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Preliminary Findings Regarding the Nevada SNAP FDaaS Implementation

Overview

On July 26, 2016, Pondera Solutions implemented its Fraud Detection as a Service (FDaaS) platform for the Supplemental Nutrition Assistance Program (SNAP) operated by the Nevada Division of Welfare and Supportive Services (DWSS). This platform employs modern analytics solutions to assist in detecting potential fraud, waste, and abuse. This report summarizes preliminary findings identified in the initial FDaaS rollout. A second deployment including additional alerts, maps, network analyzer, and case management is scheduled for August 30, 2016.

Flag Alert Summary

A review of the FDaaS Nevada SNAP Dashboard revealed that SNAP retailers and recipients tripped a total of 317,444 separate flag alerts for recipients and retailers during the transaction time period of December 31, 2013 to March 31, 2016. An alert is generated in the Dashboard each time a flag is tripped. Flags are tripped and alerts are identified when thresholds are exceeded in each batch of Nevada SNAP claims data processed by Pondera. Each batch typically contains claims submitted to Nevada SNAP for a one-month period. A flag alert summary for the entire claims data period is included in the tables below.

Count for Recipient Flags		
Recipient Flag Descriptions	**Flag Count**	**Recipient Count**
Recipients Traveling 10 Miles or More	239,848	239,848
Exclusive Out-of-State EBT Utilization	67,200	26,631
Recipient Residing in Shelter with Distant Transactions	1,506	1,065
PARIS Match	2,200	2,200
IRIS Referral	2,026	1,968
Recipients who are Currently Incarcerated	1,340	1,340
Recipient Transaction Spike at SuperClub	1,289	1,289
Deceased Recipient	1,944	762
PARIS/Out-of-State Combo	91	91
Total	**317,444**	**275,194**

Count for Retailer Flags

Retailer Flag Descriptions	Flag Count	Retailer Count
Transaction Volume Spike Indicator	1,767	1,767
Recipient Volume Spike Indicator	1,517	1,517
Convenience Stores which Exceed Peer Average for Transactions	488	466
Smash and Grab Alert	155	155
Transaction Amount Spike Indicator	7	7
Convenience Stores with High Dollar Transactions	11	2
Total	**3,945**	**3,914**

Level of Risk Summary

The Pondera Solutions Special Investigations Unit (SIU) conducted a review of the Flag Alert Summary for recipients and retailers. The following tables estimate the financial risk to the Nevada SNAP program based upon the flags that alerted. The estimate is derived by calculating financial exposure due to the possible impact on eligibility status that the flag alerts identified.[1]

Possible Exposure Amounts by Recipient Flag

Flag Tier	Recipient Flag Name	Possible Exposure Amount	Recipient Count
1	Recipients who are Currently Incarcerated	$4,201,090	1,340
1	PARIS/Out-of-State Combo	$140,049	91
1	Deceased Recipient	$314,166	762
Tier 1 Flag Total		**$4,655,305**	**2,312**
2	Recipient Residing in Shelter with Distant Transactions	$133,361	1,065
2	PARIS Match	$420,656	2,200
2	Exclusive Out-of-State EBT Utilization	$26,431,476	26,631
Tier 2 Flag Total		**$26,985,493**	**29,896**
3	Recipient Transaction Spike at SuperClub	$359,636	1,289
3	Recipients Traveling 10 miles or More	$395,366,262	239,848
Tier 3 Flag Total		**$395,725,898**	**241,137**
5	IRIS Referral	$8,281,655	1,968
Total for all Tier Flags		**$435,648,350**	**275,194**

