

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





The Development and Implementation of a Leak Detection Program and Study by SNWA Conservation

Toby Bickmore



SOUTHERN NEVADA WATER AUTHORITY®

Residential Household Leaks

- National research shows 10-12% residential water use (loss) occurs through leaks
- Leaks can range from 2-20k gallons per house per month



What do they do?

- Monitors your home's water supply – inside and out?
- Catch leaks, prevent water damage
- Some allow for the shut-off of water at the device



Program Development

- New technology – no data on water savings
- Handful of products available to not only address site leaks but also help general household water use
- What is the behavior impact of these devices on overall house water use
- Created a simultaneous rebate program and research study (new to SNWA)



Coupon Programs – Smart Leak Detector

- Print coupon at SNWA.com
- Coupon value:
 - 50% of purchase price
 - Not to exceed \$200
- Redeem by mail
- Participants enrolled in an SNWA study
- Launched February 2019
- Single family residential properties only
- Mandatory site visit prior to receiving rebate



Program development Cont.

- Want rebate to provide incentive to participate in research study
- Generally need two years of pre and post consumption data to make solid determination of savings so created a 5-year study
 - Will look at all devices rebated for two years to determine consumption impact
 - Samples of each device were submitted to Utah State for testing to verify accuracy
 - Need to develop customer and manufacturer language on sharing data

Data Sharing

- Data sharing 'ok' from customer and manufacturer
- Manufacturer agreement

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Research requirements

- The rebate value is noted on each coupon.
- Coupons are non-assignable and void if transferred from their original recipient to any other person, firm or group. SNWA does not permit the unauthorized distribution, collection, sale or assignment of its coupons for any reason.
- The customer is required to pay any applicable sales tax. In order to obtain the coupon, the customer must complete the online form and a brief survey.

Research requirements

- To receive the smart leak detector rebate coupon, applicants must participate in a 60-month research study relating to consumer leak detection devices.
- The person redeeming a rebate coupon must allow the Water Authority access to water use data from their device account through direct collaboration with the device manufacturer, including water use data and notifications sent by the device manufacturer.
- Participants must authorize the Water Authority to obtain water use records for the property address from the SNWA Water Purveyor that provides water service.
- The Water Authority will communicate with the participant regarding program participation, information about Water Authority programs, or to conduct research.
- Study participants must understand that some devices may produce different water use estimates than the actual water use readings from the purveyor water meter, which is used to produce water bills.
- Water purveyors may require the removal of smart leak detector devices installed in the meter enclosure. The purveyor also may remove the device to conduct maintenance activities and will not be responsible for any consequence to the device, including the possibility the device may be rendered useless.
- The person redeeming a rebate coupon will assume responsibility for device selection and any consequences of device use and installation.
- Research study participants will notify the Water Authority if a move from the property address takes place during the term of the study.

A Not-For-Profit Water Agency

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SOUTHERN NEVADA WATER AUTHORITY
Smart Leak Detector Program Manufacturer Agreement

This Smart Leak Detector Program Manufacturer Agreement ("Agreement") is made this ____ day of ____, 20__, by and between the Southern Nevada Water Authority ("Authority") and the product manufacturer or authorized representative ("Manufacturer"). The Authority and Manufacturer may be referred to individually as "Party" and collectively as "Parties".

- WHEREAS:**
- The Authority is conducting a field evaluation of products capable of providing consumers with water use detail and identifying leak events; and
 - The purpose of the Smart Leak Detector Program ("Program") is to encourage qualifying property owners to participate in this evaluation by purchasing and installing selected leak detector devices, and authorizing the Authority to receive data produced by their device in return for the Authority's provision of financial discounts on certain devices; and
 - The Manufacturer wishes to participate in the Program by having their product incentivized by the Authority and is willing to collaborate in the collection and transfer of data necessary to the evaluation.

THEREFORE:

Based on the Program's principles and the mutual promises and agreements set forth in this Agreement, and for good and valuable consideration, the sufficiency of which is hereby acknowledged, the Parties agree as follows:

GENERAL PROVISIONS

1. Commencement and Expiration of Agreement

Unless a specific effective date appears on the signature page of this Agreement, the effective date shall be the date of Agreement execution. The Agreement shall remain in effect throughout the Program's duration or until cancelled by written notice by either Party as provided below.

2. Exclusive Benefit of the Parties

This Agreement is not intended to create any rights, powers or interest in any third party and is made and entered into for the exclusive benefit of Authority and Manufacturer or its affiliates.

PRIORITY	ITEM	REQUIREMENT	NOTES:
	Frequency	Monthly, due within 10 days of end of month.	
	Duration	730 days	Preference is to have as continuous set as possible.
	Critical Variables	Client identification number, Address, Date, Time, Water usage (gallons) for the resolution level	Pressure, Temperature and other variables may be included at the Manufacturer's discretion.
	Resolution	1 hour	Helpful if compiled as daily and monthly.
	Data Transfer Method		To negotiate. Secure FTP preferred. Web-interface based if fully developed, API and email are also options for discussion.
	Leak identification	Flagged for duration of leak	Flexible as to how accomplished.
	Leak communication to customer	Flagged for duration of messaging; message to be provided.	Flexible as to how accomplished.
	Shut-off Event	Flagged for duration of shut-off; customer vs. auto shutoff should be distinguished where both types occur.	Flexible as to how accomplished.
	Data Quality	Anomalous, unexpected, or suspect reads shall be flagged. Missing data shall	Flexible as to how accomplished.

Coupon/Customer Agreement

Customer agrees to rebate program conditions as well as participation in the research study.

Customer submits completed coupon along with purchase receipt and box UPC to SNWA to trigger scheduling a site inspection.



