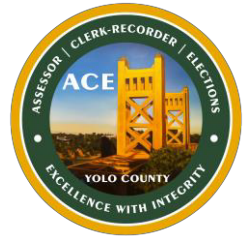# COUNTY OF YOLO

ACE –ASSESSOR/CLERK-RECORDER/ELECTIONS
625 COURT STREET, ROOM 104, WOODLAND CA 95695
(P) 530.666.8135 (F) 530.666.8213
JESSE SALINAS
ASSESSOR/CLERK-RECORDER/REGISTRAR OF VOTERS

From: Shannon Harris <Shannon.Harris@yolocounty.org>
Date: Mon, 25 Nov 2019 20:05:36 +0000
Subject: Outstanding Innovation Submission
To: "clearinghouse@eac.gov" <clearinghouse@eac.gov>

Good Morning,
Attached is the submission from Yolo County for the 2019 Clearinghouse
Awards. In the 2018 election cycle Yolo County Elections Office
Partnered with the County IT Department to improve our resources
allocation and response time to our polling places, strengthen our
communication with citizens, and increase future turnout with targeted
outreach. The result was a three-part solution comprised of a poll
worker app, interactive election result maps, and a database of voter
data to help with future outreach and education, all built with ArcGIS
tools through Esri. These tools led to our quietest election morning
in years, and allowed elections staff to efficiently allocate our time
and resources. Esri is now using the Yolo County case study as an
example of best practices to promote their services to other counties.
A full description of how we used these tools, as well as examples of
our app and maps, can be found in the attached document. Thank you for
taking the time to consider our submission. We look forward to hear
from you.
Best,

Shannon Harris, M.A. | Outreach Specialist
Yolo County Elections
(p) 530.666.8136 (e)
shannon.harris@yolocounty.org<mailto:shannon.harris@yolocounty.org>
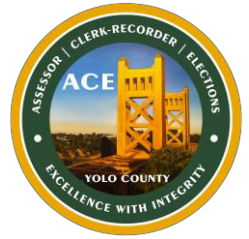Intellection|Learner|Harmony|Input|Consistency

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Overview

In 2018, the Yolo County Elections Office partnered with the Information Technology division of the county General Services Department to streamline election night reporting and improve communication with the public. The goal was to provide a modern feel to our election operations. Using geographic information system (GIS) technology, we created dynamic, interactive maps to report election results. We also created an app for our poll workers, which was used to report issues at the polling places and efficiently allocate resources to solve those issues.

Challenge

Yolo County is very unique in terms of geography and population. There are rural cities with very small populations, urban cities adjacent to the capitol, and a University of California campus in Davis. The four main goals of the partnership between the Elections Office and the IT team were:
- Improve resource allocation
- Reduce response time to polling places
- Strengthen communication of election results to citizens
- Increase future turnout through targeted outreach and education

By using GIS technology, the Elections Office planned to effectively reach all corners of the county to allocate resources and communicate with voters.

Solution

The GIS solution to the challenges listed above had three parts: A poll worker app, interactive election results maps, and a database of voter data to assist in future outreach efforts.

