AquaFlow Int'l, Inc.

Automated Bulk Water Loading Stations

AquaTrack Internet Cloud Based Water System

Version 5.01

System User Guide

Founded and Operated in Flagstaff, AZ USA

PO Box 2841, Flagstaff, AZ 86003 ◊ www.aquaflowintl.com ◊ (928) 380-6164

Table of Contents

Introduction…… 3

System Overview…… 4

System Benefits and Features 5

Faceplate Diagram……..…… **6**

Control Board Diagram……..…… **7**

Loading Station Detail Operation……... 8

System Internet Setup 9

Manager and User Functions..... **10**

Reports..... **13**

Manager Functions **15**

Pay4Water Payment Portal 17

Options 20

Flow Rate Data 21

Glossary……..…… 22

RFP Data……...…. 23

How the customers shall use the system 24

An Introduction

In 1998, Jon Keller started a water dispensing company called WaterProducts.net Inc., servicing water companies in the Southwestern part of the United States. WaterProducts.net Inc. had a magnetic strip card system, which was commonly used by water companies.

In 2009, Jon started working on a replacement system that was better suited for modern technologies due to an end-of-life notice from the magnetic strip card manufacturer. Over time, Jon designed 3 water systems that were simple and flexible with customer's needs, and in 2011 AquaFlow Int'l, Inc. was born. As of 2012, AquaFlow Int'l, Inc. has more than one hundred stands in operation throughout the United States and overseas.

AquaFlow Int'l, Inc. specializes in water payment systems that are easy to use and ensure guarantee payment to water companies for their bulk water sales. As previously mentioned, AquaFlow Int'l, Inc. has 3 systems that make this possible: the AquaFlow II RFID card system, the AquaVendor card system, and the AquaTrack internet cloud-based system. Each system has a set of unique features that allow them to stand out from other common water systems. AquaFlow is skilled in retro-fitting existing systems as well as building a complete turnkey system from the concrete slab up.

AquaFlow manufactures its own parts in Flagstaff, Arizona and its systems meet the requirements of the "Made in America" Act as well as the Davis Bacon Wage Act. The company is in good standing with the Arizona Corporate Commission as can be verified at: http://ecorp.azcc.gov/search. AquaFlow Int'l, Inc. is an OEM manufacturer operating in the state of Arizona. No contractor license is required to provide installation oversight on our systems. AquaFlow Int'l, Inc.'s employees shall never drive a vehicle that is not owned and insured by the company. AquaFlow Int'l, Inc. maintains 4 million dollars worth of general liability insurance.

Contact Information

Mail Address:

Jon Keller, President
AquaFlow Int'l, Inc.
PO Box 2841
Flagstaff, AZ 86003

Shipping Address:

Jon Keller, President
AquaFlow Int'l, Inc.
4870 E Halfmoon Dr.
Flagstaff, AZ 86004

Phone: 928-380-6164

System Overview

Definition

The AquaTrack internet and cloud based water system. The customers use a member number and a PIN number to operate the loading station. Internet connectivity is required to the loading station. All data is stored on the cloud based system. In the event that the internet is down at the site when a customer needs water, the system uses the last downloaded balance to determine if the customer can get water. The transaction is then stored locally and uploaded once the internet is available again. Internet connection to the site can be provided by any live internet access that has an Ethernet (RJ45 type) connection. DLS, Cable, LAN, Point to Point, or a Cell Based Router are all viable options.

Advantage: With the AquaTrack System, you can have 24/7 access to real time data. All reports are available from the server whenever you want them. With the use of the www.pay4water.com payment portal, the customers have the ability to add money to their account without adding a load on your office staff and at no additional cost to the water company or the customer, (if you choose to use the pay4water portal). The water customer would use their credit or bank card to make the payment, and the payment is automatically and instantly added to their water account. The payment then goes straight to the water company's bank account. There are many other benefits or advantages to the system as noted below in the "System Benefits" list.

System Requirements

1. Water pressure (or pump) at the site. The water pressure shall be between 30 - 80psi.
2. Power to the site. (A/C or Solar)
3. Internet connection with 24/7 internet connectivity.

Warranty

Typically a one year warranty is provided with the purchase of this system. AquaFlow Int'l Inc. offers an extension of the maintenance and software warranty on a year by year basis. The extended warranty program gives you about a 30% discount on repair parts, free labor, and priority service.

Our repairs are handled on a UPS basis. If your system goes down for any reason, simply give us a call and we will help you troubleshoot the system. If any part of the control system is not functioning properly and/or needs to be replaced, we will UPS you a new control board within one business day, guaranteed. Water company then replaces the control board (again, AquaFlow will be available via phone 24/7 to assist in any questions) and they are back up and running. AquaFlow then requires that the damaged board be sent back to us via UPS for evaluation and repair.

If the extended warranty is maintained, the water company shall be billed for the repair parts needed at the reduced rate. In addition, with the extended warranty, there is no charge for labor on repairs.

The warranty for the AquaTrack internet cloud based system does not cover: Acts of God, Acts of War, Acts of Terrorism, and accidents (except by AquaFlow Int'l, Inc. personally), power-related issues (such as lightning strikes or power surges), or vandalism.

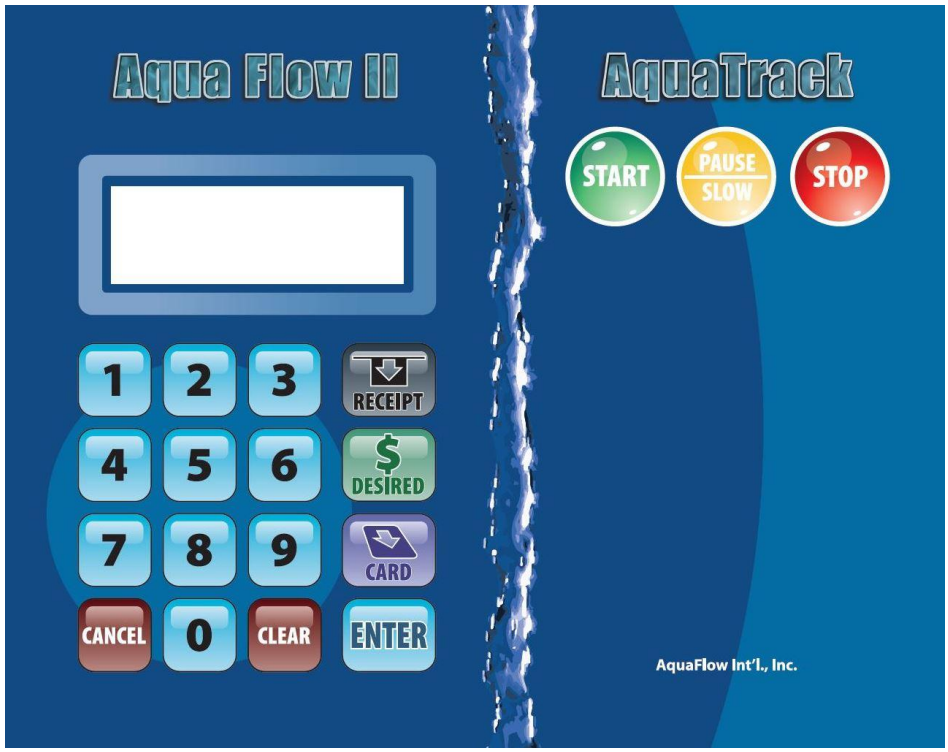
System Benefits

At AquaFlow, we are dedicated to researching and updating our systems as often as needed in order to provide exceptional quality service for our customers. The AquaTrack internet cloud based system has many features that make it stand out from other bulk water systems. Below are just some of the features that prove the AquaTrack internet cloud based system is the best system for your company.