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WATER AUTHORITY

Coupon expires: 03/29/2019
Coupon printed: 02/27/2019 17:52
Coupon number: 302934

SNWA smart leak detector rebate form Customer information

Property address _____
Installation number _____ NV 89138
Phone _____ 702-863-3759
Email _____ Toby.bickmore@snwa.com

Product information

Purchase date _____ Purchase location _____
Manufacturer _____ Model _____
Pre-tax price after all discounts _____

Program conditions

1. By participating in this program, you agree to participate in program evaluation and product research conducted by SNWA.
2. To be eligible for the rebate, you must complete this coupon and mail it to SNWA with the required attachments listed below.
3. The rebate is 50 percent of the pre-tax cost after application of any discounts. The maximum rebate is \$200 for approved devices.
4. For a list of qualifying products, visit: www.SNWA.com/rebates/smart-device/index.html. To inquire about products not on the eligibility list, please call 702-862-3760.
5. Participation is limited to properties with water service provided by an SNWA member agency and whose account is in good standing. Rebates will be paid to the property owner at the mailing address of record as recorded by the Clark County Assessor or the water account holder.
6. The date of purchase from the customer receipt must be within 30 days of the coupon printed date listed on the top of the coupon.
7. The product must be installed at the listed address within 90 days of purchase and you consent to a mandatory site visit.

My signature confirms I have read and agree to the program conditions listed above and the Program Conditions Part A and Research Consent Part B listed on SNWA.com

Customer signature _____ Date _____

Providing false information or violating the terms of the program may constitute fraud and result in prosecution.

To claim your rebate send:

1. The signed, completed rebate form
2. Dated cash register receipt
3. Original UPC code from package



Send to:

SNWA Conservation
P.O. Box 99056
Las Vegas, NV 89193

Utah State University Testing

- Utilize USU bench testing to determine accuracy of devices
- Want to assure that device readings do not significantly deviate from utility meter readings



Utah State University Testing



Utah State University Testing Results

Tested three (3) devices from each manufacturer!

Table 1. Comparative summary of flow monitoring device capabilities

Device Feature	Flo*	Buoy	Flume	Phyn	Streamlabs (Water Monitor)	Streamlabs (Water Control)
Subscription req'd	X*	X				X**
Flow Monitoring	X	X	X	X	X	X
Pressure Monitoring	X	X				X
Temperature Monitoring	X	X		X	X	X
Humidity Monitoring						X
Single unit	X	X		X	X	X
In-line installation	X	X		X		X
Alexa/Nest/Google Home Pairing	X	X		X	X	X
Plumber recommended/req'd		X				
Automatic shutoff	X	X		X		X
Manual shutoff	X	X		X		X
Usage goals	X		X			
Leak alarms	X	X	X	X	X	X
Freeze detection/alerts	X			X	X	X
Water usage by fixture	X*	X		X		
24/7 Live support	X*	X				
Battery-powered		X	X			
Multiple Units from Single Device		X (Unlimited)	X	X (6)	X (2)	X (2 or 5**)
Warranty	1-year (3-year*)	1-year	1-year	2-year	2-year	2 or 5**-year (7-year brass)

Notes:

* Only with FloProtect

** Only with StreamPlus Enhanced

Utah State University Testing Results

Device Type	Serial Number	15 gpm	2 gpm	0.50 gpm	0.25 gpm
Flume	30NLECSUDP4IL	99.90%	99.75%	96.79%	98.17%
Flume	30FXJ9RS3L41J	99.02%	101.31%	99.50%	99.42%
Flume	30GNN24XH3NVE	99.90%	100.82%	98.24%	98.65%

Device Type	Serial Number	15 gpm	2 gpm	0.50 gpm	0.25 gpm
Flo	295375850012	99.02%	100.73%	89.05%	0.00%
Flo	312911790038	101.96%	102.68%	114.21%	123.05%
Flo	312911790034	98.04%	96.81%	95.82%	87.57%

Device Type	Serial Number	15 gpm	2 gpm	0.50 gpm	0.25 gpm
Buoy	00500742	110.98%	99.65%	100.56%	99.79%
Buoy	00500175	106.76%	98.67%	100.56%	99.02%
Buoy	00500154	112.94%	101.12%	99.60%	98.93%

Device Type	Serial Number	15 gpm	2 gpm	0.50 gpm	0.25 gpm
Phyn	221746PP100C8E	100.98%	99.75%	100.66%	101.04%
Phyn	221817PP10038B	100.00%	98.77%	100.66%	99.12%
Phyn	221805PP100019	100.00%	98.77%	100.66%	97.19%

Device Type	Serial Number	15 gpm	2 gpm	0.50 gpm	0.25 gpm
Water Monitor	182000829WZU5	116.39%	125.15%	126.32%	90.26%
Water Monitor	182000930WZU5	124.15%	137.66%	181.03%	283.83%
Water Monitor	182000945WZU5	116.39%	110.71%	147.21%	0.00%

Marketing


- Coordinated kick-off with Fix a Leak Week in March
- Bill inserts and brochure went out to approximately 600k households
- SNWA TV show called WaterWays held a segment on program as well as an SNWA Facebook live session

Discover leaks quicker and easier

The SNWA is offering a new rebate for a smart leak detector, which monitors and notifies you of any leaks, sparing you costly water damage and wasted water. Get 50 percent off the purchase price or \$200, whichever is less, when you buy a smart leak detector. Restrictions apply.

When smart leak detectors identify an issue in your system, you'll receive a notification through a mobile app. Most apps also let you remotely monitor your daily water use and set water consumption goals.

"Leak detection is the new technology we are really excited about," said SNWA Conservation Manager Doug Bennett. "It will help address water loss and water damage caused by leaks, which can turn into big issues for homeowners. All we ask is that rebate participants take part in phone surveys and water use monitoring to help measure long term benefits of the technology."



