CALIFORNIA COASTAL COMMISSION
455 MARKET STREET, SUITE 228
SAN FRANCISCO, CA 94105-2219
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Th7a8a

Appeal A-3-MRA-19-0034
(California American Water Co., Marina)
&
Coastal Permit 9-20-0603
(California American Water Co., Monterey Co.)

NOVEMBER 17, 2022

EX-PARTE

Received on 11/10/22

EXPARTE COMMUNICATION DISCLOSURE FORM
Filed by Commissioner Donne Brownsey

1)Name or description of project: Nov 17, 2022 Item 7a & 8 a. California American Water company, Monterey County

2) Date and time of receipt of communication:
Nov 10, 2022 at 2:00pm-2:30pm

3) Location of communication
On Zoom

4) Identity of person(s) initiating communication:
Kathy Biala—note: Kathy is also the Mayor Pro Tem of Marina

5) Identity of person(s) on whose behalf communication was made:
Herself and Citizens for Just Water Chair Liesbeth Visscher

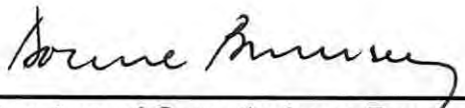
6) Identity of persons(s) receiving communication:
Donne Brownsey

7) Identity of all person(s) present during the communication:
Brownsey, Biala &Visscher

Complete, comprehensive description of communication content:

Biala & Visscher discussed their opposition to the project. They have concerns about the slant wells, the extraction pumps, the water going to the wealthy peninsula, the seawater extraction sites. They are very concerned about the ESHA impacts and object to the industrialization of this site. Stated that $1M for public access is insufficient and that brackish water has value for their community. It is very difficult for their community organization to follow 20 conditions and they do not trust the applicant.

Date November 10, 2022



Signature of Commissioner Donne Brownsey

EXPARTE COMMUNICATION DISCLOSURE FORM
Filed by Commissioner Donne Brownsey

1)Name or description of project: Nov 17, 2022 Item 7a & 8 a. California American Water company, Monterey County

2) Date and time of receipt of communication:
Nov 10, 2022 at 3:00pm-3:30pm

3) Location of communication
On Zoom

4) Identity of person(s) initiating communication:
Dave Stoldt, General Manager of Monterey Penisula Water Management District

5) Identity of person(s) on whose behalf communication was made:
Himself and Karen Paull, Chair of the MPWMD

6) Identity of persons(s) receiving communication:
Donne Brownsey

7) Identity of all person(s) present during the communication:
Brownsey, Stoldt & Paull

Complete, comprehensive description of communication content:

Stoldt and Paull explained that their agency was created by legislation to be a regulator, oversight manager and seller of water among the different water entities in the Monterey Peninsula. They are funded by a surcharge ~~for~~ on the monthly Cal Am customers' water bills as well as an annual tax assessment. They believe that there is a much less expensive water supply option based on their water supply/demand reports and that the PWM recycled water funded by the Waste Water Treatment agency which is Monterey One Water. The MPWMD sells the recycled water produced by the PWM to Cal Am for their customers. They also believe that the region does not need the water based on their demand & growth studies.

Date November 10, 2022

Donne Brownsey

Signature of Commissioner Donne Brownsey

Received on 11/14/22

EXPARTE COMMUNICATION DISCLOSURE FORM
Filed by Commissioner Donne Brownsey

1)Name or description of project: Nov 17, 2022 Item 7a & 8 a. California American Water company, Monterey County

2) Date and time of receipt of communication:
Nov 10, 2022 at 2:30pm-3:00pm

3) Location of communication
On Zoom

4) Identity of person(s) initiating communication:
Melodie Chrislock, Managing Director of PWN

5) Identity of person(s) on whose behalf communication was made:
Herself for Public Water Now

6) Identity of persons(s) receiving communication:
Donne Brownsey

7) Identity of all person(s) present during the communication:
Brownsey, Chrislock

Complete, comprehensive description of communication content:

Chrislock very disappointed in the staff report for the recommendation and for not including two pertinent water supply and demand reports which would have demonstrated that the Pure Water Monterey recycling project would produce enough supply to address demand. She stated that the recycled water is fairly drought proof. She indicated that the MPWMD is planning on making a buy out offer to CalAm in the first quarter of next year. Noted that the CPUC Public Advocates office believes that the project will raise rates 65-70% and that the reason the water will be so expensive is due to the return water agreement among other costs.