1. UNLIMITED "Accounts" and "Members" from day one**.**
2. There are no cards to buy, no card readers to go bad and no cleaning required.
3. An office computer is not needed to house the database, as with other systems.
4. No special software to download in order to manage the system**.**
5. All server updates, and system updates, are cared for by AquaFlow.
   There is zero additional load on your IT Dept.
6. The system does not need any additional computers for operation.
   The customer interface/faceplate has a built in computer.
7. The system may be run on a Cell Based Router. If you use a Cell Based Router, you can move the station to any desired location within cell service, without any changes to the setup.
8. Any computer with internet ability can access the system with the proper log on information.
9. All transactions are tracked on the system.
10. Completely sealed customer interface.
11. The customer interface is able to control up to 3 exit ports with one controller.
12. Custom programming available.
13. Customers may choose their own PIN.
14. Customers can receive an emailed receipt for each water purchase, automatically.
15. Automated report generator for end of month operations.
16. Many default pricing structures may be set up to use, with the ability to have custom pricing available for any customer.
17. The system can charge a transaction charge if desired in addition to the price per 1000.
18. A tiered pricing structure is available based on load volume, monthly volume, or yearly volume.
19. Volume of water limitations can be set for how much a customer can receive by load, by the month, or for the year.
20. An automated time can be set for the system to be open and a closing time.
21. You can assign a "Happy Hour" type price discount.
22. The system's flow sensor allows calibration to any measurement of units.
23. UPS battery protection
24. Lightning strike protection.
25. Low repair cost due to modular design. The system is made of modules, which means the screen can be replaced separately as is the case with the keypad, faceplate, computer, or interface modules.
26. A sealed system makes it water proof.
27. Video training is available online 24/7.
28. The large keypad makes it easy for gloved hands to use during cold weather conditions.

Faceplate Diagram

Front of Faceplate



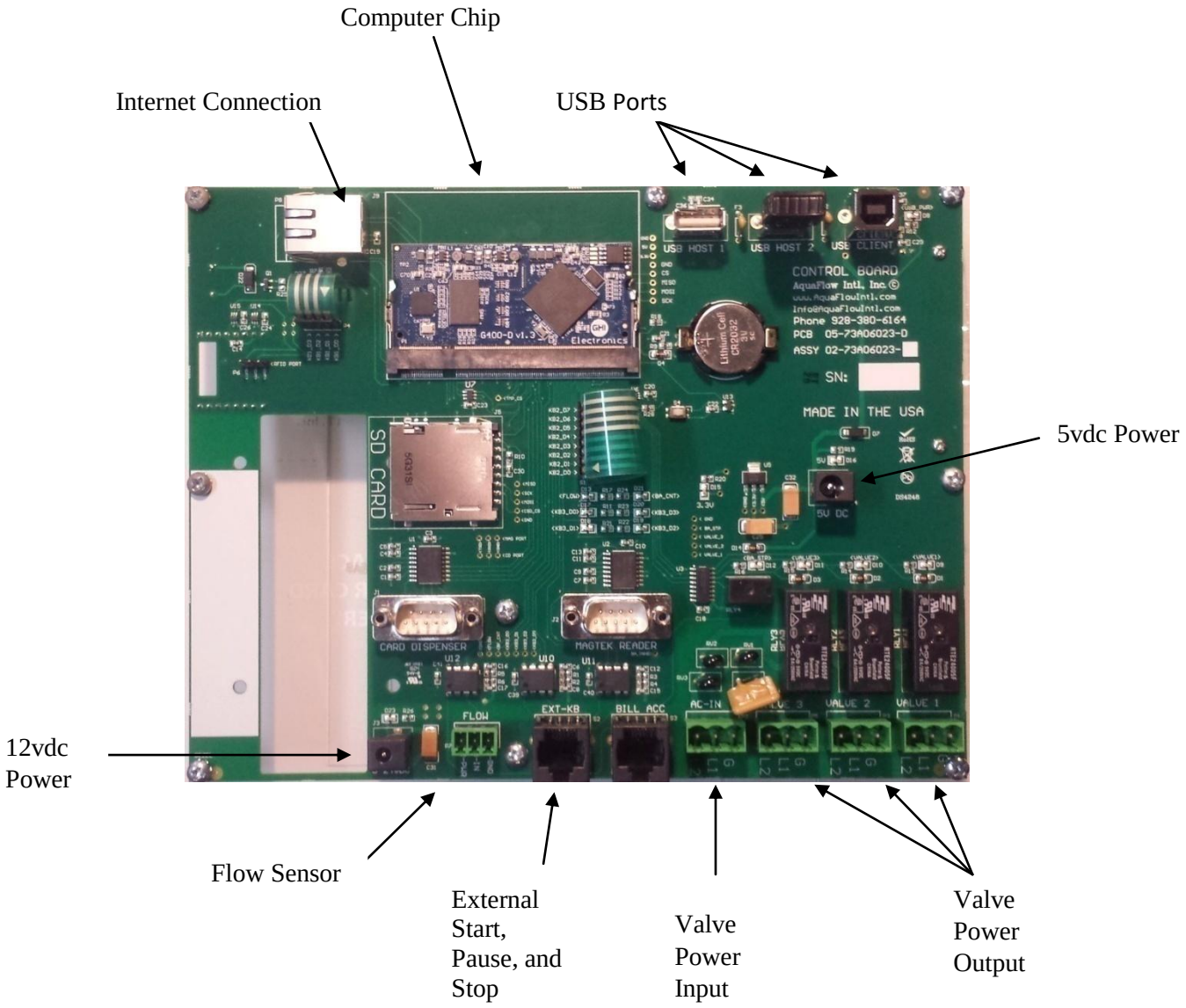
LCD Display Screen

Key Pad

Control Buttons

Control Board Diagram

Back of Control Board



The Loading Station – Details of Operation

Setting Up a Site Control Board

1. Mount the control board and faceplate.
2. Connect the valve input and output power connections.
3. Connect the flow sensor power (12vdc).
4. Connect the 5vdc computer power.

**** System takes about 1 minute to boot up. ****

5. Enter the Master Menu
6. Choose #3 to calibrate if it is the first use. (Manually calibrate the system by running water or set the K and X if are already known. See #7 below)

   From the Calibration Master Menu, Press #1 to calibrate for the first time.
   The system will prompt to allow 200+ units to pass for calibration. Take a read on the meter, and press the green START button. After a minimum of 200 units has passed, press the red STOP button. The system will prompt to enter the number of units that passed. Take a new read and subtract the old read to get the units. Enter the number of units into the system. The system will then tell the K factor and the X Factor. Write these down. Many write them in the cabinet for future use. If these numbers are already known, water does not need to be wasted the next time these need to be set.

7. If the K and X factor are known, these can be entered manually.

   From the Master Menu, press the '3' key.
   Press the #2 to enter the K Factor or #3 to enter the X Factor.

8. To set (or check) the Mac address: From the Master Menu, press the 'Card' key 2 times.

   Press #2 set Mac address.
   The Mac address is shown. If it is correct press 'Cancel', or enter the new Mac ID.
   Follow screen prompts.

9. To get the Site ID: From the Master Menu, press the 'Card' key 2 times.

   Press the #3 for the system to retrieve the Site ID. It will return a long Hex Decimal number.
   There is no need to write this down. It cannot be entered anywhere, just retrieved for system use.

10. To Refresh Members: From the Master Menu, press the 'Card' key 1 time.

    Press #1 - The system will upload any offline transactions and download all current member information into the site. This may take a minute or two. The system will re-set after it is complete.

The system may now be set up to work for your site.

The System Internet Setup & Operation

Things you need to know:

1. The AquaTrack System is an account based system meaning that the 'Account' holds the money or credit. You can have as many 'Member' attached to the 'Account' as you like. Each 'Member' accesses the water at the loading station with the use of their 'Member #' and 'PIN'. Each 'Member' has his/her own 'Member Number' and 'PIN'.

2. The AquaTrack System is a first come, first credited to the 'Account'.

3. For the Internet side of the system, there is a:

   A. System 'User': The System 'User' has the ability to add or edit new 'Accounts' for customers, add or edit 'Members', add Transactions to the 'Accounts' - either Debits or Credits to the 'Accounts'. The 'User' may also pull reports on 'Accounts' and 'Accounts' activities. The 'User' also can change their password.

   B. System 'Manager': The 'Manager' can do all-of-the above, plus is able to add or edit "Users". Managers can add or edit 'Default Rate Structures' and change some general system information for the system.