Cover your pool and save water.

SNWA programs help you \$ave

Saving water is easier and cheaper with these SNWA coupons and rebates:

MARCH 1 - APRIL 30
IT'S THE LAW.
Find your watering days at lvvwd.com

WATER NO MORE THAN 3 DAYS A WEEK.

YEAH... NO. NOPE. NUH-NUH. NEVER ON SUNDAY.

YES! YES! YES!

FIND & FIX leaks

Finding and fixing leaks can save as much as 11,000 gallons of wasted water per year and more than 10 percent on water bills.

Get step-by-step instructions for finding leaks around your home at lvvwd.com.

Facebook Live Session: Smart leak detection devices

Southern Nevada Water Authority

Up Next:

- How to Water Grass
- How in One
- Really check! Fast watering restrictions are in effect
- National Dog Day
- Don't let your swimming pool be a drain on your wallet! Watch as our...
- Swimming pool
- Trash that grass and go east!

Buoy



What is Buoy?

Buoy is a smart home water device that attaches to your water line and sends real-time data to an app that categorizes your water use, alerts you to leaks, and gives you the power to shut off water remotely.

[BUY NOW](#)

It's as easy as 1-2-3

①

Install and connect

Attached to your water line, Buoy's sensors detect even the smallest water use. When you connect Buoy to WiFi, Buoy will send your water use data to the app.

②

Download and learn

Get the Buoy app and see how you use water around your home. Buoy automatically categorizes your water usage so you can see the big picture or dig into details.

③

Shut it off and relax

Buoy sends you an alert when it detects a leak. If you're worried about damage, you can use the app to shut off your water remotely, giving you control and peace of mind.

[Support](#)



The Buoy device connects to your home's water line, and sends information to the Buoy app. From there, you'll see where you're using water, and can shut off water remotely if there's a leak. Peace of mind, predictable bills — and you can keep your lawn.

[Support](#)

Flo

[How It Works](#)[Power of Pressure](#)[Specs](#)[Help](#)[Log in](#)[BUY NOW](#)

Secure your home, conserve your **water**.

Flo continuously monitors your home's water supply to catch all leaks, prevent water damage and save you money. Say hello to smarter plumbing.



CES 2018 Innovation Awards Honoree

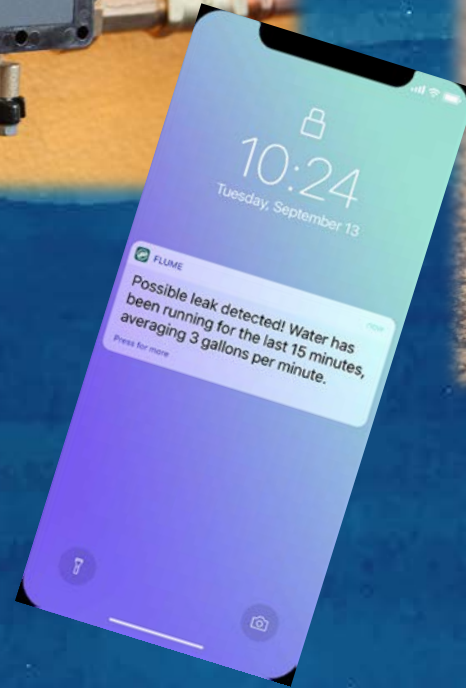
[BUY NOW](#)[WATCH HOW](#)

