Data Skimmers in Motor Fuel Dispensers

Western Weights and Measures Association Conference
September 26, 2017
What are skimmers?

- They are **illegal** devices that ‘capture’ customer card info
- Connected to the credit card readers
- Installed inside fuel dispensers, ATMs, point of sale
- Their presence is increasing
- Their design and technology is changing

It only takes 7 to 8 seconds for a criminal to install a skimmer in a fuel dispenser!!!
What do criminals do with the skimmer data?

- Re-encode card numbers on magnetic stripe cards
- Purchase gift cards and other merchandise
- Sell data on “dark web” for other criminal use
- Proceeds used to fund other criminal activities
What harm is caused?

- Skimmers cause fraud, which is costly to...
  - Consumers
  - Businesses
  - Financial institutions

- The equipment needed to make and install a skimmer is relatively inexpensive and easy to obtain

[Image of credit card skimmer with text: CREDIT CARD SKIMMER FOR SALE GAS PUMP skimmermanufacture.net]
Who should be concerned about skimmers?

- Business owners accepting credit cards
- Law enforcement
  - State, county, and local police
  - United States Secret Service
  - FBI
- Consumers
  - Review statements for fraudulent purchases
  - Ask retailers what security measures they have in place
  - Let retailers know if they see something suspicious
- Financial institutions
How is Weights and Measures involved?

- We license and inspect fuel dispensers
  - Actively checking for skimmers for over 10 years
  - Educate fuel retailers regarding inspections and security measures
  - State “clearinghouse” for tracking fuel station skimming activities
  - Respond and investigate reports of potential skimming activity

- License Registered Service Representatives (dispenser service technicians)
  - New rule requires service technicians to report the discovery of skimmers

Together we can combat this costly crime!
Arizona data – Fueling

Number of Skimmers Found/Reported Per Year

800% Increase 2015 to 2016

37 found as of 09/01/2017
## Estimated costs in Arizona

<table>
<thead>
<tr>
<th>Year</th>
<th># Skimmers</th>
<th>Estimated Cost</th>
<th>High Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>8</td>
<td>$882,400</td>
<td>$44,120,000</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>$441,200</td>
<td>$22,060,000</td>
</tr>
<tr>
<td>2013</td>
<td>12</td>
<td>$1,323,600</td>
<td>$66,180,000</td>
</tr>
<tr>
<td>2014</td>
<td>6</td>
<td>$661,800</td>
<td>$33,090,000</td>
</tr>
<tr>
<td>2015</td>
<td>11</td>
<td>$1,213,300</td>
<td>$60,665,000</td>
</tr>
<tr>
<td>2016</td>
<td>88</td>
<td>$9,706,400</td>
<td>$485,320,000</td>
</tr>
</tbody>
</table>

Estimated Losses:
- Direct Loss Per Victim = $1,003
- Indirect Loss Per Victim = $100
- Low Cost = 100 Victims per Skimmer
- High Cost = 5,000 Victims per Skimmer

Estimates from "Estimating Annual Losses From Payment Card Skimming Fraud in Florida," Sergio Alvarez, Office of Policy and Budget, Florida Department of Agriculture and Consumer Services, January 2016
About dispenser skimmers...

- Installed internally in the dispenser
- Attached to the card reader (some directly attached)
- Most are attached to wiring
- Some attached to keypad to capture PIN
- Some must be retrieved to get the card data
- Others are Bluetooth-enabled and do not need to be retrieved from the dispenser
- SMS-enabled skimmers
Various skimmers recovered in Arizona...

Skimmer plugged in-line w/ card reader
This skimmer is also connected to the PIN keypad.
Skimmers come in many shapes, sizes, and colors.
Criminals will try to conceal skimmers by making them blend in with existing equipment...

... or even try to hide them deep inside the dispenser.

Can you find the skimmer?
Gilbarco Advantage dispenser CRIND tray

The CRIND circuit tray is accessed by opening the front panel of the dispenser.

