

# Groundwater Accounting Platform

The Groundwater Accounting Platform enables water managers, landowners, and water users in East Turlock Subbasin and other GSAs to track groundwater usage and supply.

The screenshot shows a web browser window displaying the Groundwater Accounting Platform interface. The browser address bar shows [groundwateraccounting.org/etsgsa](https://groundwateraccounting.org/etsgsa). The page header includes navigation links: Water Dashboard, Scenario Planner, Geographies, Learn More, and Get Help, along with a user profile for Andrew Lovseth.

The main content area features the ETSGSA logo and the text: "ETSGSA East Turlock Subbasin GSA". A contact section provides the email [etsgsa-support@formationenv.com](mailto:etsgsa-support@formationenv.com) and phone number (209) 626-5523.

A paragraph explains the platform's purpose: "The East Turlock Subbasin Groundwater Sustainability Agency (ETSGSA) has launched our new Groundwater Accounting Platform. This platform is a critical part of our developing Groundwater Use Management Program, aimed at sustainably managing groundwater resources in the East Turlock Subbasin. The platform enables users to monitor their water use through evapotranspiration data from Land IQ. It is a powerful tool used across California to track groundwater use, aiding water managers, landowners, and users in effectively managing water availability." A link to <https://turlockgroundwater.org> is provided for more information.

A "3 STEPS TO GET STARTED" section contains three cards:

- 1 Create a User Account**: "Click 'Create Account' to sign up for the platform and create your username and password." A success message reads: "You have successfully created an account. Welcome, Andrew Lovseth".
- 2 Claim Water Accounts**: "Water Managers will provide a unique Water Account PIN to connect users to their Water Accounts. If you are a landowner or an authorized representative, use this workflow to enter your Water Account PIN and gain access to your Water Accounts." A success message reads: "You have successfully claimed 430 water accounts." A "Claim Water Accounts" button is visible.
- 3 View Fee Calculator**: "Review proposed fee structures based on your past years' water use." A "View Fee Calculator" button is visible.

Below the onboarding steps is a "View Water Accounts" section with a "View Water Accounts" button and the text: "View all Water Accounts associated with your User Profile."

The "About ETSGSA" section includes three informational cards:

- Overview**: "Learn more about your GSA." with a "Learn More" button.
- Water Levels**: "View Water Level data integrated from the California State Data Portal." with a "View Data" button.
- Contact and Support**: "View additional contact information for your GSA." with a "Contact Us" button.

The footer contains a disclaimer: "The Groundwater Accounting Platform is developed using open-source software under the GNU Affero General Public License (AGPL). It can be redistributed and/or modified under the terms of AGPL. Source code is available on request. The Groundwater Accounting Platform is built thanks to the support and cooperation of many partners and funders." Below this is the version information: "Version: 0.10 - Production - Built on: 11/16/24 1:56 PM".

**Need Help? Contact ETSGSA**

[etsgsa-support@formationenv.com](mailto:etsgsa-support@formationenv.com)

