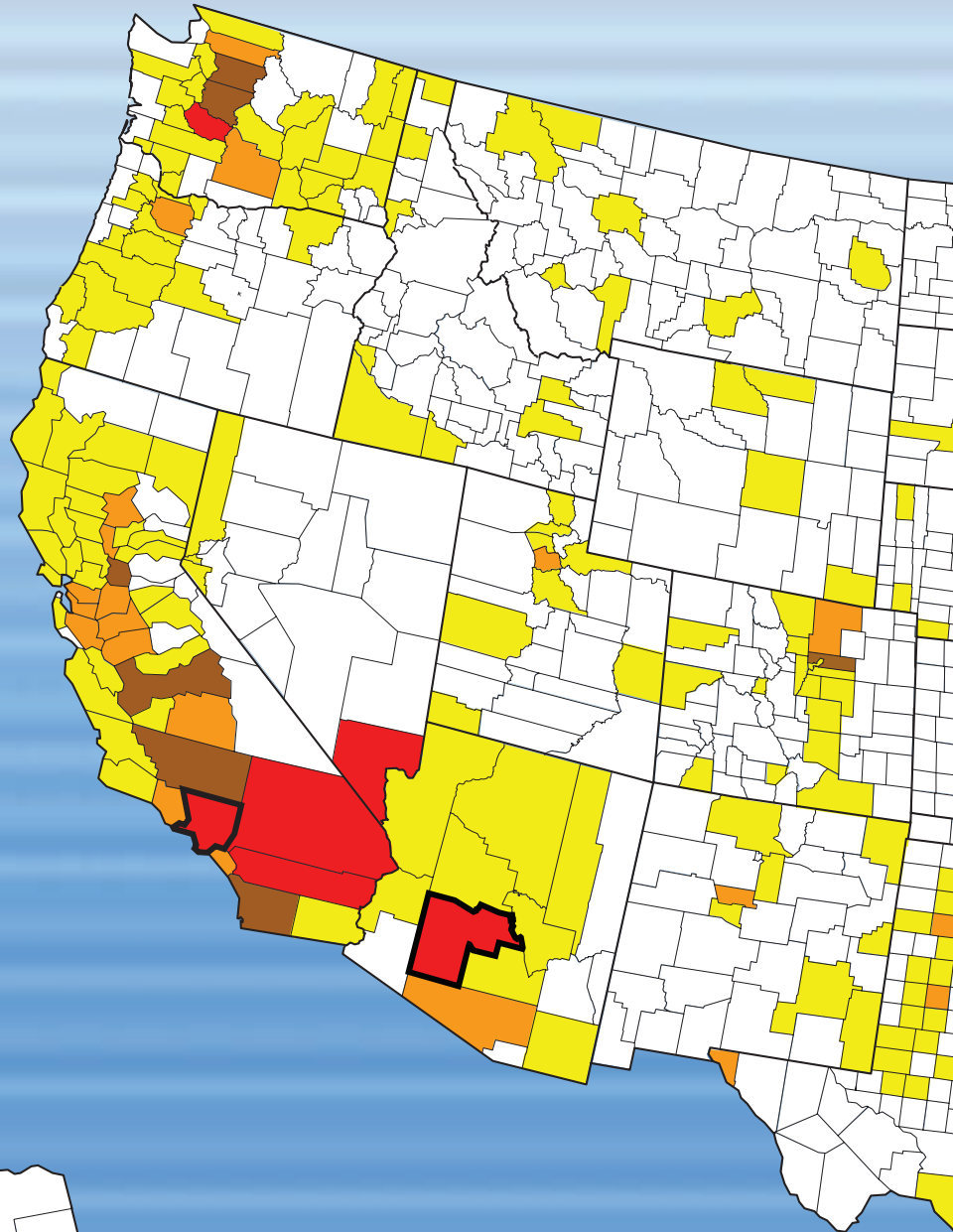
Several factors contribute to the high level of equipment theft:

- the value of heavy equipment*
- poor equipment security and poor site security
- opportunities to sell stolen equipment in the used-equipment market
- low risk of detection and arrest
- lenient penalties for thieves if prosecuted and convicted