Setting up a new Customer:

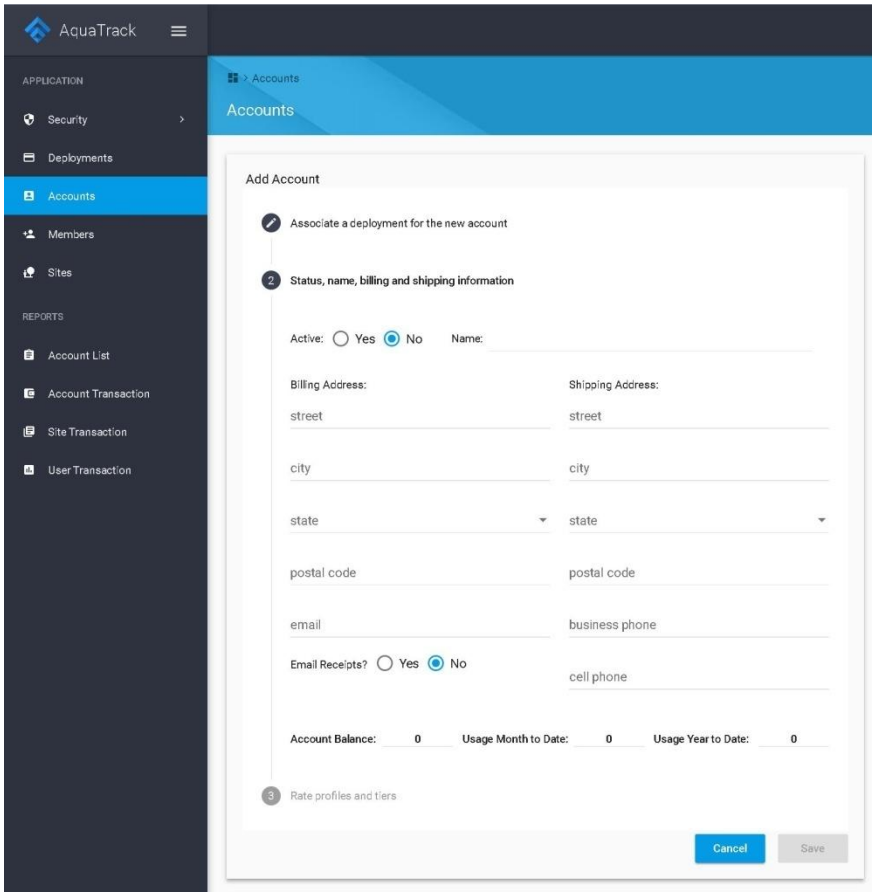
1. An account can be set up for a customer to hold money.
2. Then you add 'Members' to that account to access the money.
3. Then credit a payment to the account. Now the customer can use the system.

Site for Login: **https://www._____**

***** The details of the system assume the water company is logged into the system. *****

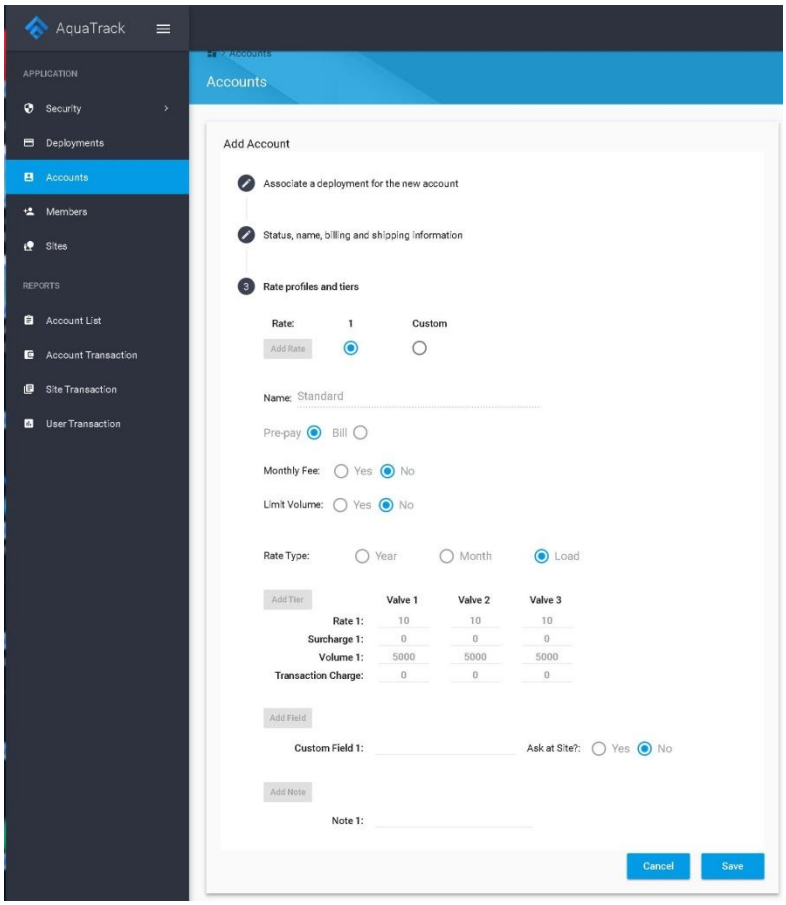
Manager and User Functions

Add Customer Account:



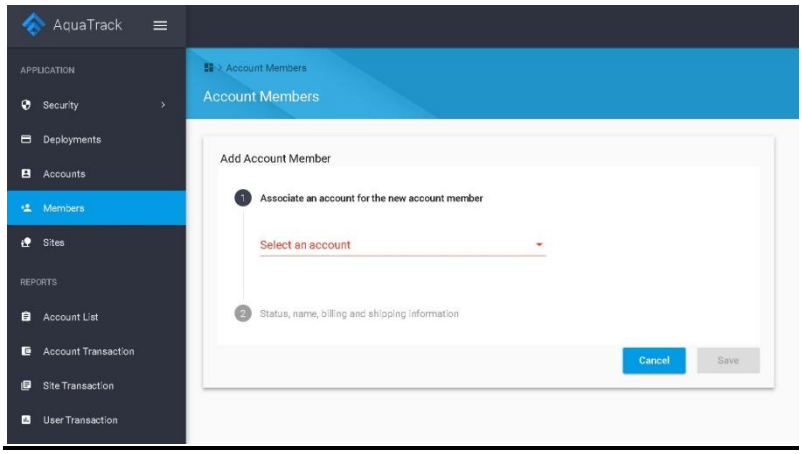
1. Click on ‘Accounts Tab’ on the left side menu.
2. To add customer account; Click on ‘Add Account’ above account list.
3. The #1 shall default to the ‘Deployment’, Click on #2
    a. Click on ‘Active’, ‘Yes’ , and enter the customer's name.
    b. Enter the billing and shipping information.
    c. Enter phone information.
    d. Click on ‘yes’ or ‘no’ for emailed receipts.

4. Click on #3 Rate Profile and Tiers



a. Choose one of the Default Rates or a Custom Rate.
b. Click on Save

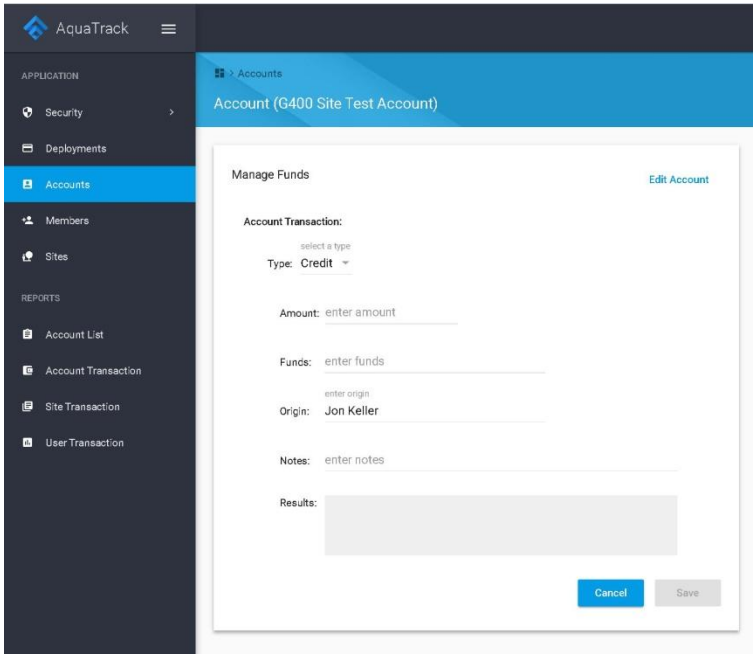
Add a Member to an Account:



1. Find and click on the Account on the list of Accounts. Click on #2 Status-
   A. Enter a name for the 'Member', and click on 'Active' - Yes or No.
   B. Enter a Member number and PIN for the member. Member numbers MUST be unique.
   C. Enter the billing and shipping address.
   D. Enter phone numbers.
   E. Click on 'Yes' or 'No' for if the customer wants an email receipt.
   F. Click on the 'Save'

   **** Note: The Account and The Member screens both have a 'Yes' or 'No' to activate. If you click on the 'No' on either screen the account or member is then not able to get water. (IE… for bounced checks and the like)

Adding Money to an Account:



1. Click on the 'Account' tab and find the account you wish to credit or debit.
2. Click on the word 'Manage' on that account.
3. Use the drop down button on the 'Type' to choose credit or debit.
4. Enter the amount to credit/debit.
5. Enter type of funds. (The system does not care what you put here. The idea is to use cash, check, credit card, or a reason for credit/debit. The 'Funds' entry can NOT be blank.)
6. Enter any notes for the transaction desired.
7. Click on the 'Save' button.

Reports:

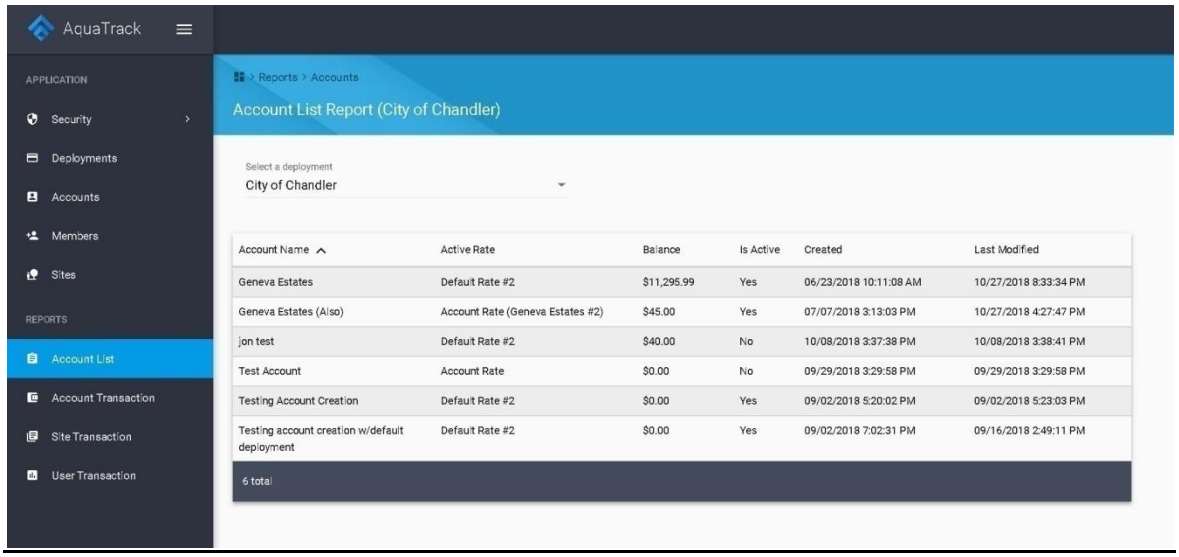
Account List Report: List of 'Accounts' with available balances, rate assigned, and date of their last sale. This is a snap shot in time.

Account Transaction Report: List of transactions for a customer with charges and balances.

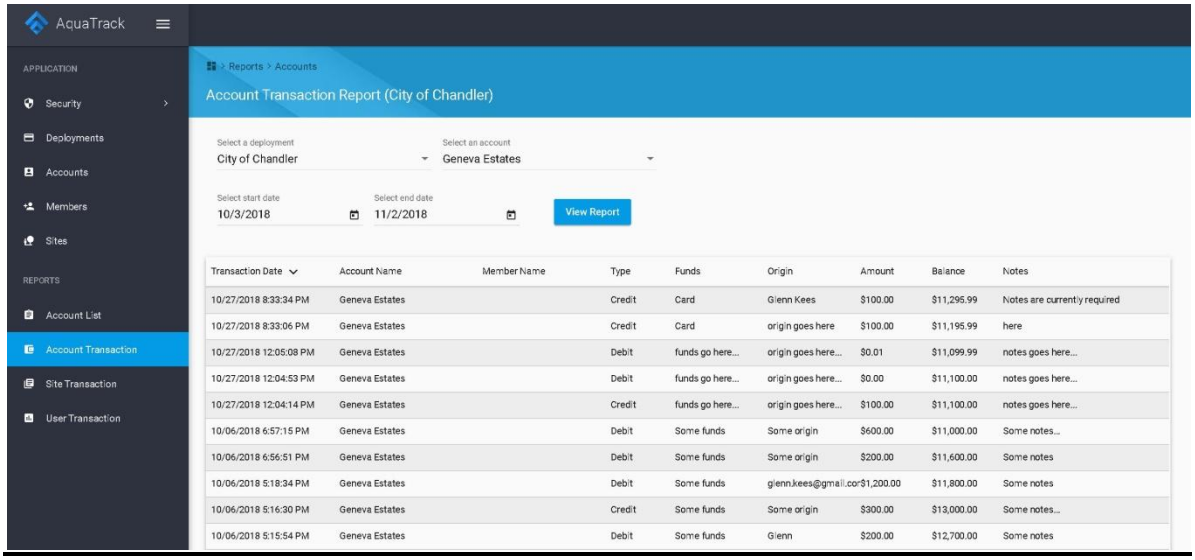
Site Transaction Report: Transactions listed by date, time, account, member, volume, amount, and rate.

User Transaction Report: This is the report to track the 'User' who added or subtracted money to an account.