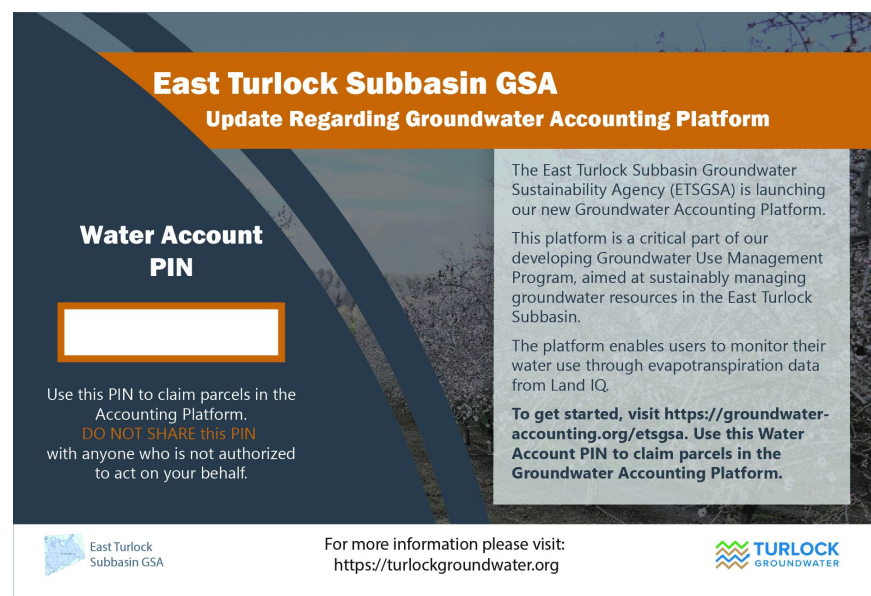
# Getting Started

To get up and running with a new User Profile on the Groundwater Accounting Platform, you need to follow four steps:

- 1** Find Your Mailers
- 2** Create a User Profile
- 3** Claim Water Accounts
- 4** Review Water Accounts

## 1 Find Your Mailers

- 1.a** Landowners will receive Water Account PINs via mail. These PINs are used to claim your Water Accounts. The PINs are sent to the mailing address of the legal owner of all parcels in the GSA based on the latest county tax assessor records.



*If you have not received your PINs, GSA staff can assist you in claiming your Water Accounts.*

## 2 Create a User Profile

- 2.a** Navigate to **groundwateraccounting.org/etsgsa**, and click “Create an Account”
- 2.b** Email Confirmation: Enter your email address and click “Send Verification Code”
- 2.c** Retrieve the email verification code from your inbox and input it into the “Verification Code” field .
- 2.d** Create Profile: Fill in First and Last Name, and create a new password.

Email

- 2.e** Click “Create” button

New Password

Confirm new password

Confirm New Password

## 3 Claim Water Accounts

- 3.a** Click “Claim Water Accounts” and select ETSGSA from the list
- 3.b** Review the Overview Information for your Geography and click “Continue”
- 3.c** Enter and submit your Water Account PINs from your mailer
- 3.d** Click “Continue” to review your Water Accounts

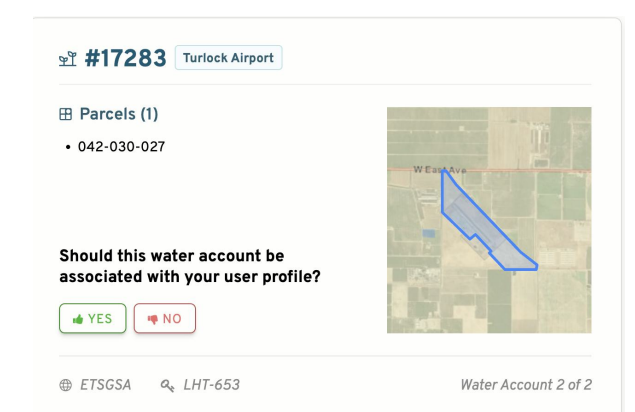


WATER ACCOUNT PIN \*  
(e.g. VQA-123)

A Water Account PIN is generated by the system for each water account in a license plate format (###-###). The keys are meant to be mailed to the owners to facilitate platform sign-up. When the landowner enters the key in the onboarding workflow the corresponding water account will be added to their user account.