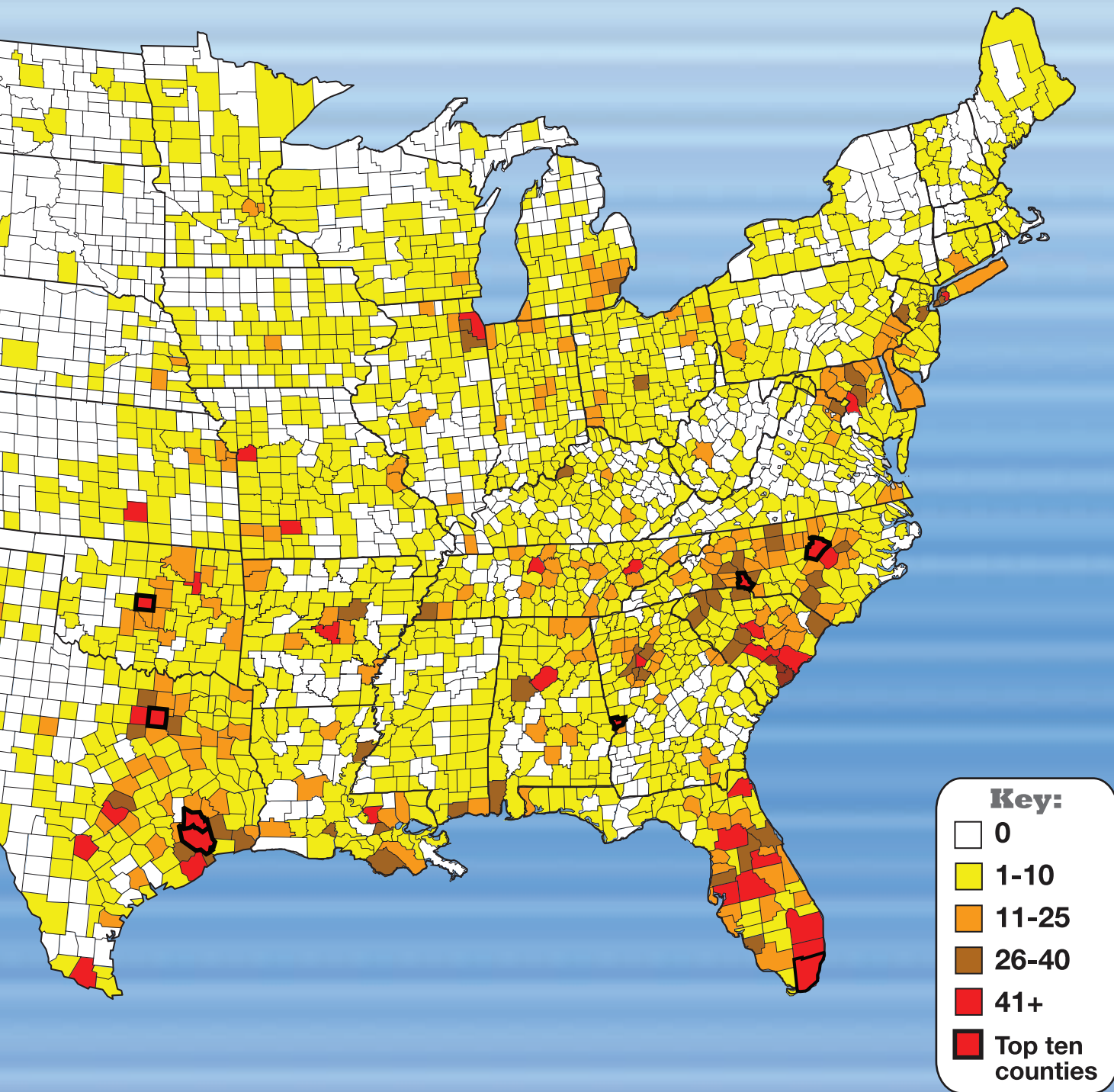
*The average estimated value of a stolen piece of equipment is \$30,000.