CRIND = Card Reader IN Dispenser
The CRIND tray is located in the middle of the dispenser.
Skimmers installed on both sides of the CRIND tray...
Various “plug-in” skimmers
More “plug-in” skimmers
Skimmer w/ 3M tape
FBI bulletin on skimmer attached directly to card reader (2015)...

In this case, the criminal removes the entire card reader and installs one with a skimmer attached.
Here is one that was found in Arizona in 2016.

Note the clear “glob” of silicone attaching skimmer to card reader.

This device was suspected to have Bluetooth capability.
Overlay skimmers

Overlays slide over the existing area where a consumer would insert their credit or debit card. Here is one that was discovered on an ATM...
CAN YOU TELL THE DIFFERENCE? Hint: The 'skimmer' is on the right.
The newest type of skimmer.

These skimmers utilize cellular phone components to send copied credit card data via SMS text message.

This skimmer was located in Florida earlier this year.
Criminals placed a sticker on the card reader door panel to show evidence that the skimmer had been tampered with.

Residue left after sticker was removed
What to do if you find a skimmer...

- We ask that employees follow our “skimmer procedure.” This was developed in conjunction with Law Enforcement and has proven to be highly effective.
- If a skimmer is found, do the following:
  - **DO NOT TOUCH** the suspect device… doing so may disturb physical evidence left on the device (fingerprints, hair, etc.)
  - Bag/place the pump out of service
  - Take “quick” photos of the device as it was found
  - **Immediately** upon discovery,
    - Contact the Department of Agriculture, Weights & Measures Services Division;
    - Your Maintenance and Loss Prevention divisions;
    - Your local police department
- Print out the last receipt from the pump where the device was discovered
- Save all video surveillance
- Again, **DO NOT TOUCH** the suspect device
Efforts in Arizona

- Inspect for skimmers during all fueling device, fuel quality, and vapor recovery inspections

- Skimmer form
  - Special form completed when a skimmer is found
  - Designed with input from law enforcement and financial institutions to contain important information (pump location, device construction, Bluetooth capability, security measures, etc.)
Efforts in Arizona, cont.

- “Skimmer Alert” sent via e-mail when a skimmer is found
  - Distribution list includes law enforcement, financial institutions, major fuel retailers, fuel associations
  - Includes location, skimmer information form, pictures
  - Also distributed to IAFCI members (International Association of Financial Crimes Investigators)

- Summary of inspection sent to location where skimmer was discovered
  - Includes recommendations on regular inspection practices and security efforts
Efforts in Arizona, cont.

- Radius inspections when a skimmer is found
- Inspector evidence collection training
- Statewide inspection for skimmers
- Post locations on website, increased media
- AZPOST video for law enforcement training
Efforts in Arizona, cont.

- Stakeholder meetings, open communication with law enforcement, financial institutions, retailers

- Senate Bill 1294 passed May 2016
  - Increased penalties for skimmer crimes
    - 2\textsuperscript{nd} degree trespass, 3\textsuperscript{rd} degree burglary for unauthorized access to devices used for commercial transactions that accepting electronic or physical currency
    - Unlawful possession and use of scanning devices from class 6 felony to class 4 felony
Are skimmers going away?

**Chip card liability shift postponed at gas stations from October 1, 2017 to October 1, 2020**

TODAY’S TOP STORIES

**Crooks are selling a skimmer that works on all chip card readers**

Think that your new EMV-compliant chip-reading point of sale terminal will keep crooks from stealing your customer credit card info?

http://www.csoonline.com/article/3114245/cyber-attacks-espionage/crooks-are-selling-a-skimmer-that-works-on-all-chip-card-readers.html
Madison police arrest 2 believed to have placed card skimmers on gas pumps

ED TRELIVEN etreliven@madison.com  Nov 18, 2016

Image captured near Picacho Peak, AZ of 2 men posed as service technicians attempting to retrieve a skimming device

3 arrested in credit card skimmer bust at Falls Church gas pumps

Mar 18, 2017  1
Evidence collection

➢ Chain of custody...