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[1] The estimates are inclusive for the time period of 01/31/2011 to 03/31/2016, except for transaction based flags that cover the time period 12/31/2013 to 03/31/2016.
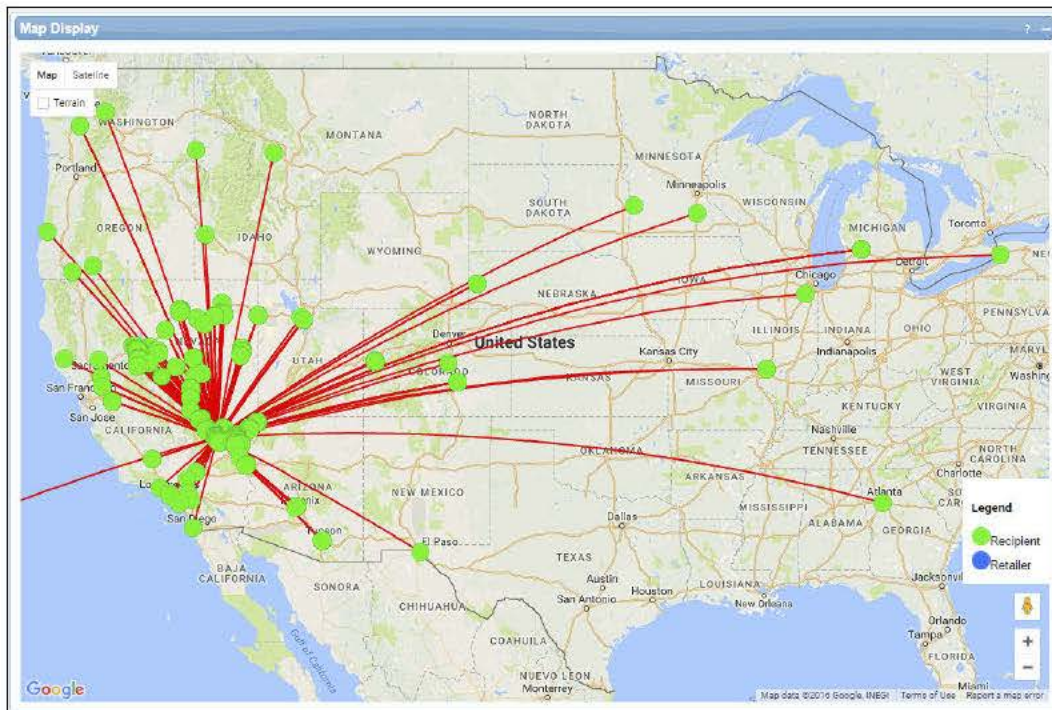
![Pondera logo]

Possible Exposure Amounts by Retailer Flag

Flag Tier	Retailer Flag Name	Possible Exposure Amount	Retailer Count
2	Convenience Stores with High Dollar Transactions	$157,923	2
2	Transaction Amount Spike Indicator	$5,031,376	7
2	Smash and Grab Alert	$109,774,859	155
2	Recipient Volume Spike Indicator	$1,144,683,392	1,517
2	Transaction Volume Spike Indicator	$767,257,496	1,767
Tier 2 Flag Total		**$2,026,905,046**	**3,448**
4	Convenience Stores who Exceed Peer Average for Transactions	$33,318,545	466
Total for all Tier Flags		**$2,060,223,591**	**3,914**

Geospatial Map Summary

The FDaaS Dashboard includes geospatial mapping capability to visualize (1) recipients who to visit a particular retailer; (2) recipients who travel excessive distances (greater than 50 miles) to visit a retailer; and (3) convenience stores exceeding peer averages for individual transactions. This tool furnishes the ability to provide a snapshot of recipient and retailer activity that might be indicative of trafficking in SNAP benefits.

The geospatial map below provides an example of recipients traveling excessive distances to transact business at retailers in zip code area 89048.

The geospatial map below provides an example of convenience stores exceeding peer averages for individual transactions.[2]

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[2] The convenience store retailer exceeds peer transaction amount average by 20 percent or more.

Flag Alert Examples

The following examples provide illustrations of flags that alerted subsequent to the implementation of the FDaaS platform for Nevada SNAP:

DECEASED RECIPIENT EXAMPLE

The FDaaS Dashboard identified David ▮▮▮▮ as an active Nevada SNAP recipient, who died on March 2, 2016. A review of the FDaaS Dashboard Flag Details disclosed a total of 26 SNAP transactions occurring after his date of death at four different retailers.

INCARCERATED RECIPIENT EXAMPLE

The FDaaS Dashboard identified Brian ▮▮▮▮ as an active Nevada SNAP recipient, who currently is incarcerated and has been so since November 13, 2015. Open-source research disclosed that ▮▮▮▮ plead guilty to murder during February 2016 for shooting and killing a 17-year-old in Washington state during 2015.[3] FDaaS Dashboard data determined a last SNAP transaction date of March 20, 2016 for ▮▮▮▮, which occurred during his period of incarceration.