Top 10 counties for equipment theft

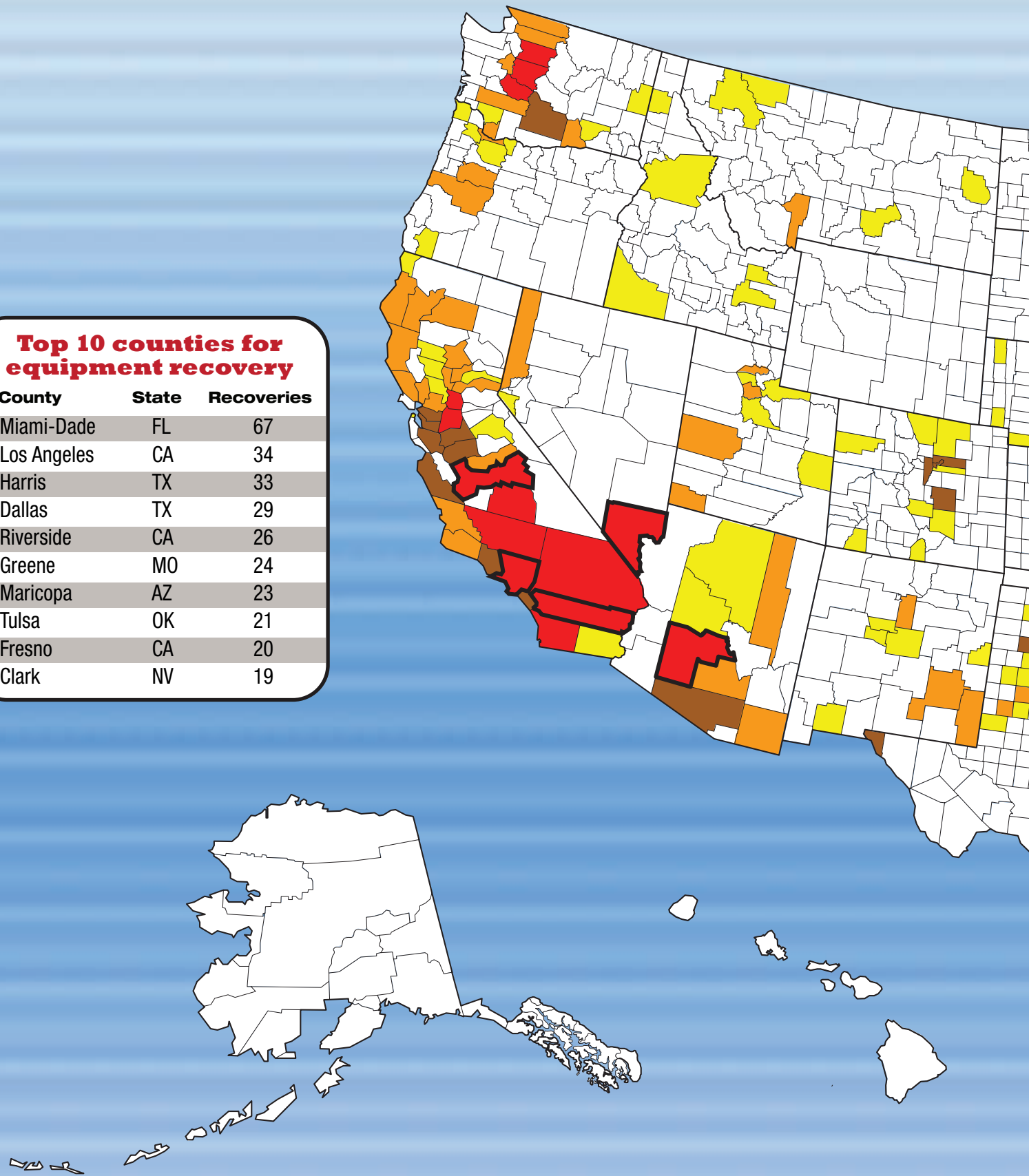
County	State	Thefts
Harris	TX	222
Miami-Dade	FL	203
Dallas	TX	143
Oklahoma	OK	96
Montgomery	TX	94
Maricopa	AZ	92
Wake	NC	86
Los Angeles	CA	84
Mecklenburg	NC	84
Muscogee	GA	82