## 4 Review Water Accounts

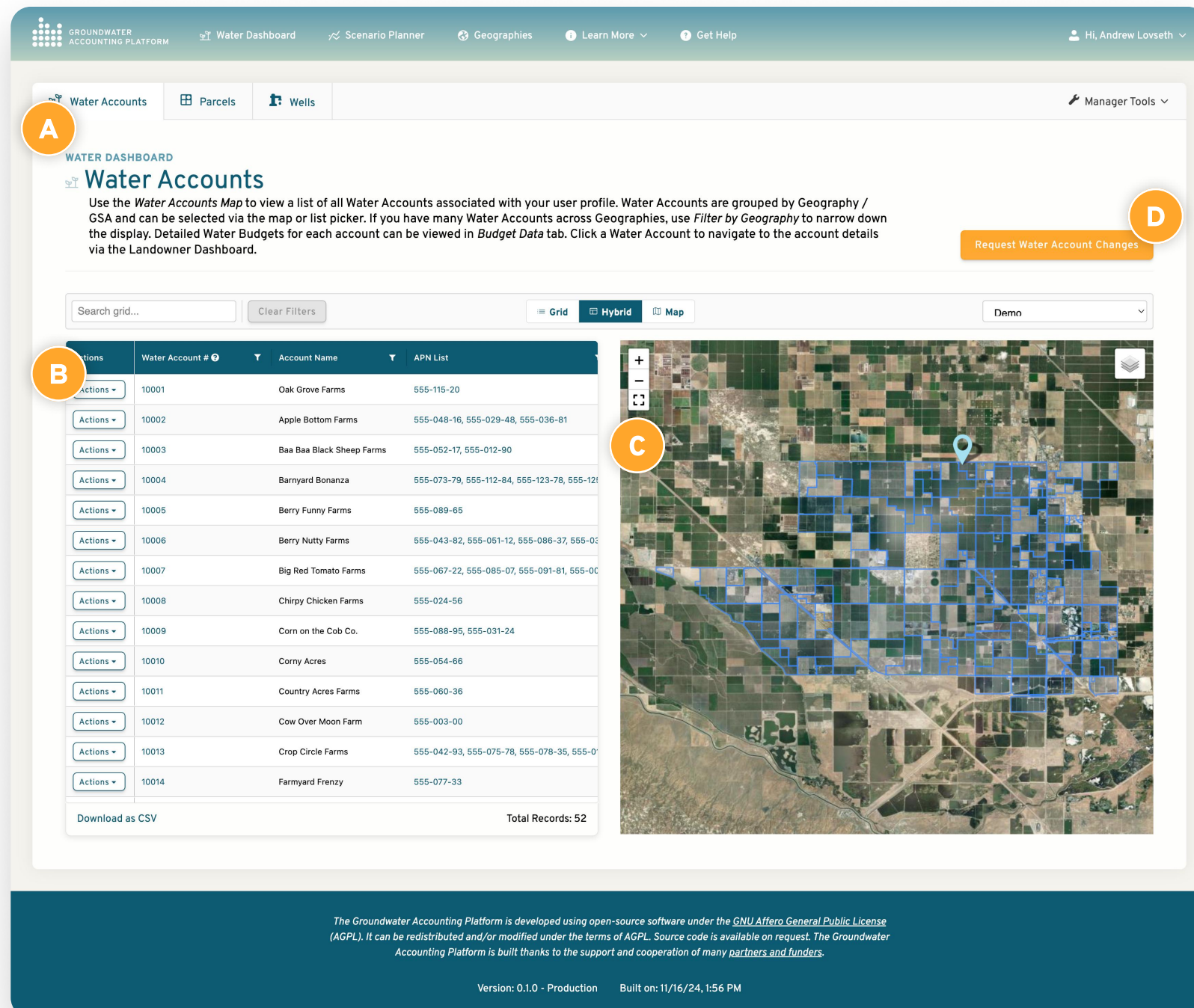
- 4.a** Review the Parcels associated with your the PINs you entered
- 4.b** Confirm that you are the landowner or an authorized representative for each Water Account and Parcel associated with the PINs you entered. Select “Yes” if the Parcels are correct. Otherwise select “No” and contact ETSGSA staff for any necessary corrections or updates to the Parcels and Water Accounts.
- 4.c** Click “Save and Continue” to go to your Water Dashboard



# All Water Accounts

Water Accounts is the central hub for all of your water data. View your Water Accounts, Parcels, and Wells.