Man pleads guilty to shooting death of Oak Harbor teen

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By Jessie Stensland
Whidbey News-Times
Published: Thursday, February 25, 2016, 12:01 a.m.

OAK HARBOR — One of the four people accused in the murder last fall of an Oak Harbor teenager pleaded guilty Monday.

Brian ▮▮▮▮ 20, admitted to shooting and killing 17-year-old John ▮▮▮▮ As part of the plea agreement, he provided a recorded statement about the murder and agreed to testify against his three codefendants.

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[3] http://archive.heraldnet.com/article/20160225/NEWS01/160229505

VALIDATION EXAMPLE

Public news reports identified the arrests of three individuals during May 2015 for SNAP fraud charges associated with activity at two convenience stores in Washoe County, Nevada.[4] According to the published reports, law enforcement authorities made three arrests and uncovered a loss of $376,000 through the fraudulent use of SNAP funds at the Dhaka Convenience Store and Family Mart.

Arrested   **Arrested**   **Arrested**

Both convenience stores were analyzed through the FDaaS Dashboard. This analysis sought to determine if any suspicious behaviors/activity would have been identified through flag alerts if the Pondera platform had been active at the time of the perpetrated fraud. Analysis determined the following flag alerts would have been identified for activity occurring prior to the arrests, and the analytics could have assisted in identifying the ongoing suspicious activity at the stores.

For Dhaka Convenience Store:
- Recipient volume increased 159 percent during a three-month period
- Transaction volume increased 320 percent during a three-month period

For Family Mart:
- Recipient volume increased 241 percent during a three-month period
- Transaction volume increased 178 percent during a three-month period
- Transaction amounts exceeded Nevada SNAP convenience store peer average by 22 percent

Not only were recipient and transaction spikes found at these two convenience stores, but both also had recipients traveling significant distances to conduct SNAP transactions. This is illustrated through the geospatial maps below.[5]
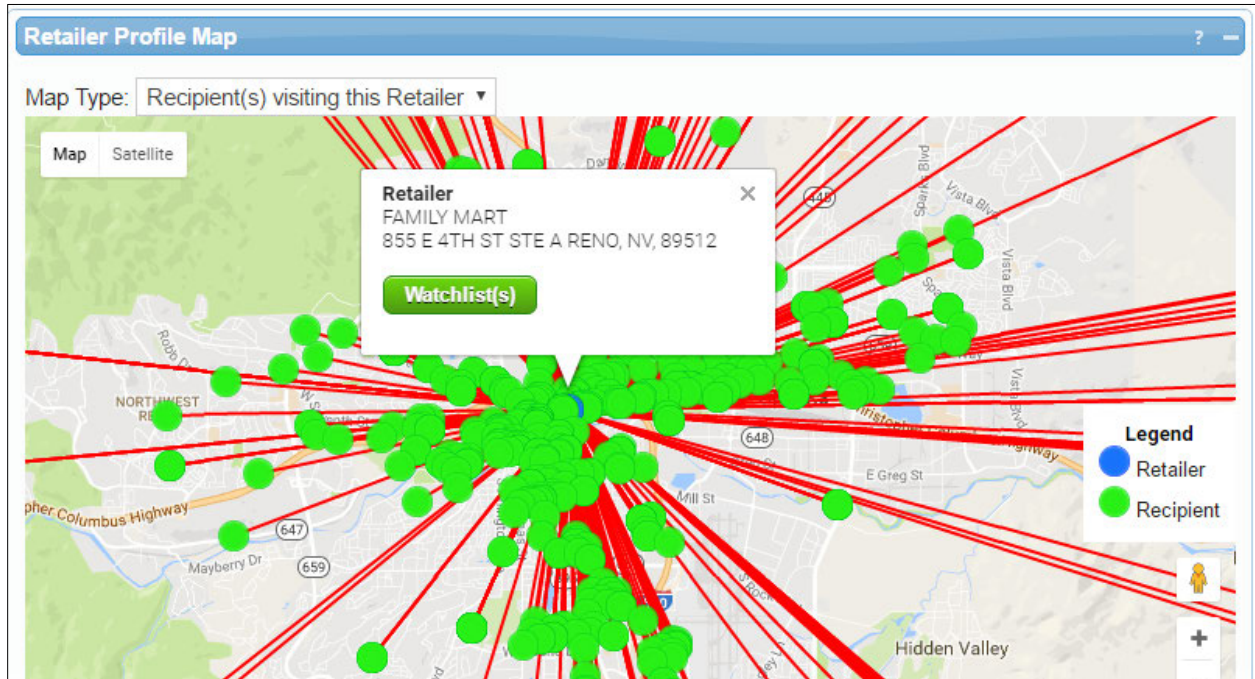