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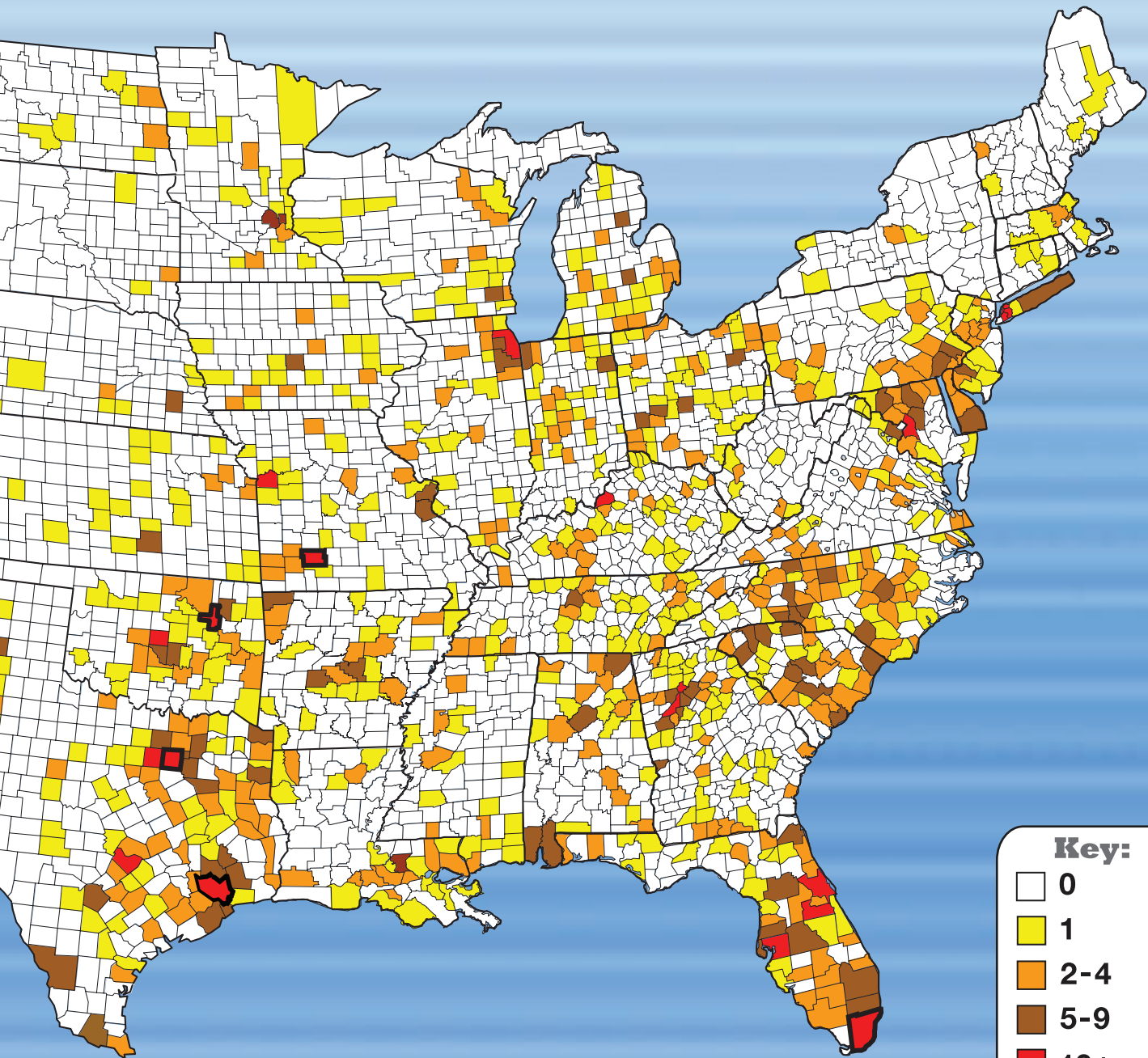
Government Theft by County