Poll Worker App

On Election Day, a major challenge is providing resources and assistance to the 96 polling places across Yolo County. Issues such as a poll worker not showing up, or an unexpected rush at the polling place leading to a depletion of ballots, need immediate attention from the elections office. In the past, we have addressed these issue with roving Inspectors, who are assigned specific polling places to check on throughout the day. This solution had many issues, as roving Inspectors can only carry so many supplies in their vehicle, and poll workers needed to be able to contact these rovers throughout the day. Using Esri's Survey123 for ArcGIS and Workforce for ArcGIS, the county IT team was able to create an app for poll workers to use on mobile devices provided by the elections office. A poll worker could complete a request for additional ballots, which would then be pushed to the elections office, where we would locate the closest roving Inspector's real time location in the workforce Dashboard and send them to the polling place with additional ballots. In the elections office, we had a dashboard with a live feed of the requests coming from the polling places so we could easily see how many requests were open, how many were complete, and which types of supplies were requested most often. Knowing how many supplies were requested throughout the day will help us plan supply stocks for future elections. These applications were a major improvement in polling place communication. They allowed our elections office to be more efficient in resource allocation, thus reducing staff hours and overall cost. They also
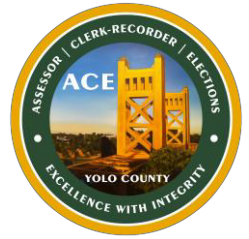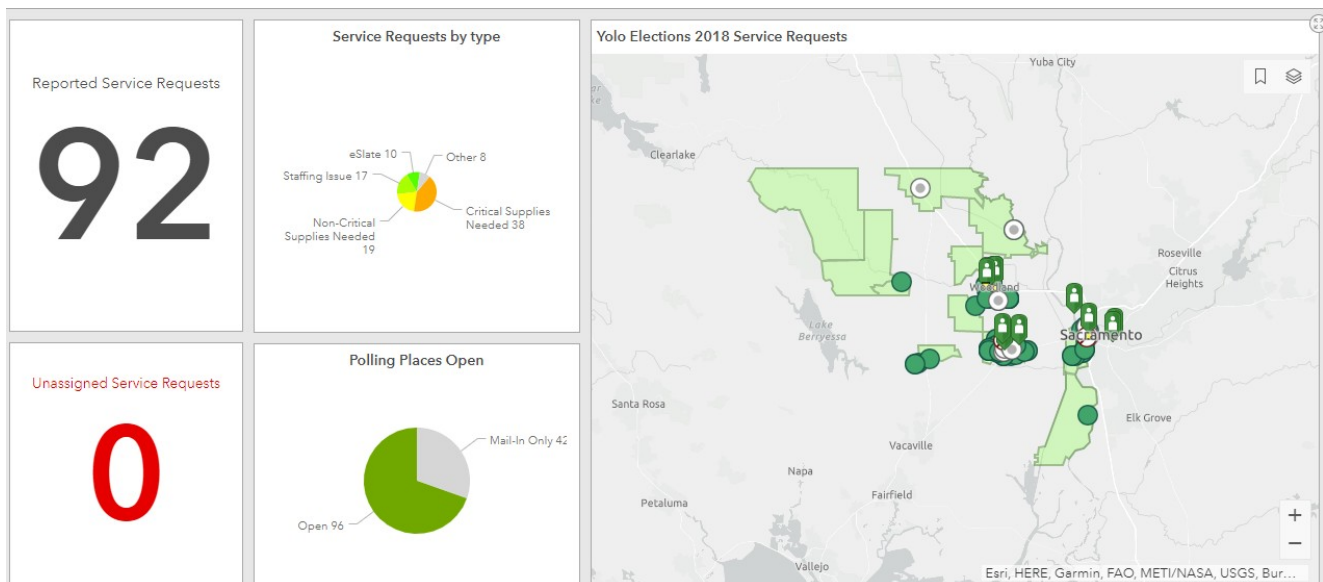
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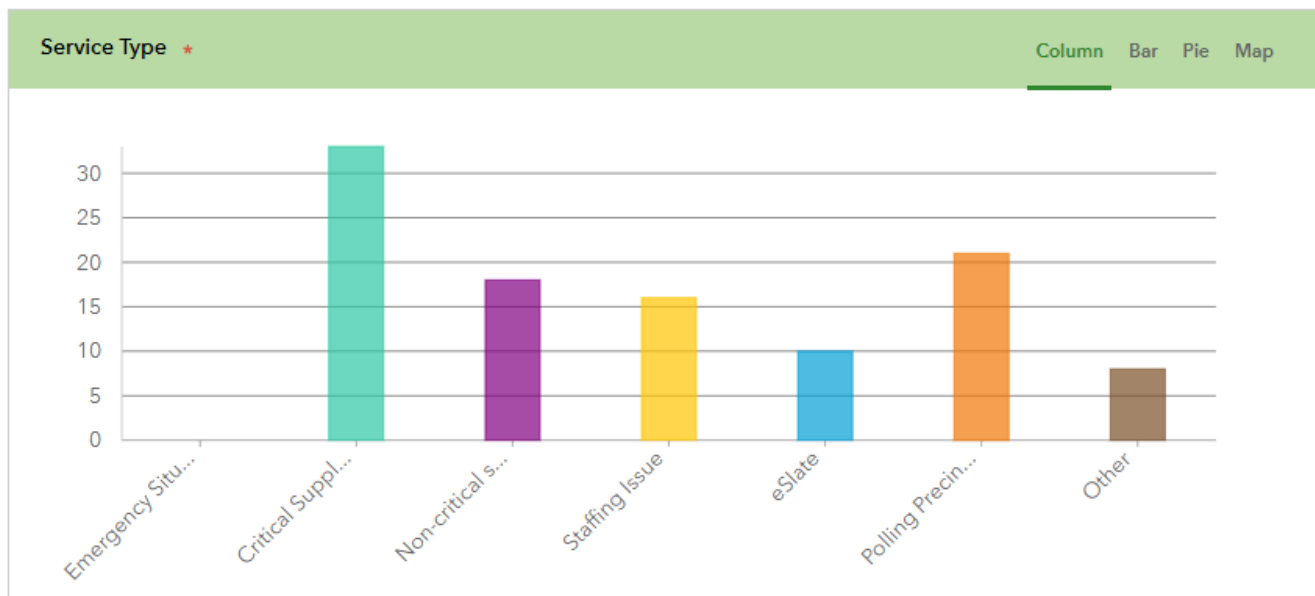(P) 530.666.8135 (F) 530.666.8213
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saved our roving Inspectors driving time, which both reduced cost (as we pay our Inspectors for mileage) and improved sustainability. These applications could be replicated in any county to improve communication with poll workers. Esri used Yolo County as an example of best practices for using GIS for election management and developed a set of election application templates that are based on the applications Yolo County created. Overall, these applications helped us have the quietest election morning our office has ever had.