**What is a Water Account?** A water account is a group of parcels whose water supply and usage are pooled together.



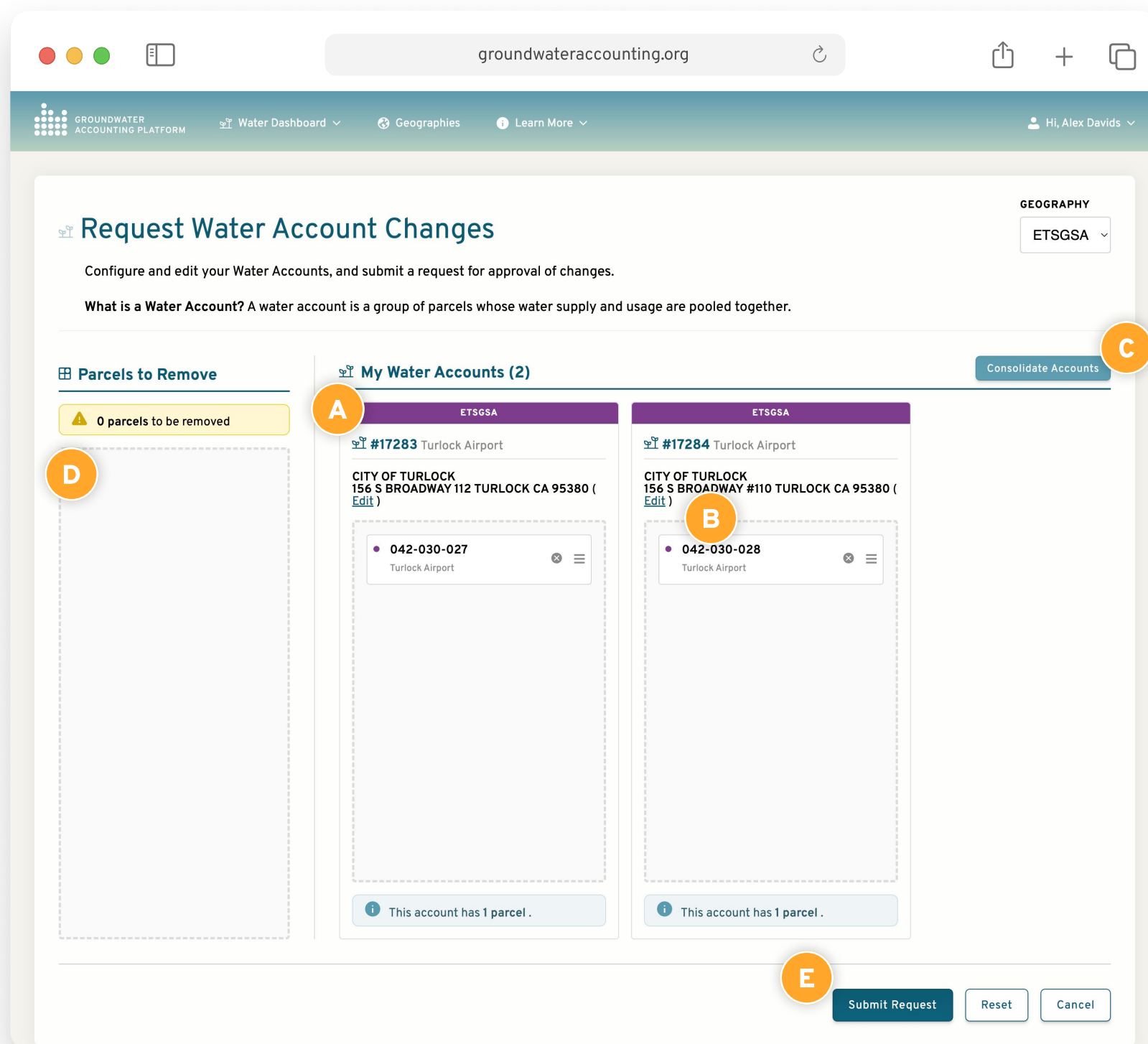
The screenshot shows the 'Water Accounts' dashboard. At the top, there's a navigation bar with 'Water Accounts', 'Parcels', and 'Wells' tabs. Below the navigation, there's a 'WATER DASHBOARD' section with a title 'Water Accounts' and a brief description. A search grid is visible with a search bar and filters. The main content area is split into two parts: a table on the left and a map on the right. The table lists water accounts with columns for 'Water Account #', 'Account Name', and 'APN List'. The map shows a satellite view of a rural area with blue outlines representing water accounts and parcels. A 'Request Water Account Changes' button is located in the top right corner of the dashboard area.