Top 10 counties for equipment recovery

County	State	Recoveries
Miami-Dade	FL	67
Los Angeles	CA	34
Harris	TX	33
Dallas	TX	29
Riverside	CA	26
Greene	MO	24
Maricopa	AZ	23
Tulsa	OK	21
Fresno	CA	20
Clark	NV	19

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nt Recovery by County



Recovery Rates

Low recovery rates make it difficult to draw concrete conclusions from recovery statistics alone. By including information from investigations, such as those in the “Case Studies” section, we can gain an idea of how equipment is stolen, where it goes, and who steals it.

The NICB compiled 13,374 reports of stolen heavy equipment in 2010. Conversely, in 2010, the NICB reported 2,562 recoveries of equipment stolen in 2010.



Only 19% of stolen equipment was recovered in 2010.

NOTES

1. Of the 13,374 reported equipment thefts in 2010, NCIC reported 2,562 recoveries.
2. The recovery rate does not reflect pieces of equipment that law enforcement recovered but did not mark as recovered.
3. The recovery rate does not reflect unreported thefts.

ANALYSIS

Several factors contribute to the low recovery rate of stolen equipment. They are as follows:

- delays in discovery and reporting theft
- inaccurate or nonexistent owner records
- lack of pre-purchase screening of used equipment
- limited law enforcement resources dedicated to equipment investigations
- complexities in equipment numbering systems
- limited, possibly inaccurate, equipment information reported to NCIC
- equipment information reported to NCIC is often reported in error to the “article file” rather than the “vehicle file”

COMMENT

The area that needs the most improvement is also the area that promises immediate results: making accurate information available to law enforcement 24 hours a day through NER and the NICB.

As a minimum requirement, equipment owners should keep accurate lists of equipment with PIN/serial numbers and submit them to law enforcement, their insurers, and NER as soon they discover a theft.

When they purchase equipment, owners should register serial numbers in the NER database, so that the information is available to law enforcement 24 hours a day. In the event of a theft, law enforcement can identify the equipment, even during weekends or at night.

Recovery by State

Top Ten States for Equipment Recovery

State	Recoveries
Texas	324
California	264
Florida	210
North Carolina	147
Georgia	122
Oklahoma	101
South Carolina	95
Ohio	84
Missouri	79
Kentucky	65
Illinois	65

The top five states account for 42% of recoveries.

The top ten states account for 61% of recoveries.

NOTES

1. In 2010, law enforcement recovered most equipment in the same state in which it was stolen.
2. The bigger the state and the more demand for equipment within that state, the lower the chance that the equipment will leave the state.
3. The longer the time after a theft, the more likely it is that thieves will move equipment out of state and sell it to a purchaser who seems to have no knowledge of the theft.
4. Law enforcement is less likely to recover equipment when thieves move it far away, especially out of state. Therefore, more stolen equipment may be moving out of state.