Elections Operations Dashboard

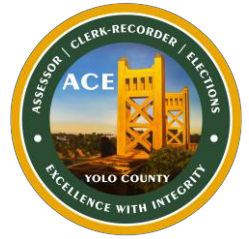

Survey Results from Poll Worker App

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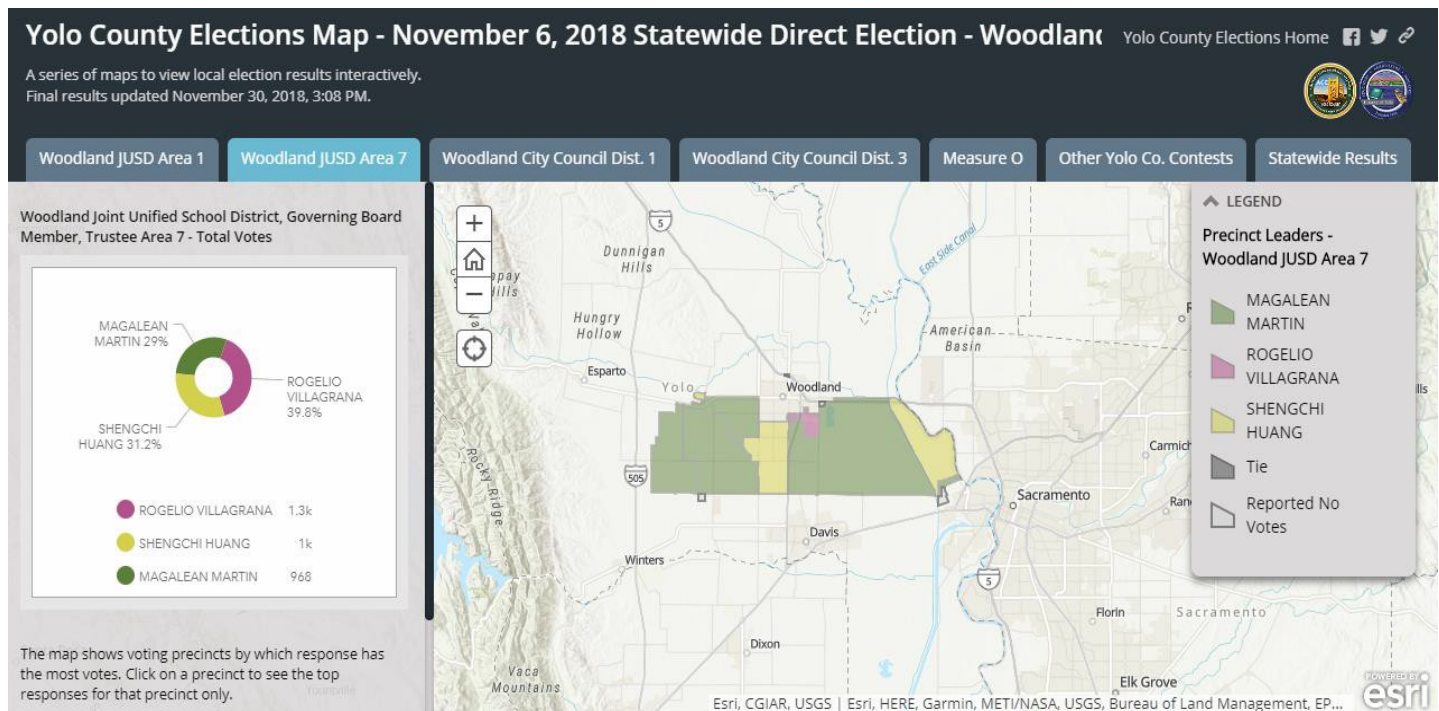(P) 530.666.8135 (F) 530.666.8213
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Election Results Mapping