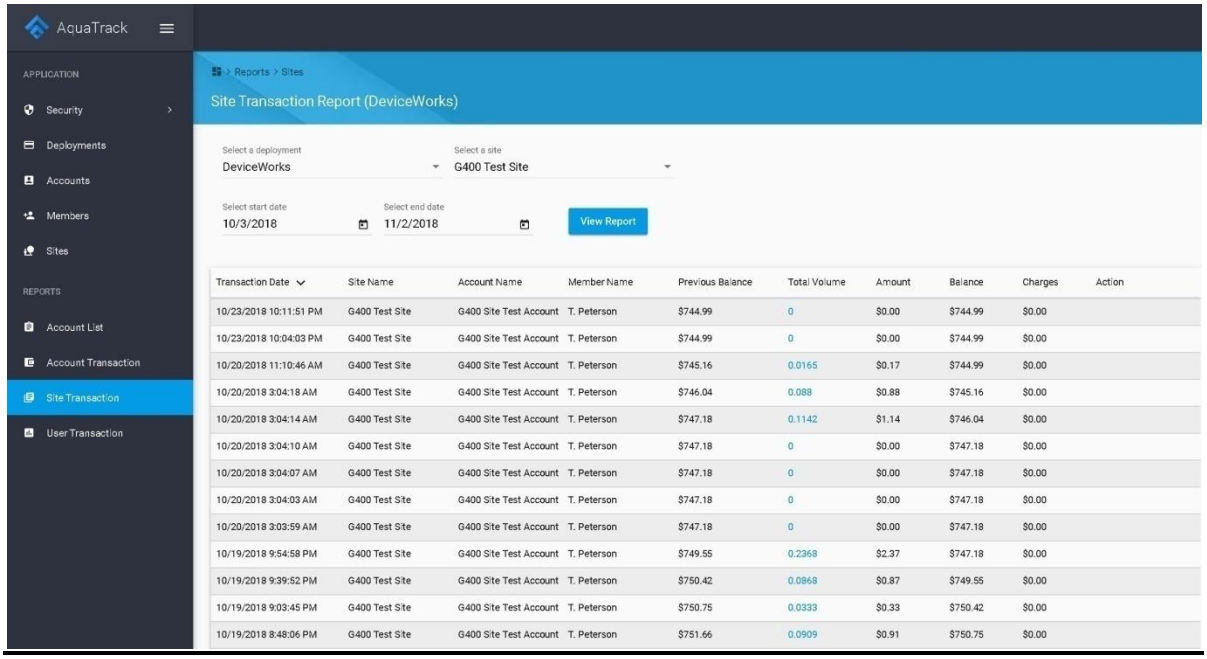
Account List Report



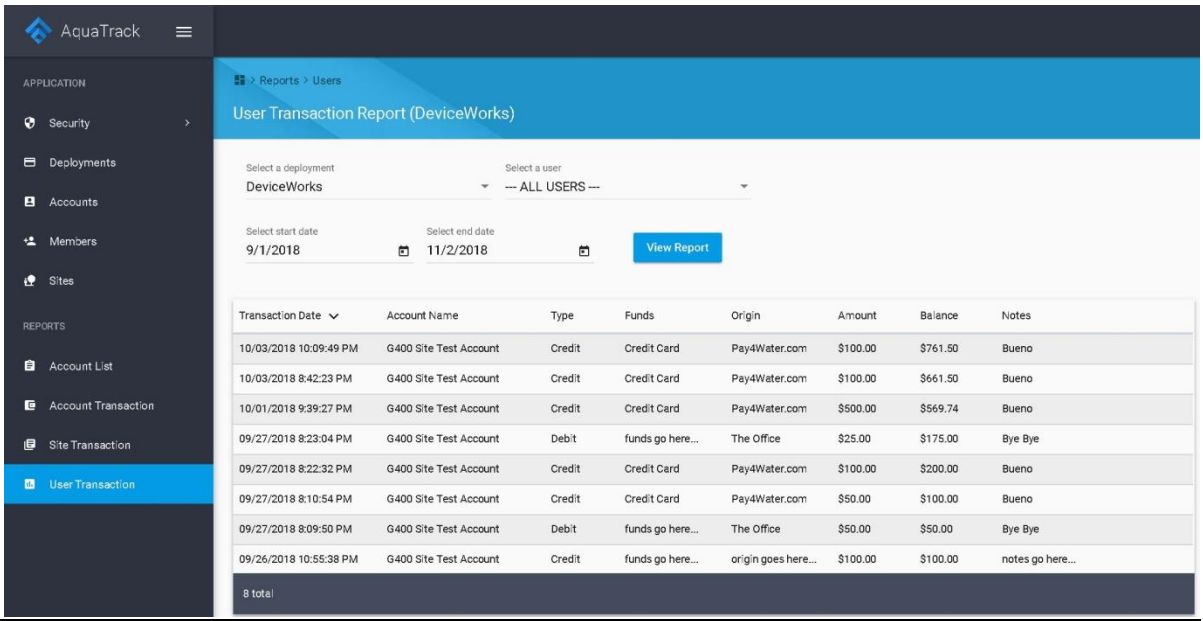
Account Transaction Report



Site Transaction Report



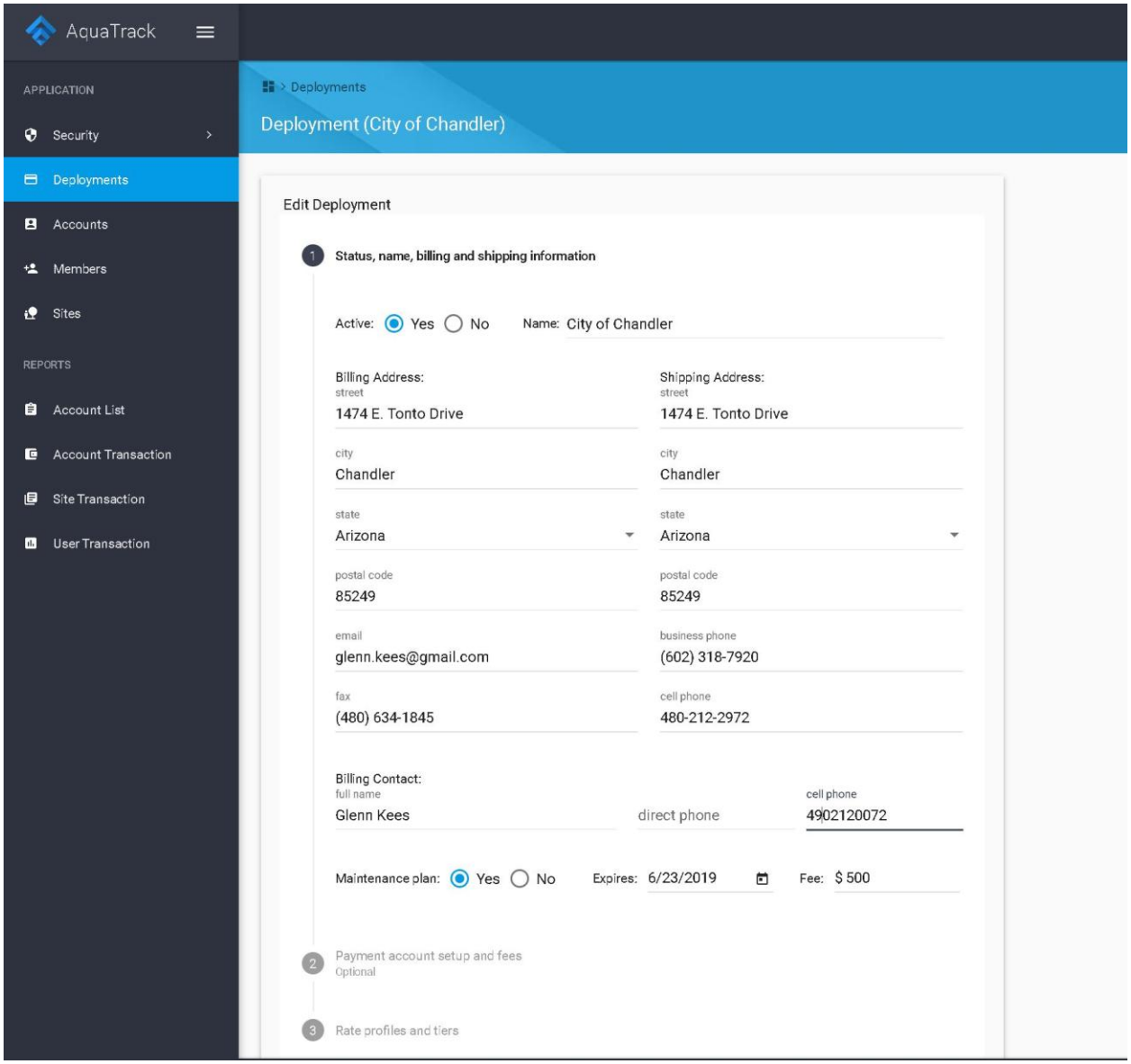
User Transaction Report



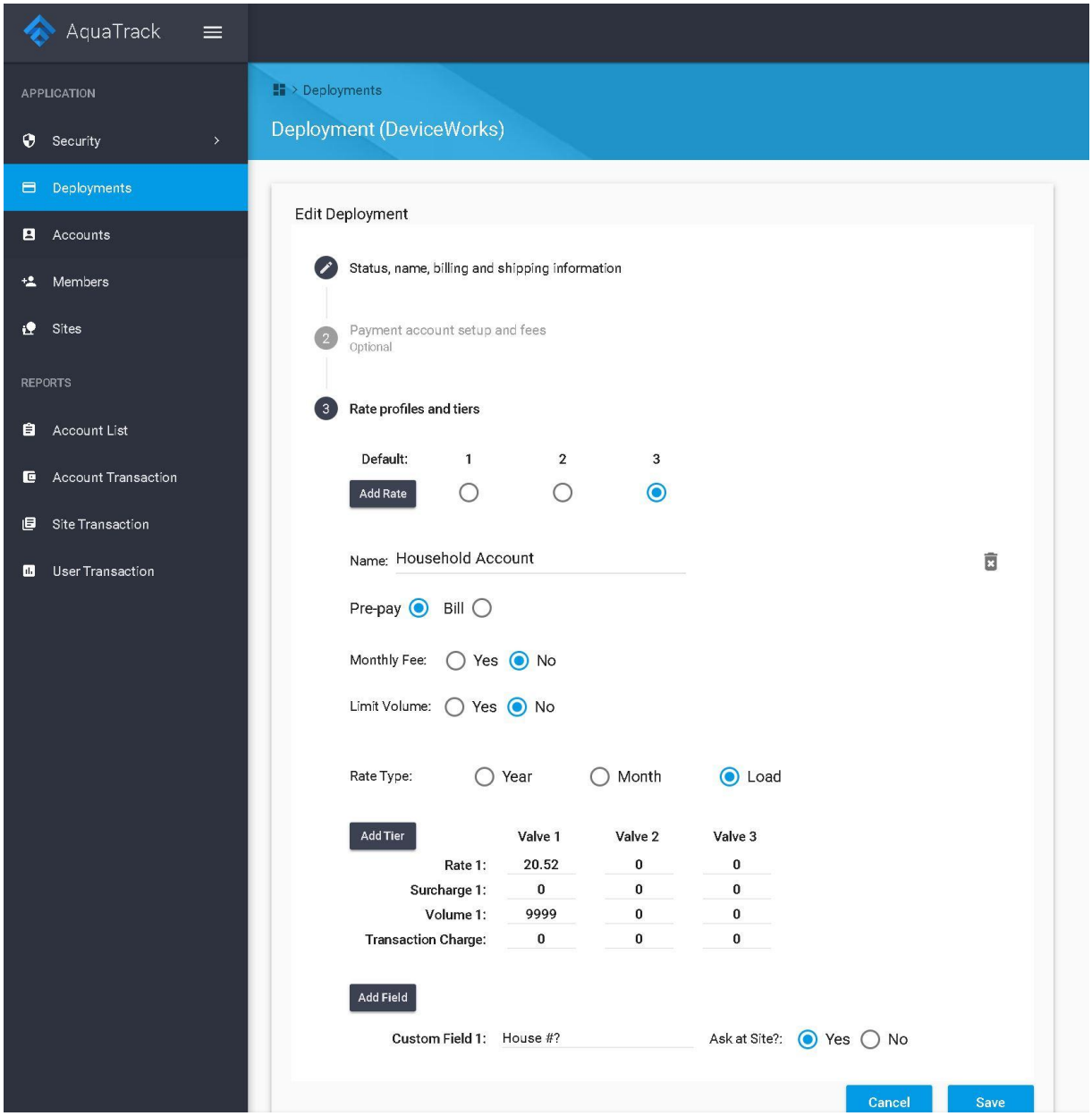
All reports may be exported to either a .PDF or a .CSV file.

Manager Functions

Edit Deployment Settings



* All fields are editable except the ‘Name’ and ‘Active’ fields.


AquaTrack
APPLICATION
Security
Deployments
Accounts
Members
Sites
REPORTS
Account List
Account Transaction
Site Transaction
User Transaction
Deployments
Deployment (DeviceWorks)
Edit Deployment
Status, name, billing and shipping information
2
Payment account setup and fees
Optional
3
Rate profiles and tiers
Default:
1
2
3
Add Rate