ANALYSIS

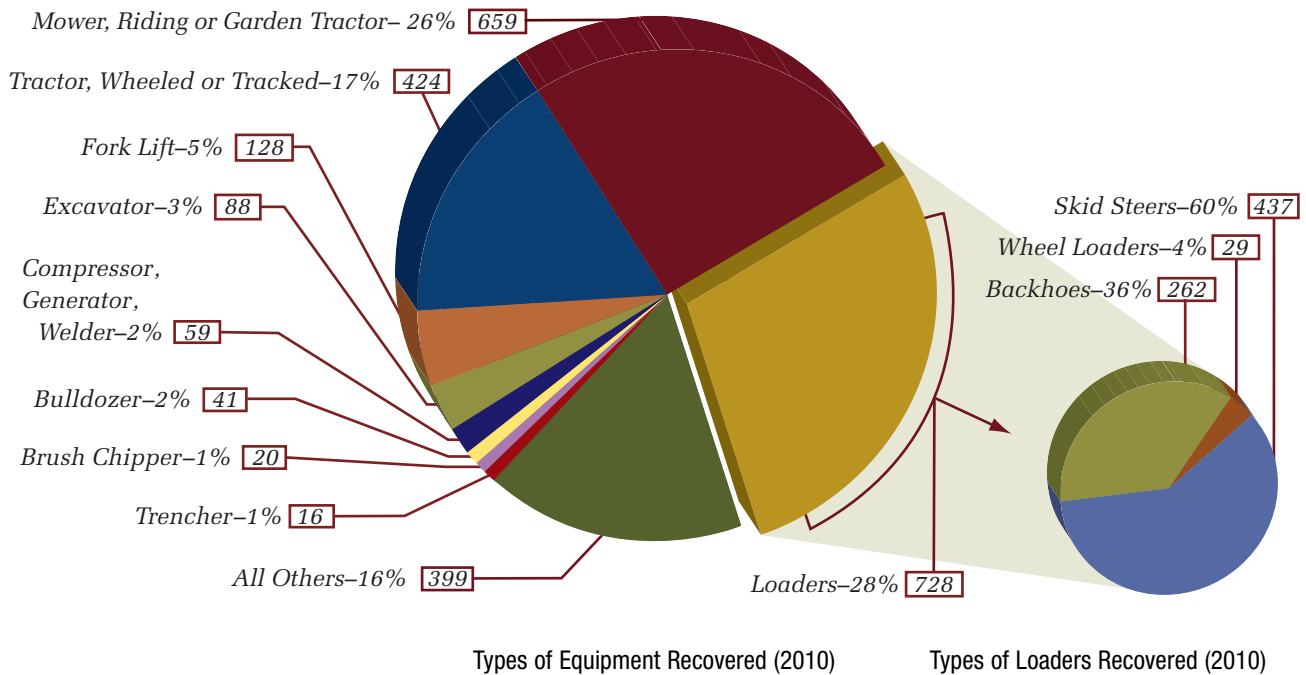
1. Lack of screening in the used-equipment market bolsters thieves' confidence. They feel safe selling equipment in neighboring states or neighboring counties.
2. Recoveries made at ports and borders prove that thieves do export stolen equipment; however, selling stolen equipment within the United States is easy, so the cost of export is worthwhile only when thieves can raise prices abroad or when they steal equipment close to a border.

COMMENT

In the fight against equipment theft, it is important to act both locally (for example, by circulating theft reports) and nationally (for example, by submitting data to national databases).

A key component in the fight is to make it harder for thieves to sell stolen equipment. Buyers should check used equipment at www.IRONcheck.com before purchasing.

Types of Equipment Recovered



NOTES

1. Source is the total number of recoveries of equipment stolen in 2010.
2. The "Excavator" category includes both full-size and compact or mini-excavators.
3. Loader breakout is an estimate based on thefts reported to NER.

ANALYSIS

The types of equipment recovered most are usually the types of equipment stolen most. The gap between theft and recovery continues to narrow as NICB training encourages law enforcement to look more closely at the pieces of equipment stolen more frequently.

Mower, Riding or Garden Tractor has the lowest recovery rate at 10 percent. Forklifts have the highest rate of recovery (35 percent). When excluding Mower, Riding or Garden Tractor, equipment recovery rate jumps to 27 percent (as opposed to 19 percent when all 13,374 thefts are included).

Recovery by Manufacturer

Manufacturer	Recoveries
John Deere	539
Caterpillar	313
Kubota	223
Bobcat	215
Case	114
New Holland	55
Ford	45
International	42
Cub Cadet	40
Ingersoll-Rand	26