➢ Definition:

   The movement and location of physical evidence from the time it is obtained until the time it is presented in court. Every transfer of evidence from person to person needs to be documented so that it is verifiable that nobody else could have accessed or tampered with that evidence.

➢ Who, what, when, where, and how...
Chain of custody example

What, Where, When →

Who →

How →

ON 01/05/2015 AT 0721 HOURS I RESPONDED TO 20203 N 67TH AVE THE CIRCLE K IN REFERENCE TO A FRAUD CALL. CALL NOTES STATED THAT A CARD SKIMMER WAS FOUND INSIDE OF PUMP 3.

UPON MY ARRIVAL I MET WITH ARIZONA DEPARTMENT OF WEIGHTS AND MEASURES INVESTIGATOR PRI. LINDA WETZEL, WHO TOOK ME OVER TO PUMP NUMBER 3. THIS PUMP WAS THE FARTHEST PUMP NORTH WEST OF THE STORE. LINDA OPENED THE PUMP AND POINTED TO WANT APPEARED TO BE AN ELECTRONIC ADAPTER THAT WAS CONNECTED TO THE CIRCUIT BOARD THAT READS THE CREDIT/DEBIT CARDS. THE ELECTRONIC PIECE APPEARED TO BE WRAPPED IN A BROWN FABRIC.

BE DOWNLOADED INTO THE DIMS SYSTEM AS EVIDENCE.

PRIOR TO REMOVING THE DEVICE I NOTICED THE RED CIRCLE K SECURITY TAPE WAS NOT STUCK TO THE CONNECTION OF EITHER PIECE OF ELECTRIC DEVICE. IT WAS ONLY STUCK TO THE SECURED BASE.

USING LATEX GLOVES I REMOVED THE ELECTRONIC SKIMMER AND PLACED IT IN A PROPERTY AND EVIDENCE PLASTIC BAG. I REMOVED THE SECURITY TAPE AND PLACED IT IN A SEPARATE PROPERTY AND EVIDENCE BAG. BOTH ITEMS WERE TAKEN TO THE GLENDALE POLICE MAIN STATION LOCATED AT 6835 N. 57TH DR. THERE I HAND DELIVERED THE ITEMS TO GLENDALE DETECTIVE T. WARD 13015 OF THE GLENDALE FINANCIAL CRIMES SQUAD.

JOSEPH ADVISED THAT CIRCLE K DESIRES PROSECUTION FOR THE FRAUD AND PLACEMENT OF THE SKIMMER IN THE MACHINE.

I PROVIDED LINDA AND JOSEPH BOTH WITH VICTIMS RIGHTS FORMS WITH MY NAME AND ID NUMBER AND REPORT NUMBER.

THIS CONCLUDES MY INVOLVEMENT IN THIS MATTER.
Evidence collection procedure

- Glove-up, use non powdered disposable gloves
- Place evidence in some type of evidence bag. Paper bag, Manila Envelope, zip-top bag... Seal top and initial if applicable.
- Keep items separate
- Handle as little as possible
What skimming leads to...
Glendale PD, March 2017
Goodyear PD, Sept. 2016
Goodyear PD, Sept. 2016
Questions?

Arizona Department Agriculture,  
Weights and Measures Services Division  
Kevin Allen  
Vapor and Fuel Program Compliance Manager  
kallen@azda.gov, 602-771-4939

Report a skimmer: dwm@azda.gov, 602-542-4373

Office of the Attorney General, Criminal Division  
Don Carroll  
602-542-7940  
donald.carroll@azag.gov

City of Glendale  
Police Department  
Detective Tom Ward  
623-930-3091  
tward@glendaleaz.com