GIVE \$50, GET \$50

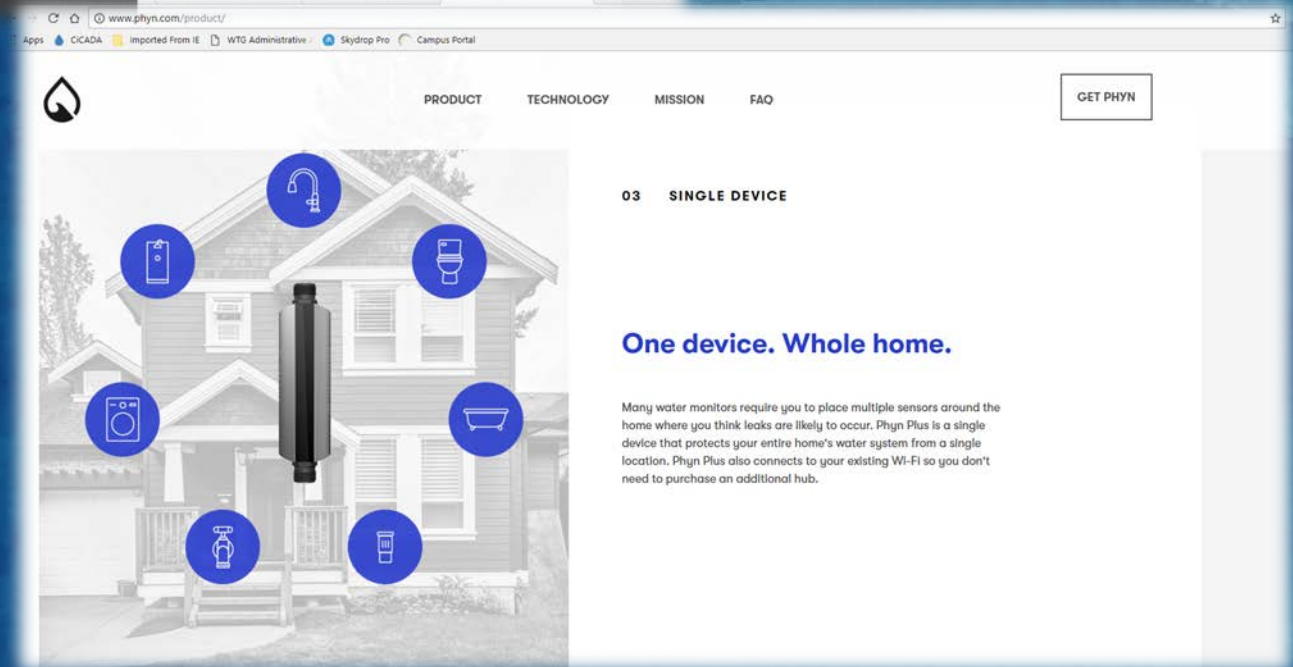
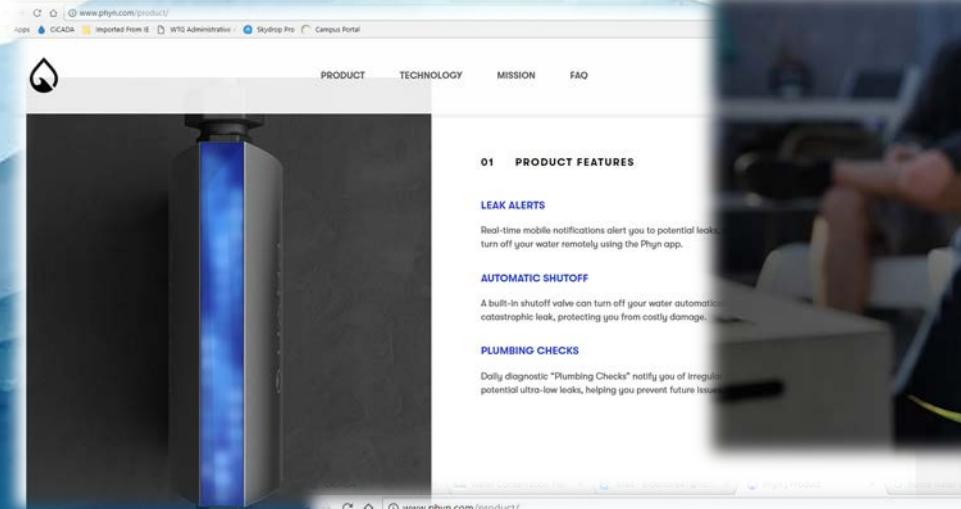
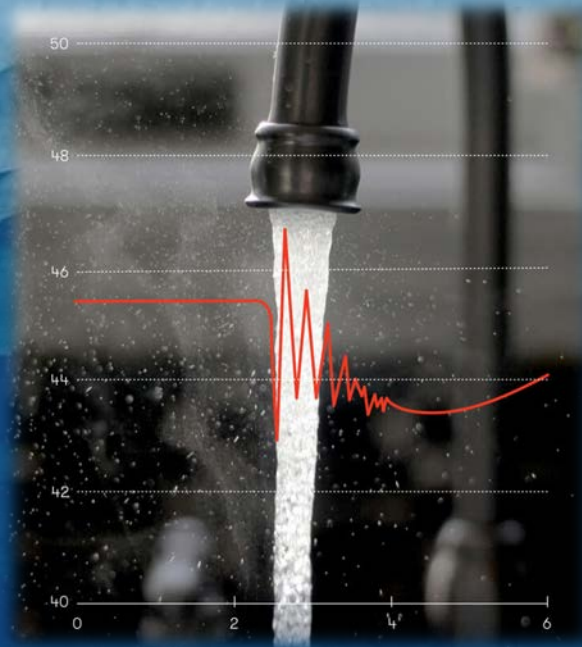


SOUTHERN NEVADA WATER AUTHORITY®

Flume



Phyn



Streamlabs



StreamLabs


Our Products About Resources Support Contact

INTEROPERATES WITH
nest amazon alexa

Smart Home Water Monitor

\$199 ★★★★★

[ADD TO CART](#) [NOW FREE SHIPPING](#)




STREAMLABS DETECTS

- Kitchen
- Bathroom
- Laundry
- Basement
- Whole House

StreamLabs

Our Products About Resources Support Contact



Keep leaks on lockdown 24/7 with control from anywhere.

Get alerts to your phone in real-time if a leak is detected anywhere in your home, and view live and historical water usage statistics. It's everything you need to monitor and control your water system.

- ✓ Live Flow Data
- ✓ User Customized Enhanced Leak Detection: Slow And Major Leak Alerts
- ✓ Freeze Alert
- ✓ Smart Alerts™ Learning Leak Detection
- ✓ Away mode setting that works with Nest® and Alexa®
- ✓ Leak Alert History
- ✓ Comparative Usage Chart

[Available on the App Store](#) [Get it on Google Play](#)

Manufacturer Marketing and Partnerships

Manufacturers are partnering with local plumbers as well as conducting direct marketing.



The screenshot shows the Butter Plumbing website with a navigation bar including links for 'ABOUT US', 'CONTACT US', and 'PLUMBING'. The main content area features a section titled 'PHYN PLUS SMART LEAK DETECTION' with the following text:

Save Up to \$400 on PHYN Plus Smart Leak Detection System

Butter Plumbing is pleased to offer our customers the PHYN Plus, Smart Water Assistant + Shut Off, which protects your home from leaks, diagnoses issues with your plumbing and gives you powerful insights into how you use water. PHYN Plus measures microscopic water pressure changes in high definition—240 times a second—to recognize the unique “voice” of each fixture in your home. So, when you run a faucet, PHYN knows it’s a faucet. Once PHYN learns your fixtures, it automatically shuts off your water in the event of a leak, and notifies you via your mobile phone, so water damage can be prevented, even when you are away from home.

Comes with \$200 Instant Manufacturer’s Rebate and may be eligible for an additional \$200 rebate from Southern Nevada Water Authority after inspection visit is completed.