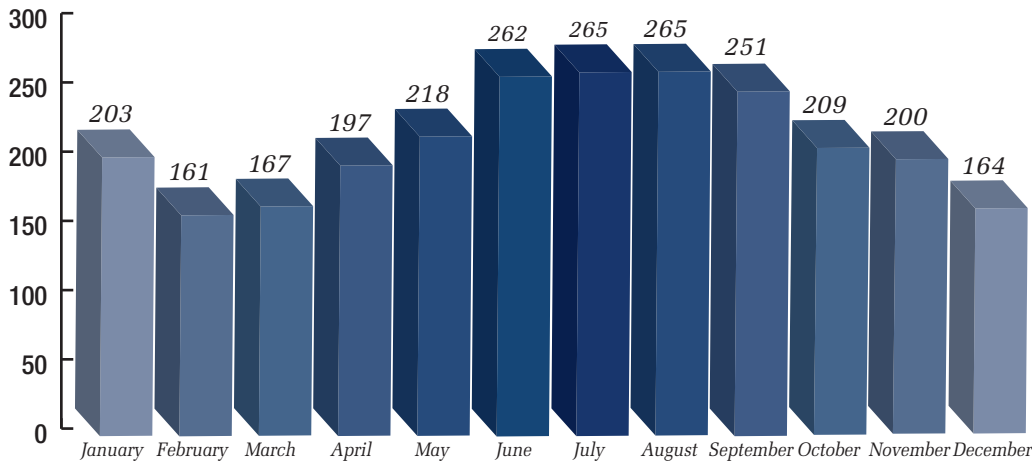
NOTE

1. Source is the total number of recoveries of equipment stolen in 2010.

ANALYSIS

The top five manufacturers account for 55 percent of all recoveries. The makes of recovered equipment closely mirror the makes of stolen equipment.

Recovery by Month



NOTE

1. Source is the total number of recoveries of equipment stolen in 2010.

ANALYSIS

As the busy season slows and jobs near completion, jobsites become safer and more accessible to law enforcement. The majority of work for larger equipment has generally finished, and equipment begins to sit for longer periods of time as projects are completed. It is not uncommon for contractors using stolen equipment to abandon it or leave it behind at the end of a job as maintenance and storage may be more costly than stealing a new machine next year.

Model Year of Equipment Recovered

Year	Recoveries
2010	325
2006	253
2008	242
2007	220
2005	218
2009	212
2004	165
2000	129
2003	112
2002	93

NOTES

1. Source is the total number of recoveries of equipment stolen in 2010. Each piece of equipment manufactured in 2010 faced potential theft for only part of the year, from the date sold to December 31.
2. Results may be skewed slightly because owners often misstate the date of manufacture. For example, a buyer may list a 2009 model purchased in 2010 as a 2010 model.

ANALYSIS

Newer equipment draws more attention from both law enforcement and thieves. It is not uncommon for older equipment to sit unused in lots or yards, but newer equipment is more likely to be noticed as out-of-place by officers.

Top 10 Cities for Equipment Recovery

City	State	Recoveries
Miami	FL	47
Houston	TX	30
Springfield	MO	24
Riverside	CA	21
Fresno	CA	19
Las Vegas	NV	18
Louisville	KY	18
Phoenix	AZ	18
Tulsa	OK	18
Bakersfield	CA	17

NOTES

1. Source is the total number of recoveries of equipment stolen in 2010.
2. Six of the top ten cities for recovery are in the top ten states for theft.

ANALYSIS

Recoveries tend to be localized near high theft areas, suggesting that a good deal of stolen equipment doesn't move far. This may be due to the rules of supply and demand; where there is equipment to steal there are machines that are needed. Unfortunately, not all high theft areas have high recoveries. Areas with proper funding, training, and dedicated heavy equipment taskforces have much higher recovery rates. It is interesting to note California's significant presence on this list. This state's mandatory statewide registration programs provide law enforcement with many opportunities to access equipment and, therefore, make recoveries.



Key Statistics

The following numbers give a snapshot of NER and NICB operations as of December 31, 2010:

16,310,332 Number of ownership records

\$14,158,013 Value of items recovered by law enforcement with the help of NICB and NER in 2010

102,451 Theft reports in NER database

\$24,284 Average value of equipment recovered by police with NICB and NER assistance

10,978 Fleets with equipment registered with NER

1,390 Law enforcement officers trained by NICB on heavy equipment investigations in 2010

583 Recoveries made by law enforcement with the help of NICB and NER in 2010

382 Attendees at FBI-LEEDA/NER/NICB Regional Equipment-Theft Summits in 2010

37 States in which the NICB conducted training in 2010

17 Number of insurance companies offering incentives to register equipment on NER's database

5 Number of top ten equipment rental companies that are NER clients



Case Studies

Oklahoma Chop Shops

An employee of the Canadian County Oklahoma Sheriff's Office was attempting to serve a tax warrant on a property located in rural Oklahoma City, Oklahoma. To verify that he was at the right location, the agent ran the license plates on two vehicles at the property and discovered that both were reported stolen. The Sheriff's Office requested that an NICB agent assist during the subsequent execution of a search warrant.