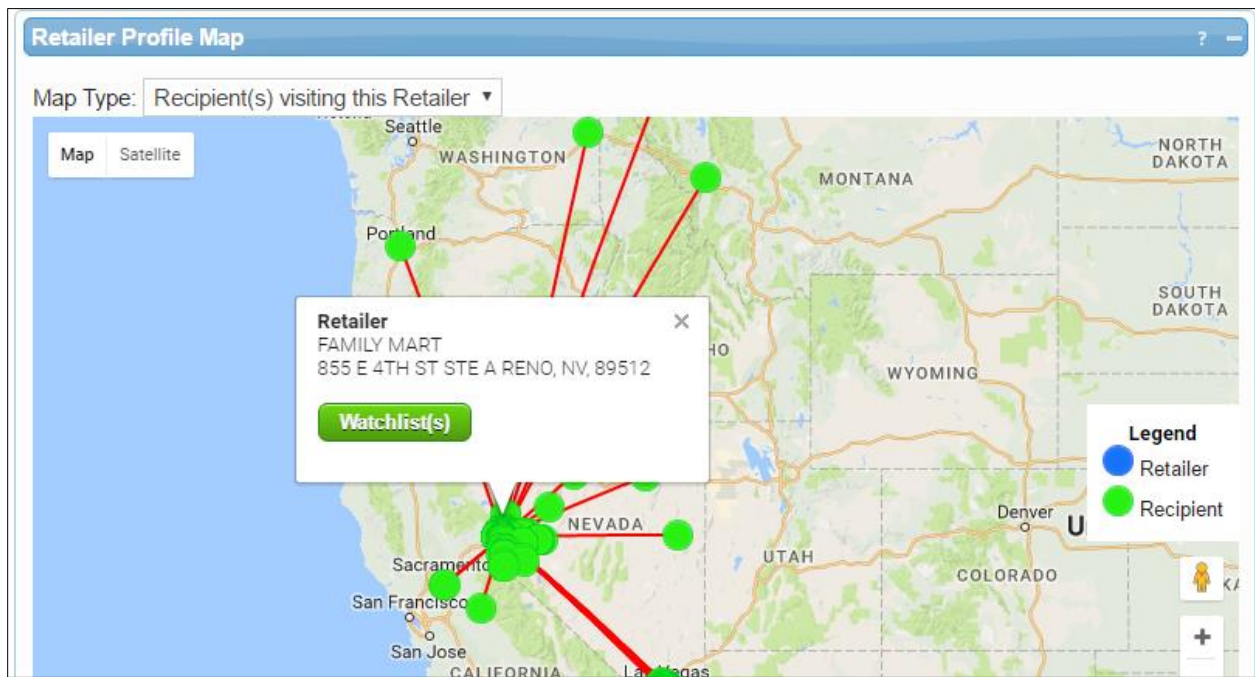[4] http://www.kolotv.com/home/headlines/Three-Arrested-on-Welfare-Fraud-Charges-305041071.html