Water Account #	Account Name	APN List
10001	Oak Grove Farms	555-115-20
10002	Apple Bottom Farms	555-048-16, 555-029-48, 555-036-81
10003	Baa Baa Black Sheep Farms	555-052-17, 555-012-90
10004	Barnyard Bonanza	555-073-79, 555-112-84, 555-123-78, 555-121-84
10005	Berry Funny Farms	555-089-65
10006	Berry Nutty Farms	555-043-82, 555-051-12, 555-086-37, 555-012-90
10007	Big Red Tomato Farms	555-067-22, 555-085-07, 555-091-81, 555-012-90
10008	Chirpy Chicken Farms	555-024-66
10009	Corn on the Cob Co.	555-088-95, 555-031-24
10010	Corny Acres	555-054-66
10011	Country Acres Farms	555-060-36
10012	Cow Over Moon Farm	555-003-00
10013	Crop Circle Farms	555-042-93, 555-075-78, 555-078-35, 555-012-90
10014	Farmyard Frenzy	555-077-33

- A Navigation:** Toggle between views of your Water Accounts and Parcels. The Platform has functionality to manage Well inventories, but this is not currently used in ETSGSA.
- B List of Water Accounts:** View a list of all of your Water Accounts. Click the “Details” link on any of the accounts to view the Water Budget.
- C Map of Water Accounts:** View on map the outlines of all your Parcels and Water Accounts. Click on a shape to get a quick view of that Water Account’s details.
- D Request Water Account Changes:** Parcels are initially grouped into Water Accounts based on common ownership records. To consolidate Parcels into fewer Water Accounts, or align Parcels with farm operations, use the Request Water Account Changes button.

# Request Water Account Changes

Use this form configure and edit your Parcels and Water Accounts.



**A My Water Accounts:** All Water Accounts associated with your User Profile will be shown here. Note, if you have Water Accounts in multiple GSAs you will only see the Water Accounts for the currently selected GSA.

**B Edit Water Account:** Use the Edit link to update the Contact Name and Address for a Water Account. You can also give each account a name to help easily identify it.

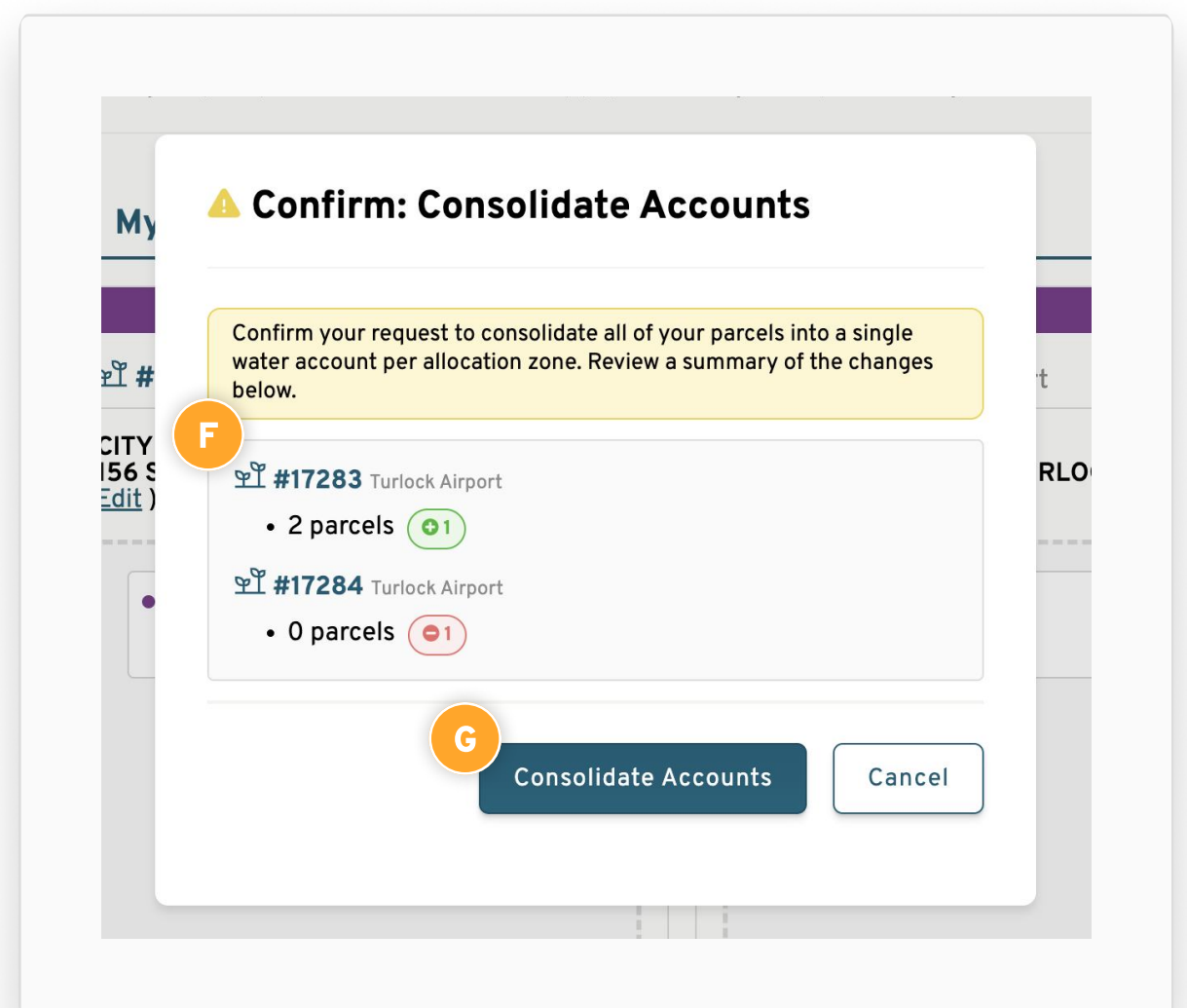
**C Consolidate Accounts:** Use this button to consolidate all your Parcels into a single Water Account.