   To meet our goal of strengthening communication with voters, the Elections Office and county IT worked together to create interactive, real-time maps of results on election night. We chose 19 races that we thought would be of the most interest to the voters, and as results came in on election night, the maps were updated to show which candidate had received the most votes, and what the breakdown of votes was in each precinct. These maps were created through a web-based app that we linked directly on our elections website. When a voter visited our website to see election results, there was a clear link to these maps. They showed exactly how many votes each candidate had received in each precinct as well as overall in the district, and were color-coded by candidate so that the viewer could tell, at a glance, how the election was turning out. These maps were also helpful to members of the media, who are often calling the elections office all night long in order to get results. With these maps, the press can get complete, up-to-date elections results right on our website, thus freeing up the phone lines and staff in the office to accomplish other election night tasks. These maps were an innovative solution to how we can communicate detailed results to the public throughout the night without taking up too much time on election night. These maps can now be replicated by any county interested in visual reporting of election results, and Esri has used the Yolo County case study as an example for best practices when promoting their services to other counties. We received a lot of positive feedback about how easy it was to use these maps and how clear the results were. All of our maps can be found at https://elections-yolo.opendata.arcgis.com/
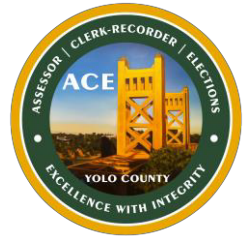

Map of Elections Results

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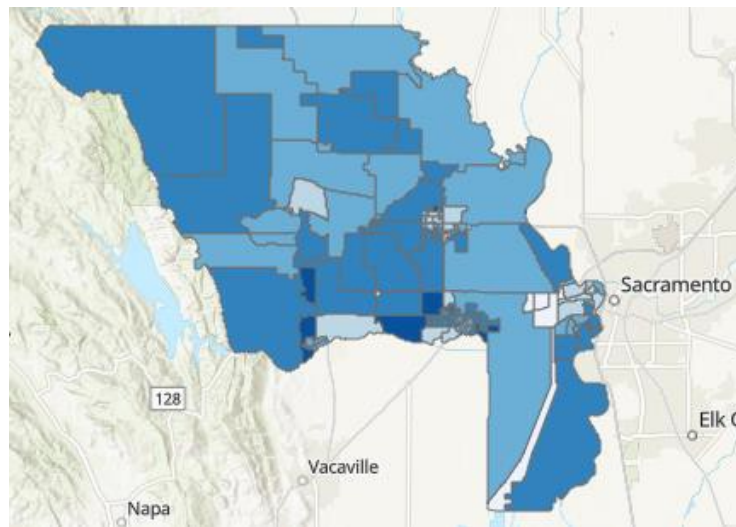(P) 530.666.8135 (F) 530.666.8213
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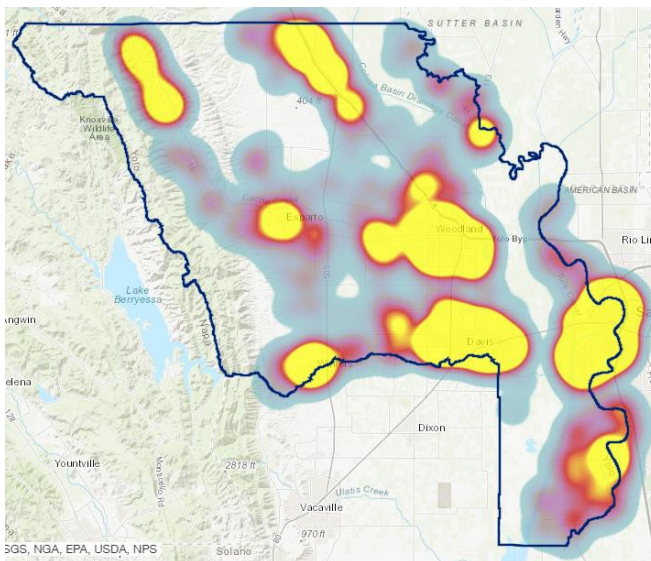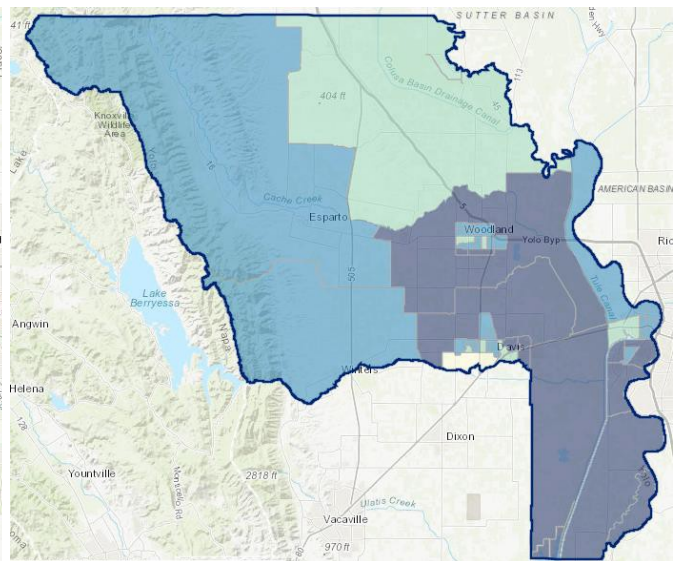ASSESSOR/CLERK-RECORDER/REGISTRAR OF VOTERS