Name: Household Account
Pre-pay
Bill
Monthly Fee:
Yes
No
Limit Volume:
Yes
No
Rate Type:
Year
Month
Load
Add Tier
Valve 1
Valve 2
Valve 3
Rate 1:
20.52
0
0
Surcharge 1:
0
0
0
Volume 1:
9999
0
0
Transaction Charge:
0
0
0
Add Field
Custom Field 1:
House #?
Ask at Site?:
Yes
No
Cancel
Save

www.pay4water.com Payment Portal

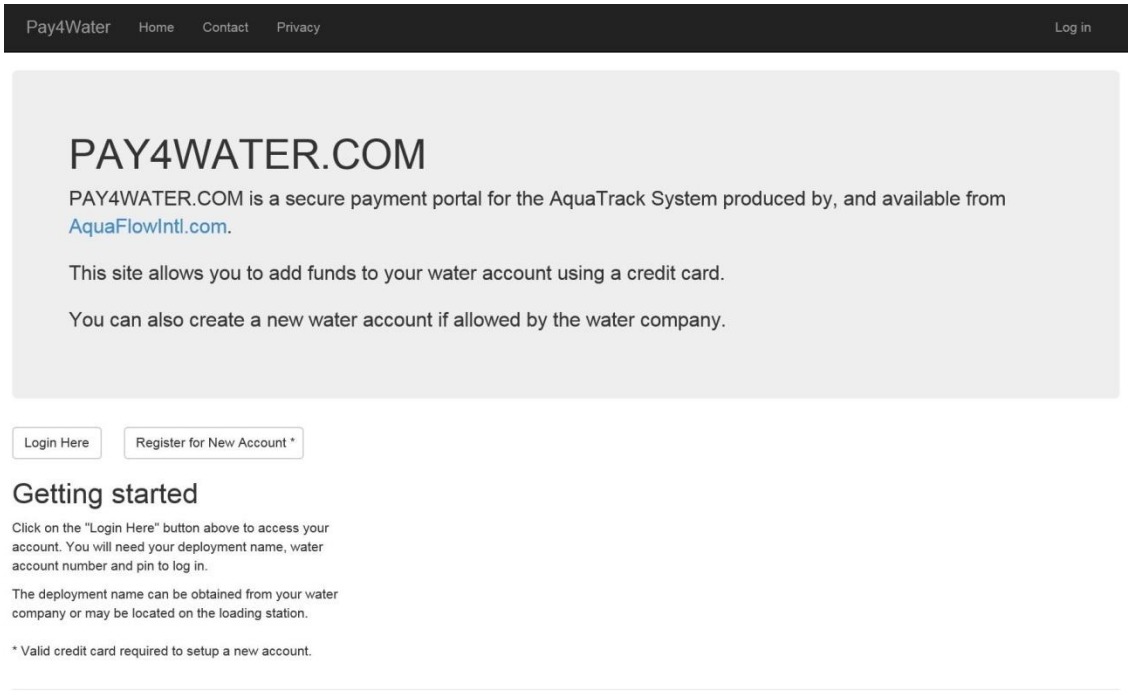
Overview

The pay4water.com payment portal is free for our customers to use. You have control over whether or not you want your customers to be able to log on to the site and make payments to you on their bulk water accounts and if you want people in general to be able to sign up on the site for an account for your loading station. You can choose to allow one and not the other, not allow either, or allow both functions.