PHYN Plus comes with a 3 years parts and labor warranty when installed by Butter Plumbing, as we are part of the Uponor Pro Squad.

With a potential for \$400 in rebates, now is the time to protect your home and personal belongings with the latest cutting-edge smart technology. Homeowner’s insurance premiums may even go down once your insurance provider finds out you have installed the PHYN.

Call Butter Plumbing today to schedule your free estimate: 702-655-5214



The graphic features a smartphone displaying a water usage app, a Flo by Moen device, and a box with the text 'secure your home. conserve your water.' The background is a dark blue gradient.

flo
BY MOEN.

51 million homes will suffer from water damage. **Make sure yours isn't one of them.**

Flo by Moen protects your entire home from water damage and leaks 24/7.

GET \$300 IN REBATES
REDEEM by going to meetflo.com/snwa

Early Program Observations

- 265 Coupons Requested
 - Indicates interest in program but often purchase has not been made yet
- 84 Coupons have been submitted for rebate
 - Coupons submitted for Flo, Flume, Phyn, Streamlabs and Buoy
- 80 site visits to date – first one on April 15, 2019

Enrollment

Select Columns (optional):

Expand Section to View

SEARCH RESULTS

Records: 266

Owner Name	Address	Parcel	Status Date	Coupon #	Coupon Amount	Coupon Type	Origination
MARRIE PHILIP & PATRICIA TRUST	5079 VINCITOR ST LAS VEGAS 89135	16425515007	7/23/2019	304946	\$99.50	Smart Leak Detector	SNWA.COM
HELLER FRED J & JUDITH	5073 VINCITOR ST LAS VEGAS 89135	16425515008	7/23/2019	305152	\$99.50	Smart Leak Detector	SNWA.COM
KONCHAN THOMAS EDWARD	2904 SUMTER VALLEY CIR HENDERSON 89052	19112110018	7/18/2019	305202	\$99.50	Smart Leak Detector	SNWA.COM
GONZALEZ M B G FAMILY TRUST	3326 MONTESSOURI ST LAS VEGAS 89117	16315510006	9/11/2019	305269	\$99.50	Smart Leak Detector	SNWA.COM
FREES JAMES P	1760 CRYSTAL DOWNS AVE LAS VEGAS 89123	17714211056	8/06/2019	305389	\$99.50	Smart Leak Detector	SNWA.COM
CHASE FAMILY TRUST	1645 WELLINGTON SPRINGS AVE HENDERSON 89052	19112211043	8/21/2019	305755	\$99.50	Smart Leak Detector	SNWA.COM
FINDER CHARLES A & ESTHER T	2092 TWIN FALLS DR HENDERSON 89044	19018513033	8/29/2019	306164	\$99.50	Smart Leak Detector	SNWA.COM
BOGDAN LIVING TRUST	2306 GREAT ELK DR HENDERSON 89052	19113410080	9/06/2019	306297	\$99.50	Smart Leak Detector	SNWA.COM
BADALUCCO MARTIN J & RONETTE K	8981 VENETIA ST LAS VEGAS 89123	17721512051	4/30/2019	303323	\$200.00	Smart Leak Detector	SNWA.COM
FLYNN BARRY J & LAURA L	1100 MALACHITE CT HENDERSON 89011	16033211023	8/12/2019	305640	\$200.00	Smart Leak Detector	SNWA.COM
CHESNUTT MICHAEL L	6133 BROWNING WAY LAS VEGAS 89130	12535610020	8/26/2019	305811	\$200.00	Smart Leak Detector	SNWA.COM
MULLANEY WILLIAM & SUE TR R-501	1341 VILLAFRANCA CIR HENDERSON 89052	19101615003	8/28/2019	305807	\$200.00	Smart Leak Detector	SNWA.COM
NOLF WILLIAM NICHOLAS	3212 DOVE RUN CREEK DR LAS VEGAS 89135	16411414007	6/19/2019	304311	\$200.00	Smart Leak Detector	SNWA.COM
JOHNSON CASEY	4701 ARIAL RIDGE ST LAS VEGAS 89147	16319413010	5/28/2019	302954	\$200.00	Smart Leak Detector	SNWA.COM
HICKEY THOMAS J & ANN M REV TR	2413 CHATEAU NAPOLEON DR HENDERSON 89044	19019415028	7/18/2019	304977	\$200.00	Smart Leak Detector	SNWA.COM
STATER SCOTT	3205 JEVONDA AVE HENDERSON 89044	19114112027	7/16/2019	304458	\$200.00	Smart Leak Detector	SNWA.COM
DAUM FAMILY 2006 REV TRUST	2598 PORTSMOUTH CREEK AVE HENDERSON 89052	19113714012	7/18/2019	304954	\$200.00	Smart Leak Detector	SNWA.COM
HABRAT FAMILY TRUST	2174 HANDEL AVE Henderson 89052	19005212018	8/12/2019	305726	\$200.00	Smart Leak Detector	SNWA.COM

Export to Excel

Site Visit Survey

Site visit is mandatory in order to receive rebate check



Leak Detection Device Field Survey (v1.6; 4/15/19)

Address: _____ Date: _____

Name (Point of Contact who chose the LOD): _____

Person met with on-site (if different from above): _____

SNWA Representative(s): _____

Technology	Device Name	Model	Serial #	Physical Location
1				
2				

Installed by: Self or Other (please specify) _____ Is it functional? Y / N _____ Installation Cost? \$ _____

Is there a subscription? Y / N If yes, cost? \$ _____ Ease of Downloading App _____ Ease of Using App _____

On a scale of 1 to 5: (1 = lowest, 5 = highest) _____ Is an Alert present? Y / N _____ If so, what types (circle all that apply): audio at device _____