Future Outreach Efforts

Now that we have access to GIS technology to track voter turnout across the county, we can use that information to improve outreach through targeted efforts and education. Registrar of Voters Jesse Salinas says, "We can now begin to look at patterns of low participation in the various neighborhoods and start to develop strategies to change the less engaged election patterns of the past toward greater participation in the future." Using these GIS maps, we can visualize "hot spots" and "cold spots" in the county and focus our outreach efforts on those places that historically do not turn out. The elections office learned a lot about GIS technology in 2018, and moving forward we plan to continue to use it to shape the way we communicate and educate our community.

Yolo County Voter Turnout

Heat Map of Registered Voters

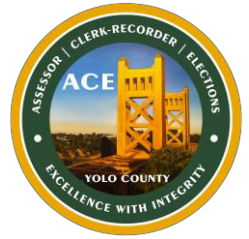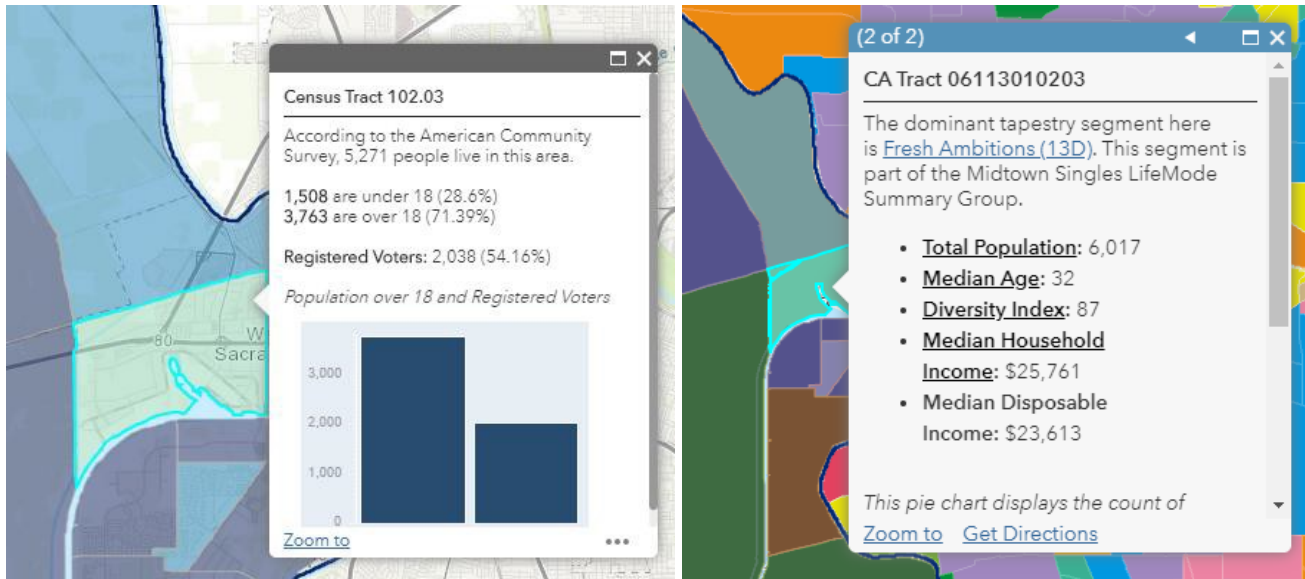Cold spots-Large % of 18+ residents not registered to vote