**D Parcels to Remove:** Any Parcels that you no longer own or are authorized to manager can be dragged to the “Parcels to Remove” section.

**E Submit Request:** When you have configured your Parcels as you like use this button to submit changes to the GSA.

**F Consolidation Summary:** The Consolidate Accounts button is a quick way to bring all your Parcels into a single Water Account. Due to actual ownership of Parcels and variances in Tax Assessor records, you may receive many PINs and have many accounts to manage. The Consolidation Summary shows what your accounts will look like after consolidation.

**G Consolidate:** Click the Consolidate Accounts button to confirm all Parcels should be merged into a single Water Account. Note that all Parcels in a single Water Account will have their supply and usage pooled together. You may prefer to maintain separate Water Accounts if you are authorized to manage Parcels for distinct farming operations whose water usage should not be pooled for accounting purposes.



**Note** If you need to add a Parcel(s) to a Water Account you do not have the PIN for, please contact ETSGSA for support.

# Water Account Detail

The Water Budget tab is the most up-to-date, at-a-glance view of your supply and usage data.

The screenshot displays the 'Water Budget' section for Turlock Airport (Water Account #17283). Key elements include:

- Reporting Period:** 2024, Units: ac-ft/ac.
- Summary Statistics:**
  - TOTAL ET: 1.39 ac-ft/ac
  - TOTAL EFFECTIVE PRECIP: 0.90 ac-ft/ac
  - ET MINUS EFFECTIVE PRECIP: 0.50 ac-ft/ac
- Account Overview:** Parcel Area (125.65 acres), Field Area (76.83 acres), and Contact information (City of Turlock).
- Account Map:** An aerial map showing parcels in blue and fields in green.
- ET minus Effective Precip Chart:** A line chart showing cumulative ET minus Effective Precipitation from Nov 2023 to Oct 2024. The y-axis represents Depth (ac-ft/ac) from 0.0 to 0.8. The x-axis shows months from Nov-2023 to Oct-2024. A blue shaded area under the line indicates the cumulative deficit.
- Water Measurements Table:** A table showing various water measurements for the Water Account.