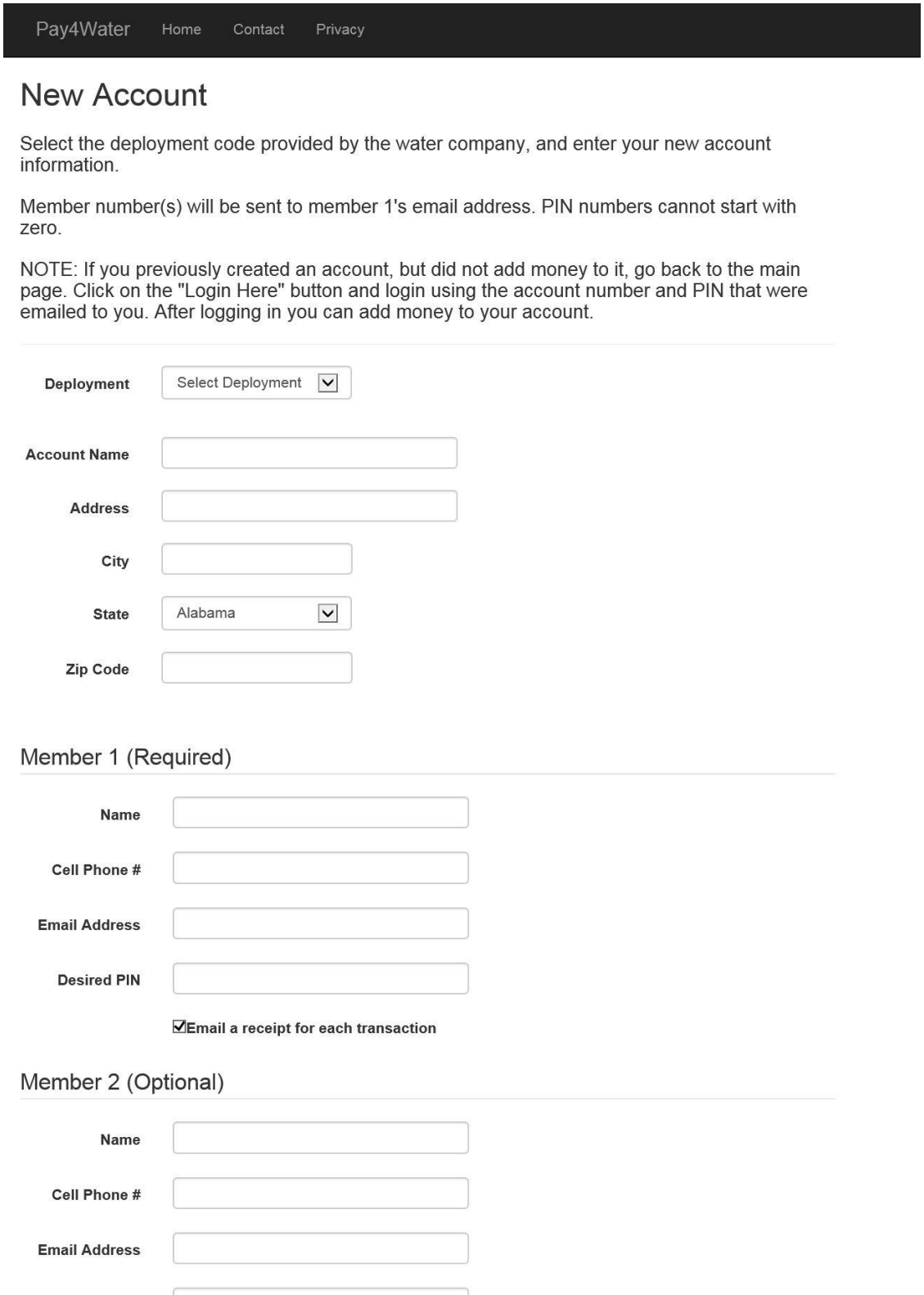
Requirements to use the Payment Portal

In order to use the payment portal the water company must setup a merchant account to accept credit cards. You can use your current credit card processor for this if you have one. Your processor will need to setup a 'Gateway' for the account. If the processor is able to setup an 'Authorize.Net Gateway', there is no charge to set up the pay4water.com payment portal. (The payment portal has already interfaced with that gateway.) If your processor wants you to use another gateway, there may be a one time programming charge.

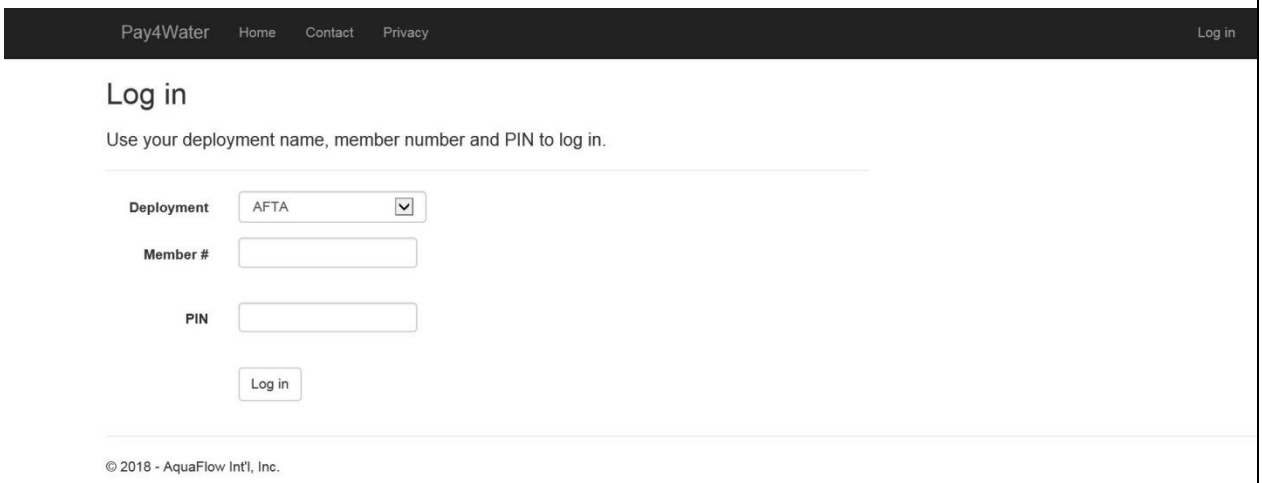
The Payment Portal



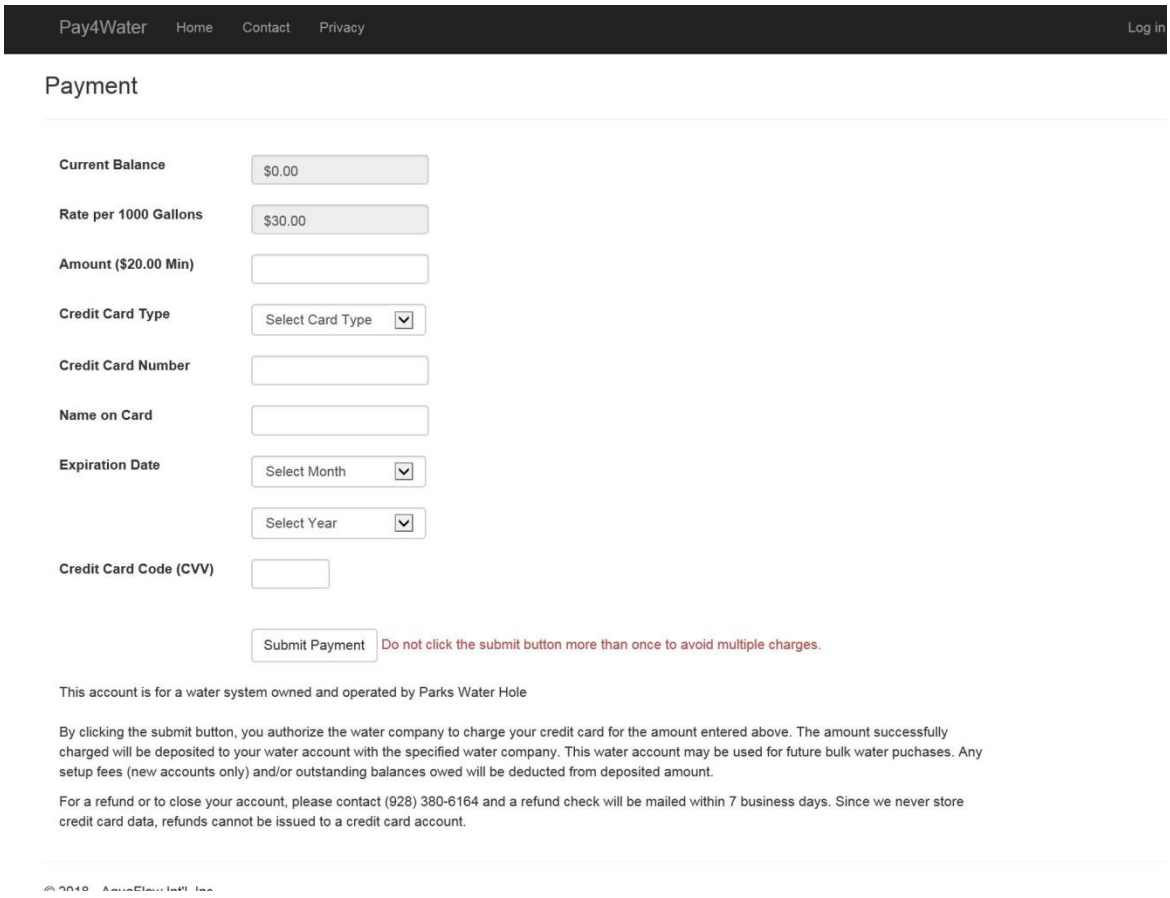
New Account Signup



Logging in to Add Money to your Account



The PCI Compliant Credit Card Screen



AquaFlow NEVER stores the credit card information.