During the search, two juveniles drove up to the domicile in what turned out to be another stolen vehicle. They were promptly arrested.

The search of the property led to more than 70 recoveries, valued at nearly \$1 million, which included stolen vehicles, equipment, and trailers. The suspects connected with this ring were identified as operating chop shops and were in possession of a number of stolen vehicles. Numerous state and federal charges have been filed against the subjects involved in these cases.

In connection with this case, two auto shops in Moore, Oklahoma were served with search warrants. Police officers found stolen items including an "owner give-up" Ford Mustang transmission. That discovery resulted in the claimants pleading guilty to insurance fraud in Oklahoma County District Court.

Mississippi Lost and Found

During a search operation for a missing child, the Panola County, Mississippi, Sheriff's Office used a helicopter to scan vast areas. As the helicopter was sweeping a grid, its LoJack receiver got an alert. The location was identified for follow-up investigation.

After the successful rescue of the missing child, law enforcement went back to the property that had been emitting the alert and located a stolen CAT bulldozer. Upon questioning the property owner, law enforcement learned that the dozer was brought on the property by a relative of the owner.

The property owner, a prominent community member, was angry about stolen equipment being found on his land. He showed the officer other pieces of equipment that the relative had "stored" on the property and insisted that law enforcement check them out.

The Panola County Sheriff contacted the State of Mississippi Agriculture/Commerce Theft Unit and requested their assistance and, ultimately, an NICB agent as well.

The investigation led to the recovery of 15 pieces of stolen equipment, valued at \$414,201. The equipment was stolen from locations in Alabama, Georgia, and Mississippi. Prosecution against two suspects in this case is pending.

\$80,000 Backhoe Discovered Two Years After Theft

On August 22, 2008, a 2005 Caterpillar 416-D backhoe was stolen from the construction site of a new high school in Alto Bonito, Texas. The Starr County Sheriff's Office handled the initial investigation.

In November, 2010, a Texas Ranger contacted his NICB counterpart and informed him that he had a confidential informant who knew the whereabouts of the stolen backhoe. The Texas Ranger and the NICB agent, using the informant's information, recovered the backhoe and arrested a 41-year-old suspect on felony theft charges. The backhoe was valued at \$80,000.

The insurance company involved in this case authorized a payment to the confidential informant for the information that led to the recovery.

Summary

Although complete statistics do not exist, it is clear from available data that equipment theft is a serious problem. Estimates derived from data in this year's report suggest the total value of stolen equipment in 2010 is \$400 million. This number does not include losses from business interruption, such as short-term rental costs, project-delay penalties, and wasted workforce and management time. By frequency of loss, theft is a greater problem than any other type of equipment risk.

Equipment-theft levels coincide with the amount of equipment in a particular area. The states with the highest volume of construction and agriculture report the largest number of thefts.

Mobility and value of equipment are the lead contributors to theft. Most thefts are from work sites with little or no security. Given two similar types of equipment, a thief will steal the newer one because it is more valuable. In contrast to the automobile industry, there is little difference in equipment security between a new machine and one made several years ago.

Law enforcement recovers as little as 19 percent of stolen equipment. Recovery locations and types closely mirror theft locations and types.

Conclusion

Equipment owners and insurers should focus risk-management efforts on easily transportable, high-value equipment.

Equipment security and work-site security are important. Work-site security should be a priority because equipment often sits in areas with little or no physical security.

Officers investigating equipment theft should focus on popular targets and look for red flags such as location, type of transport, missing decals, altered paint, and especially missing identification plates.

The area that needs the most improvement is also the area that promises immediate results: supplying accurate information to law enforcement 24 hours a day through NER and the NICB.





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