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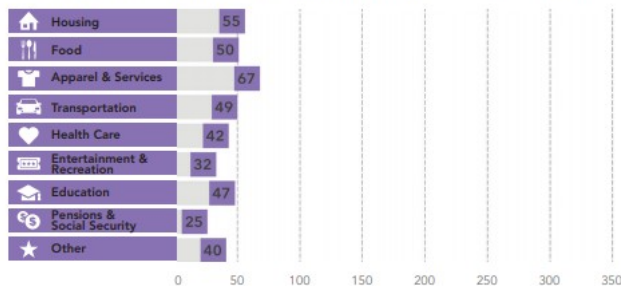ASSESSOR/CLERK-RECORDER/REGISTRAR OF VOTERS

We utilized American Community Survey population data to see where we have cold spots of larger populations of residents over 18 years old that are not registered to vote. We explored Esri's tapestry data to further evaluate how we can best outreach to that population to encourage them to vote in future elections.

Census Tract 102.03

According to the American Community Survey, 5,271 people live in this area.

1,508 are under 18 (28.6%)
3,763 are over 18 (71.39%)

Registered Voters: 2,038 (54.16%)

Population over 18 and Registered Voters

Zoom to

(2 of 2)

CA Tract 06113010203

The dominant tapestry segment here is Fresh Ambitions (13D). This segment is part of the Midtown Singles LifeMode Summary Group.

- **Total Population:** 6,017
- **Median Age:** 32
- **Diversity Index:** 87
- **Median Household Income:** $25,761
- **Median Disposable Income:** $23,613

This pie chart displays the count of

Zoom to   Get Directions

LifeMode Group: Next Wave
13D Fresh Ambitions

TAPESTRY SEGMENTATION
esri.com/tapestry

AVERAGE HOUSEHOLD BUDGET INDEX

The index compares the average amount spent in this market's household budgets for housing, food, apparel, etc., to the average amount spent by all US households. An index of 100 is average. An index of 120 shows that average spending by consumers in this market is 20 percent above the national average. Consumer expenditures are estimated by Esri.

Category	Index
Housing	55
Food	50
Apparel & Services	67
Transportation	49
Health Care	42
Entertainment & Recreation	32
Education	47
Pensions & Social Security	25
Other	40

MARKET PROFILE (Consumer preferences are estimated from data by GfK MRI)

- Young families are the focus; *Fresh Ambitions* residents must budget for baby food and disposable diapers. Baby and parenthood magazines are their chosen reading material.
- These young, newly established residents own cell phones, not landlines.
- Almost half of all households can access the Internet via home PC; Spanish-language web sites and downloading video games and music are popular.
- Nearly half of all households subscribe to a cable service; Spanish TV networks, BET, and children's shows are popular.
- When their budget permits, they wire money back home. Half of all residents have owned or used a credit or debit card within the past year. And, roughly a third maintain a savings account.
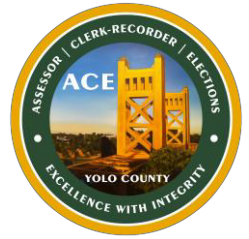
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Results

By partnering with the County IT department and using the tools available to us through Esri, the Yolo County Elections Office was able to bring a modern feel to our 2018 Election Cycle. Poll workers needs were met quickly and efficiently, voters and the media were given immediate access to election results in a user-friendly format, and we received data that will help us tailor our outreach and education efforts moving forward. We were able to reduce staff time answering phone calls, as well as rover inspector time traveling across the county. This saved money for the county in terms of staff hours, and was also more sustainable in terms of driving time and fossil fuel burned when getting to and from the polling places with supplies. These tools could be replicated in any county to reach poll workers, present results, and inform outreach efforts. The use of ArcGIS in 2018 revolutionized our election efforts, and made huge strides towards achieving our goals of transparency, efficiency, and strong communication with our community.