Does the device currently show a leak? Y / N _____ text message _____ auto call _____ call from retailer/mfr. _____ Other _____

visual at device _____ push notification _____ in-app alert _____ Leak Location(s): _____

Leak volume: _____ Units: _____ Pool/Spa _____ Other _____

Area(s) Monitored: Indoor _____ Irrigation _____ Additional details (if necessary): _____

(circle all that apply)

Any special notes about areas not monitored? _____

Motivations _____

Why did you want a leak detection system? 1st _____ 2nd _____ 3rd _____

If ranking why you got this device, what do you consider your top three reasons? _____

Why did you choose this specific device rather than one of the others being rebated? _____

What other efficiency improvements/programs have you participated in before today (including energy, water, gas, recycling, etc.)? _____

Is there a fire sprinkler system installed? _____

Any other feedback to share? _____ Y / N _____ If yes, what was the cost to repair it? \$ _____ Units: _____

Did a previous leak influence your decision? Y / N _____ Total claim amount? \$ _____ Volume (if known): _____ Deductible? \$ _____

Location: _____ # of full bathrooms: _____ # of half bathrooms: _____ # of bedrooms: _____ Dishwashers _____

Did you file an insurance claim? Y / N _____ Sinks _____ Showers _____ Tubs _____ RO systems _____

Property and Demographic Information _____ Tank/Tankless Water Heaters _____ Softeners _____ Drip stations _____

Rooms - _____ Toilets _____ Auto Refill? Y / N _____ Spray stations _____ Smart mode active? Y / N _____

Indoor - _____ Clothes Washers _____ Spa _____ Smart controller(s) present? Y / N _____

Outdoor - _____ Pool _____

Fixture and appliance count _____

Other water uses? _____ Please list ages: _____

How many people live in the house? _____ Out-of-work _____ Retired _____

People - _____ Highest grade/degree of the resident(s): _____ What is your annual household income? _____

Economic Considerations _____

POC or primary breadwinner is (circle): _____ Working _____ Location(s): _____

What do you think the value of your home is? _____ In no, please explain why? _____

Rep Leak Check at Meter _____

Leak showing at meter? Y / N _____ If yes, Volume _____

Do the meter and device agree about (circle choice) showing / not-showing a leak? Y / N _____

Informed customer of leak at the visit? Y / N _____

Expected resolution, if known: _____

Leak Detection Device Post-visit / Back-office

Do not complete this section until after the site visit.

Parcel Number: _____

Home Value currently on Zillow \$ _____

Home Value currently on Redfin \$ _____

Customer Knowledge / Interaction - On a scale of 1 to 5 (1 = lowest, 5 = highest) rate each Customer's:

Interest / enthusiasm _____

Satisfaction with the overall price _____

Satisfaction with the installation _____

Satisfaction with the device in general _____

Satisfaction with the Retailer/Mfr. _____

Condition of the property (how well maintained?) _____

Neighborhood _____

Knowledge about the device _____

Knowledge about water use in general _____

Knowledge about SNWA _____

Satisfaction with SNWA _____

Notes: _____

Information entered into database for the LOD research study (check) _____

Site Visit Survey

Questions asked include:

- Who installed the device
- Why they purchased a device – motivation
- Number of rooms, bathrooms, sinks, occupants etc.
- Are they aware of a leak
- Are they aware of indoor/outdoor/both being captured?
- How do they like the app

Things we determine from site visit:

- Verify device and app installed and working
- Verify what is being captured – indoor/outdoor or both
- Document installation location

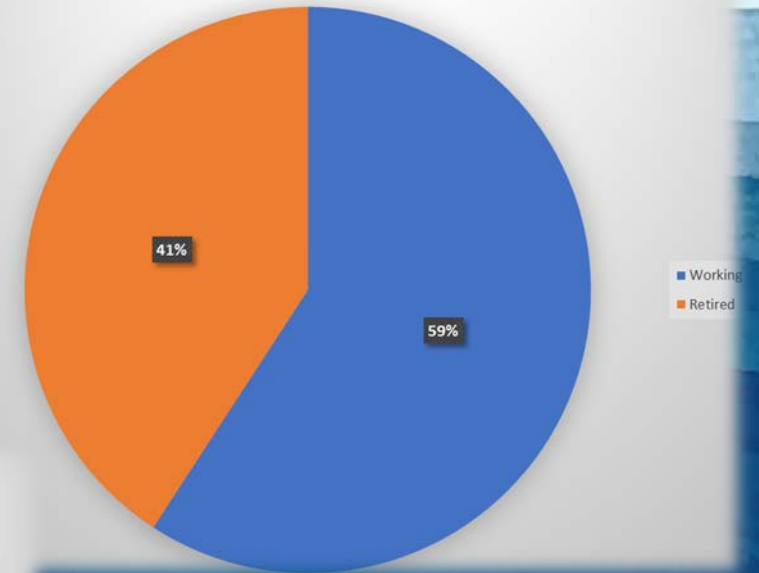


Site Visit Survey Results to Date

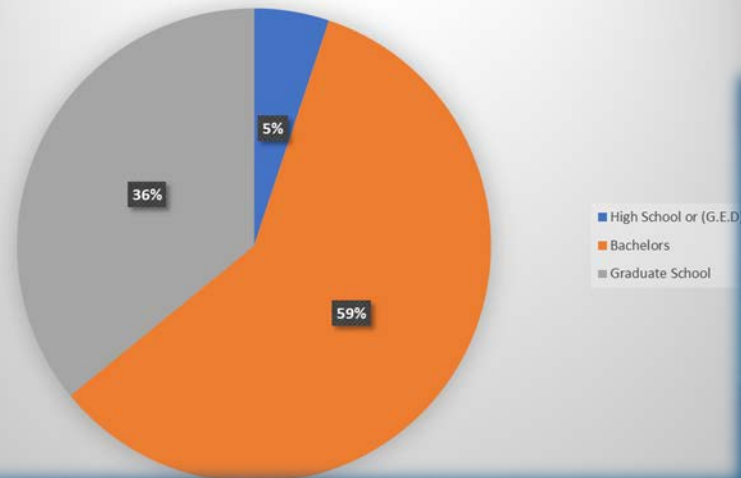
Demographics

- Avg Age – 58
- Avg Household Income - \$126k
- Avg Family Size – 2.24
- Avg Home Value - \$538k
-