Measurement	To...	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	M...	Area
Land IQ ETa	1.39	0.03	0.02	0.07	0.15	0.27	0.36	0.20	0.06	0.10	0.07	0.06	-	ET	76.83
Land IQ Precip	1.28	0.04	0.15	0.35	0.33	0.19	0.16	0.07	0.00	0.00	0.00	0.00	-	Precip	76.83
Effective Precip	0.90	0.03	0.11	0.24	0.23	0.13	0.11	0.05	0.00	0.00	0.00	0.00	-	Calculate	76.83
Merced Irrigation Dis	0.00	-	-	-	-	-	-	-	-	-	-	-	-	Surface V	76.83
Turlock Irrigation Dis	0.00	-	-	-	-	-	-	-	-	-	-	-	-	Surface V	76.83
Ballico-Cortez Surfak	0.00	-	-	-	-	-	-	-	-	-	-	-	-	Surface V	76.83
Riparian Water	0.00	-	-	-	-	-	-	-	-	-	-	-	-	Surface V	76.83
Other Surface Water	0.00	-	-	-	-	-	-	-	-	-	-	-	-	Surface V	76.83
Consumed Groundw	0.50	0.00	-0.08	-0.17	-0.08	0.14	0.25	0.15	0.06	0.10	0.07	0.06	-	Calculate	76.83

**A Page Controls:** The 2024 Reporting Period for ETSGSA is November 2023 through October 2024. Water measurements can be displayed as depth (acre-feet per acre) or volume (acre-feet).

**B Account Overview:** A summary of the Water Account for the current Reporting Period.

**C Total ET:** The total measured Evapotranspiration reported by Land IQ for the Fields associated with the current Water Account.

**D Total Effective Precip:** The total Effective Precipitation for the Fields associated with the current Water Account. Effective Precipitation is calculated per GSA policy from the Land IQ actual precipitation measurements.

**E Account Map:** This map shows the Parcels (in blue) and Fields (in green) associated with the Water Account. Select a Parcel or Field to learn more and navigate to the Parcel detail page.

**F ET minus Effective Precip Chart:** View a monthly chart of ET minus Effective Precipitation. Note that early in the Reporting In months with no irrigation the Effective Precipitation will be greater than ET and is displayed in the chart as zeros. As the irrigation season progresses and ET exceeds Effective Precip the chart will display positive values.

**G Water Measurements:** View the detailed Water Measurements for this Water Account. Each measurement represents a separately accounted "bucket" of water. Data can be viewed Parcel-by-Parcel or for the total account. There are many measurements defined for ETSGSA, including buckets for Surface Water delivery.

**Note** If you do not receive surface water, ET minus Effective Precip is ETSGSA's estimate for consumed groundwater.

# Parcel Detail

The Parcel Detail page provides a summary of a parcel, including ownership, classification, field boundaries, and water measurements.

The screenshot displays the 'Parcel Detail' page for parcel ID 042-030-028. The interface includes a top navigation bar, a left sidebar with a 'Parcel' dropdown menu, and a main content area. The main content area features a map (B) showing the parcel boundaries in blue and associated fields in green. Below the map are three metadata cards (C): 'PARCEL AREA 125.65 acres', 'IRRIGATION STATUS' (Irrigated, Merced, Subsidence Management Area), and 'OWNER NAME' (City of Turlock). A 'Fields' table (D) lists three fields with their names, areas, and crops. At the bottom, a 'Water Measurements' chart (E) shows 'Acres-feet per month' from Nov 2022 to Sep 2024, with data series for Consumed Groundwater, Effective Precip, Land IQ ETs, and Land IQ Precip.

- A Water Account Link:** Navigate directly to the Water Account that the Parcel belongs to.
- B Parcel Map:** View the boundaries of the Parcel (blue) and associated Fields (green) on a map.
- C Parcel Metadata:** View information about the Parcel area, zones, and ownership.
- D Fields:** View the Land IQ Fields associated with the Parcel. The Fields boundaries are used to determine ET and Precipitation for this Parcel.
- E Water Measurements:** View water use estimates for water measurements on the Parcel.