[5] The incarceration and validation examples herein are compiled from public source data and further investigation would be required to confirm the details set forth above.
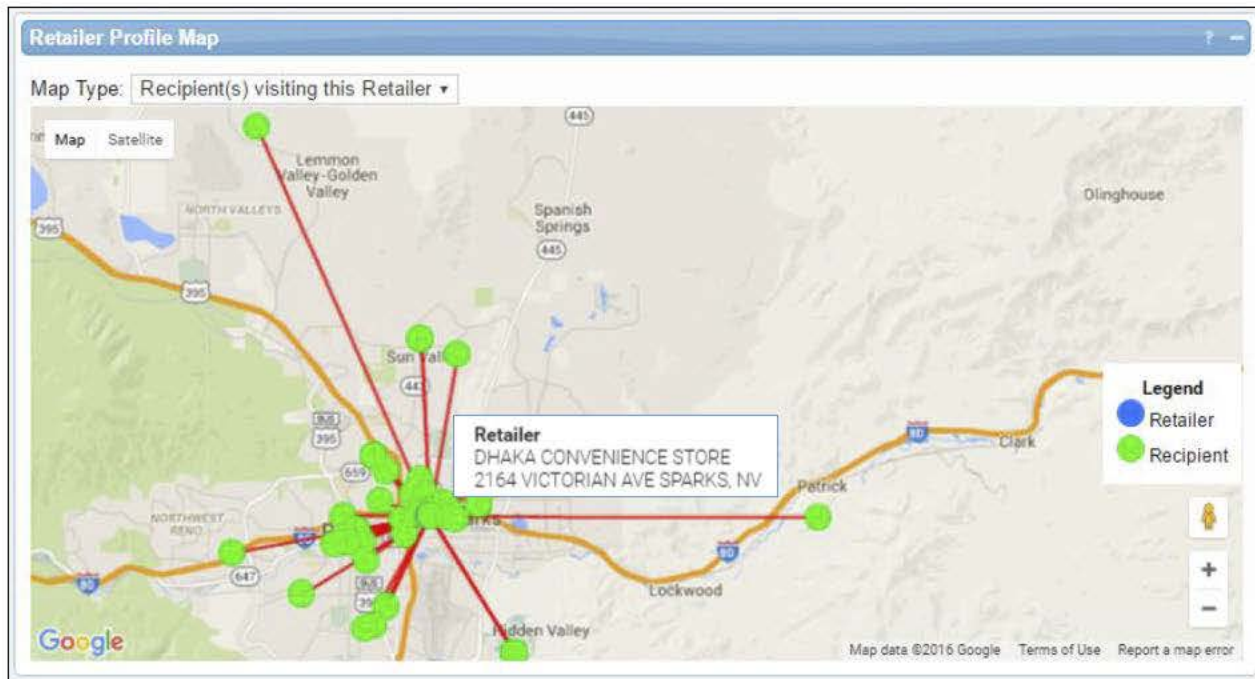
Family Mart Geospatial Map – Recipients Visiting Retailer

Zoom View

Bird's Eye View

![Pondera logo]

Dhaka Convenience Store Geospatial Map – Recipients Visiting Retailer

Bird's Eye View

Pondera's FDaaS and Nevada's Fight Against SNAP Fraud

Most persons who apply and utilize the SNAP Program do so honestly; however, in order to continue to provide the accessibility necessary to ensure that individuals have access to the program, opportunities exist to perpetrate fraud. For instance, a 2012 report by the Nevada Legislative Auditor identified issues with the Nevada SNAP program continuing to pay benefits to deceased recipients.[6]

In addition, fraud occurs in the trafficking of SNAP benefits. This happens when SNAP recipients sell their benefits for cash to retailers, often at a discount. A United States Department of Agriculture report issued during 2013, estimated the total value of trafficked benefits nationally at $858 million annually.[7] The report pointed out that small stores (e.g. small grocery or convenience stores) accounted for 85 percent of all trafficking redemptions, even though these stores represented only 15 percent of all redemptions.

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[6]
https://www.leg.state.nv.us/division/audit/Full/BE2012/Division%20of%20Welfare%20and%20Supportive%20Serv ices,%20LA12-19%20Full.pdf
[7] http://www.fns.usda.gov/extent-trafficking-supplemental-nutrition-assistance-program-2009-2011-august-2013

The Pondera FDaaS System provides the tools to detect previously unknown anomalies and patterns by ingesting program data, matching it against third party data sources, and then running the data through a series of procedural and prediction models. When a transaction violates a predetermined threshold, FDaaS sends an alert to the integrated FDaaS Dashboard, Recipient or Retailer Profile, and Geospatial Analysis maps. Nevada SNAP Program Integrity staff can then view the alerts and interact with the maps to identify possible instances of program fraud.

The FDaaS Dashboard offers the capability to address the types of fraudulent SNAP activity identified in State and National reports. In that regard, if follow-up investigation by Nevada authorities substantiated the fraudulent or ineligible activity identified in just the first run of Tier 1 flags noted above, this could result in savings to the Nevada SNAP program exceeding $4,500,000. If just HALF led to administrative or criminal cases, this would represent over $2,500,000.