Work Status

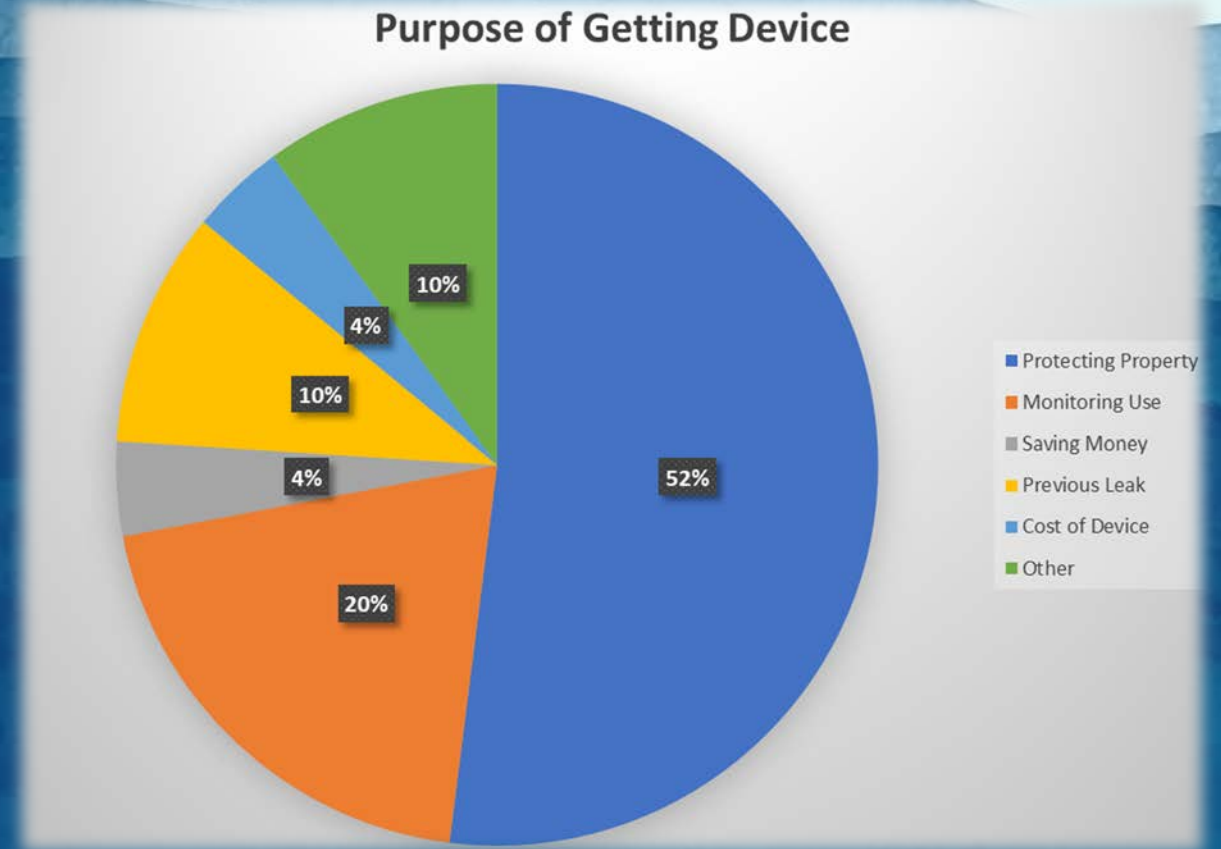


Education of Device Owners



Site Visit Survey Results to Date

Percentage of people who discovered a leak after installing the device – 17%



Site Visit Survey Results to Date

- Who Installed
 - 57% Self and 43% plumber
- Installation cost if through a plumber
 - \$100-\$700 (higher installation cost involved work with PRV)
- Previous leak impacted decision – 21%