The credit card information must be entered with each use.

Options

Credit Card Reader at the Site:

You can have a credit card reader at the site for operations like a gas station. While this is possible, we highly recommend you use the www.pay4water.com option instead. Since the total water sale is typically less than $3.00, (sometimes much less) the credit card charges can be a large percentage of your revenue. Most credit card processors charge a percentage of the sale and add at per transaction charge of up to $ 0.30 per transaction. Plus they all also have monthly fees, as well as "Batch fees". So swiping a credit card at the site, for a small water sale, may easily exceed 25% - 50% of the total sale in fees for the credit card processor.

Some have addressed this issue with a minimum sale amount at the site. That can be setup and would look something like this: $8.00 Min Charge to include up to 500 gallons and then $8.00 per 1000 for water over the 500 gallons. (If a customer got 200 gallons they would pay $8.00. If the customer got 1000 gallons the customer would pay $8.00 for the first 500 gallons and then $4.00 for the next 500 gallons for a total of $ 12.00 for the 1000 gallons.)

When setting up this type of scenario, keep in mind that the pricing is all based on the load they are getting at the time. We do not then track the sales by individual customers since they do not need to have an account to get water. The credit card purchases are tracked, and the volumes they received and paid. Each sales volume is tracked under a standard credit card sale account but not by individual credit cards.

Receipt Printer at the site:

We offer a receipt printer for the site. This is a thermal receipt printer commonly used at gas stations. However, there are several drawbacks to the use of a receipt printer at the site. First the printer paper is sensitive to moisture in the air. This can cause the printer to jam. Second the receipt printer often causes a mess at the site from customers looking at the receipt and then just tossing it.

A better option is to offer your customers the option of getting an emailed receipt for each water purchase. In this way there is no extra equipment at the site and no mess to clean up.

General Water Fill Rates

2" line fills at a rate of 80 -120 GPM (50-80psi) depending on water pressure. A 2,000 gallon truck would take about 20 minutes to fill at 100gpm.

A 3" line fills at a rate of 350 -450 GPM (50-80psi) depending on water pressure. A 2,000 gallon truck would take about 6 minutes to fill at 350gpm.

A 4" line fills at a rate of 600 -800 GPM (50-80psi) depending on water pressure. A 5,000 gallon truck would take about 6 to 8 minutes to fill at 600gpm.

The most common size station is 2".

You can have either an 'overhead loading station' or a 'side loading station'.

We can retrofit our systems into your existing station(s), or provide a turnkey solution.
Our system can run multiple (up to 3) valves with one customer interface. (ie… customer can choose between a 2" overhead, a 3" side loading, or a 1/2" 5 gallon fill from the same customer interface).

Note: one customer loading at a time.

Glossary

Calibration: Setting the flow sensor to match the volume on the meter.

K Factor: The K Factor is the number of electronic pulses the flow sensor sends to equal one unit of measurement. A 2" system using US gallons is normally set somewhere around 100 pulses. The system makes setting the K factor easy.

X Factor: The X factor is the number of units of water that pass through the valve from the time you press the 'STOP' button until the water stops flowing. This is the amount of time the valve takes to close.

Y Factor: The Y factor is the number of seconds the system will wait for water to flow past the flow sensor.

Master Menu: This is the setup menu where all preferences and settings can be set for the system.

Price Per 1000: This is the cost of water per 1000 units of measurements.

Transaction Charge: The system allows you to charge a 'per fill up' price in addition to the rate charged for the volume of water. If a customer has a tank on the truck and another on a trailer, the customer can fill the truck tank and then hit the 'PAUSE' button. The customer then can move the truck to fill the trailer's tank. The customer hits the green 'START' button to continue the fill. In this instance, the customer would only pay 1 transaction charge.

Office Encoder: The re-value station for the RFID cards. The office encoder box allows the cashier or operator to add value to customer cards.

Operator Card: This is the card the cashier or CSR at the office will use. It gives the permission to add value to an account, subtract value from an account, change PINs and transfer logs.

Manager Card: This is the card the manager of the office will use. It gives them the authority to do all the things an operator does and more. (Such as changing the rate at the site, changing a customer's PIN if the customer does not know the old PIN etc.)

CSR: Customer Service Representative

RFP Data

1. Company:

1.1. Company must have been in business of selling bulk water loading systems for 10+ years.
1.2. Company must maintain a minimum of $2,000,000 of general Liability Insurance.
1.3. Company must maintain a 24/7 tech support line.

2. Enclosure:

2.1. Enclosure height to allow for a person to stand and do any repairs needed.
2.2. Enclosure to be constructed of corrosion resistant materials with protective coatings as necessary.
2.3. Enclosure shall be insulated with a minimum of 2" of rigid insulation.
2.4. Enclosure shall have a thermostatically controlled heater.
2.5. Enclosure shall have an Electrical Sub Panel box inside.
2.6. Enclosure shall have a full height door.
2.7. Enclosure shall have a GFI electrical outlet.
2.8. Enclosure shall have a light controlled by a light switch.

3. Water Components:

3.1. Enclosure shall have a RP style backflow device.
3.2. Enclosure shall have a flow sensor with an accuracy factor of 1.5%.
3.3. Enclosure shall have a stainless steel 24vdc electronically controlled valve.
3.4. Enclosure shall have a stainless steel 24vdc electronically controlled drain valve (if there is an overhead loading port).

4. Water System:

4.1. System shall be controlled by a Micro Computer.
4.2. Customers shall use their Member # and PIN # to access the water.
4.3. System shall have the ability to track an unlimited number of user's transactions.
4.4. A communication line or service shall not be required at the site.
4.5. System shall have the ability to charge a transaction charge per load.
4.6. System shall have the ability to charge based on a multi - tiered rate structure by Load, Month, or Year volumes.
4.7. System must have the ability to have a turn on time and a turn off time for each day of the week.
4.8. System shall have the ability to supersede the default rate for any customer.
4.9. System shall have the ability to upload logs from the system.
4.10. System shall have the ability to control up to three exit ports with one controller.
4.11. System shall have the ability to track all transactions.
4.12. System shall have 3/4" x 3/4" keys for use by gloved hands.
4.13. System shall be modular in design.
  4.13.1. The screen shall be able to be replaced separately.
  4.13.2. The computer shall be able to be replaced separately.
  4.13.3. The control board shall be able to be replaced separately.
  4.13.4. The faceplate with keypad shall be able to be replaced separately.

How the customer uses the Loading Station:

When the customer arrives at the water loading station, the system is in 'Wait' mode. It is ready for the customer to use. The customer sets the hose for the filling of his tank and then enters their 'Member' number and PIN. The customer is then shown the available volume on his/her account. The system then prompts the customer to enter the volume desired, or hit the green start button to begin. If the customer enters 100 and hits the start button, the system turns on, and shows them the volume received as it increases. The customer may press the red stop button at any time to stop the transaction, or the system will shut down automatically when the system reaches the 100 units minus the X Factor. The system shall deliver 100 units plus or minus 1 unit. The customer only pays for the volume he receives. The system then shows the new balance and how many units the customer just received.

> ****Note that if the customer has 2 tanks, they can fill both by using the yellow 'PAUSE' button in between fills to switch tanks, and will only be billed for 1 transaction.****.

There are many abilities that the AquaTrack System has that have not been detailed here. The system is quite flexible. Due to our commitment to our customers, we maintain a programmer on staff in case there is a special feature you desire. Custom programming is never an issue because we are the manufacturer of all our systems.

We would like to take this time to thank you for your considering the AquaTrack System for your water loading station needs. We are committed to providing our customers with first class service and a product that shall be trouble free for years to come.

Jonathan M Keller, CEO
AquaFlow Int'l, Inc.
www.aquaflowintl.com
(928) 380-6164