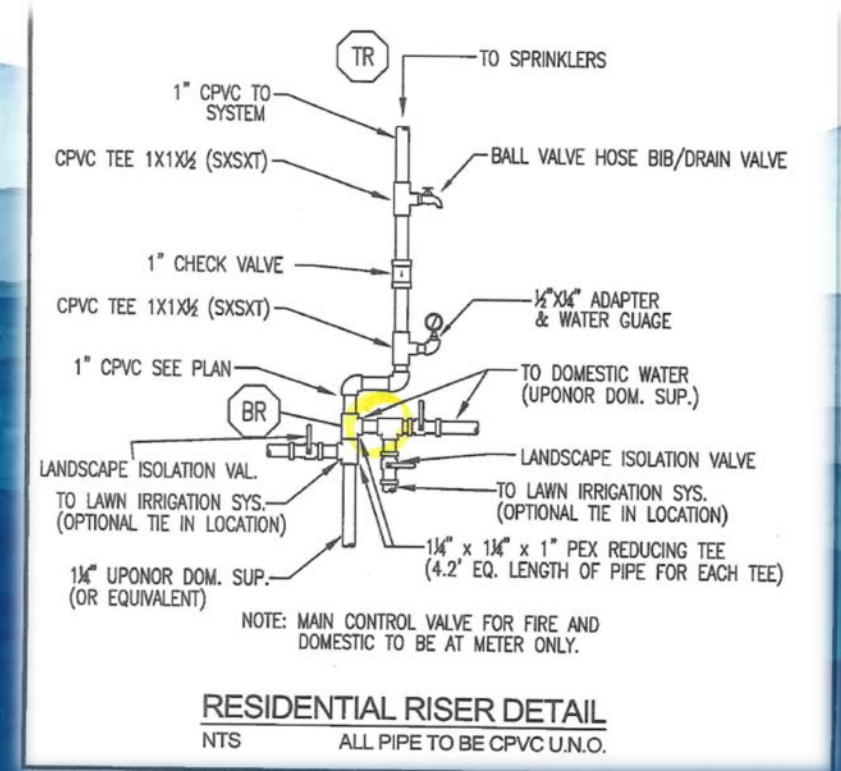
Site Visit Survey Results to Date

- Capturing Indoor/outdoor or both
 - All Flume capture all water use but no shutoff capability
 - 57% of Phyn capture indoor and outdoor – primarily installed by one plumber
 - 20% of Flo capture indoor and outdoor
- 29% also had a smart irrigation controller
- Just starting to collect consumption data



Initial Issues

Residential Fire Sprinkler



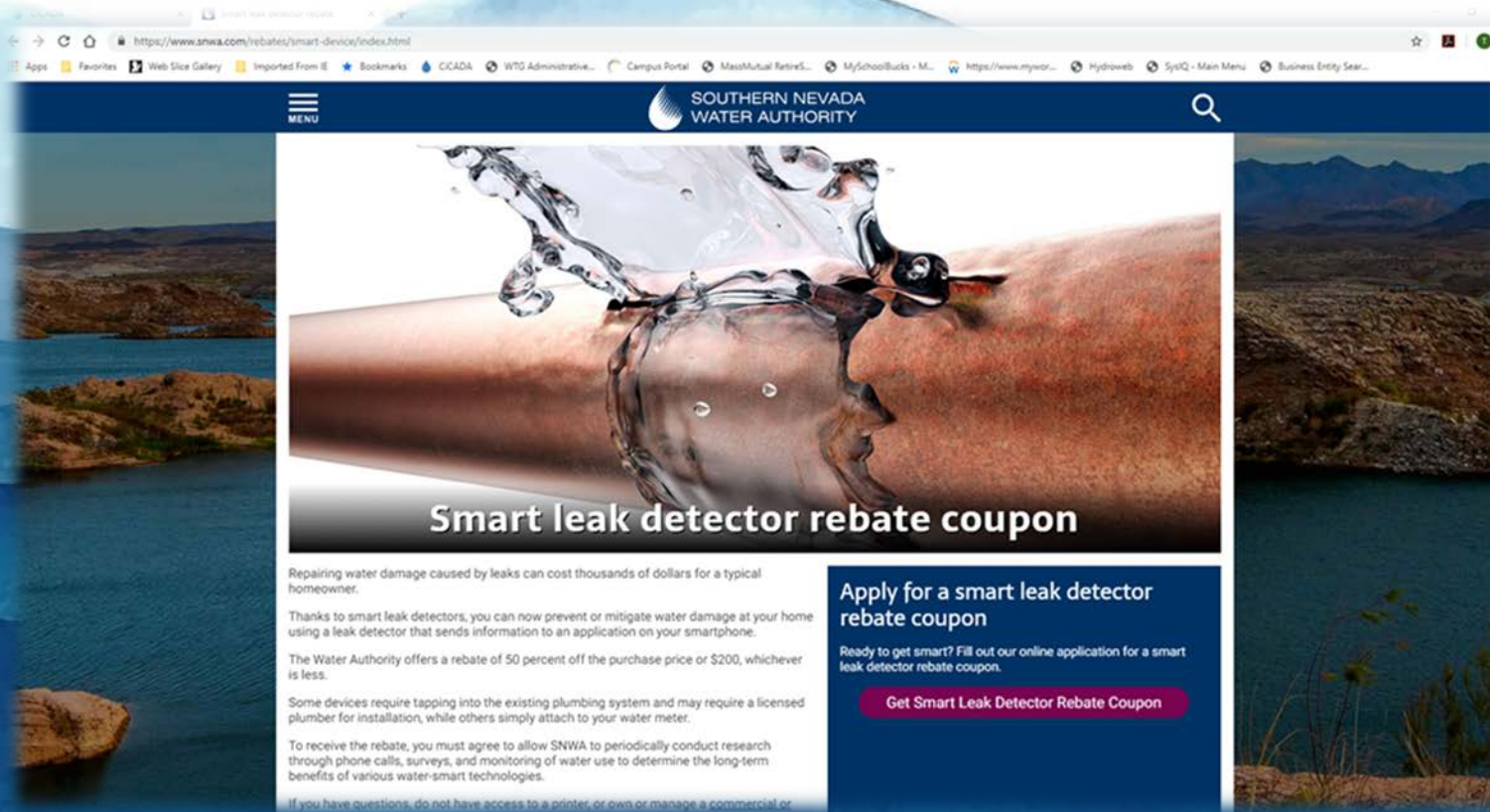
Added language to website to address installation of devices if a fire sprinkler system is present:

Important notice for homes with automatic residential fire sprinklers: Improperly installing a leak detector device could hinder operation of fire sprinklers. Always ensure plumbed leak detection devices are installed only on the domestic water line after it diverts from the fire sprinkler system. Never install a leak detection device into your home's main water service line upstream of the fire sprinkler system. Consult a licensed plumber for guidance.

Initial Issues

- * Capturing outdoor water use in addition to indoor for devices that are located inside the garage
- * Many homes in Southern NV have irrigation shut off prior to the garage
- * With so much residential water use occurring outside, how beneficial are devices if not capturing outdoor?





Questions/Comments

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