Date November 10, 2022

Donne Brownsey w/attachments

Signature of Commissioner Donne Brownsey

EXPARTE COMMUNICATION DISCLOSURE FORM
Filed by Commissioner Donne Brownsey

1)Name or description of project: Nov 17, 2022 Item 7a & 8 a. California American Water company, Monterey County

2) Date and time of receipt of communication:
Nov 10, 2022 at 4:00pm-4:30pm

3) Location of communication
On Zoom

4) Identity of person(s) initiating communication:
Layne Long, Manager, City of Marina

5) Identity of person(s) on whose behalf communication was made:
Himself and Mayor Bruce Delgado

6) Identity of persons(s) receiving communication:
Donne Brownsey

7) Identity of all person(s) present during the communication:
Brownsey, Delgado and Long

Complete, comprehensive description of communication content:

They stated that the staff report recommends conditions that really don't address the issues that they believe cannot be fixed by the conditions. They believe there is no cure for the EJ issues & their legal costs of $8.5M opposing CalAm. The Commission report forces this small community to fight a corporate giant. They estimate that the legal ruling re: the water rights will occur sometime in 2024. They requested that the Commission deny the permit in order for the City of Marina to save an enormous amount of resources fighting the legal battles related to the court case and their support for the future eminent domain proceeding by the MPWMD to acquire the CalAm operations. They agree with the MPWMD's water supply demand reports and have concerns with CalAm restricting the road through the old Cemex property due to their wells therefore restricting public access & adding costs to the City for providing that access.

Date November 10, 2022

Donne Brownsey

Signature of Commissioner Donne Brownsey

EXPARTE COMMUNICATION DISCLOSURE FORM
Filed by Commissioner Donne Brownsey

1)Name or description of project: Nov 17, 2022 Item 7a & 8 a. California American Water company, Monterey County

2) Date and time of receipt of communication:
Nov 10, 2022 at 3:30pm-4:00pm

3) Location of communication
On Zoom

4) Identity of person(s) initiating communication:
Ted Harris representing the Marina Community Water District

5) Identity of person(s) on whose behalf communication was made:
Himself and Rusty Areias, Lobbyists for the MCWD

6) Identity of persons(s) receiving communication:
Donne Brownsey

7) Identity of all person(s) present during the communication:
Brownsey, Areias and Harris

Complete, comprehensive description of communication content:

They believe that the useful life of the project is covered by the water supply of PWM recycled water. Therefore this is a much less expensive option than the De-Sal. They raised the numerous concerns that the conditions addressed and that this project is being driven by economics and not water. They stated that the communities do not want the project and that the support is limited to the tourist and development industries who want more water.

Date November 10, 2022

Donne Brownsey

Signature of Commissioner Donne Brownsey

Received on: 11/10/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Gibson

1) Name or description of project: Cal Am

2) Date and time of receipt of communication: November 8, 2pm

3) Location of communication: Telephone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Ted Harris, Rusty Areias with California Strategies

5) Identity of person(s) on whose behalf communication was made: Marina Coast Water District

6) Identity of persons(s) receiving communication: Commissioner Gibson, Commissioner Wade Crowfoot, Chris Calfee (CNRA).

7) Identity of all person(s) present during the communication: Persons identified in #s 4 and 6.

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

See attached.

11/10/2022
Date

Thomas Gibson
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

ATTACHMENT TO EX PARTE REPORT

Representatives for Marina Coast Water District discussed their concerns with the project. They stated that their key concern was what they believed was a lack of need for the project, in particular what they believed was the lack of need for the project due at least in part to the Pure Water Monterey project. They also discussed the cost of the project with respect to potential water rate increases. They described the project as "unripe" for approval by the Coastal Commission and contrasted it with the Doheny project given anticipated ESHA impacts and EJ issues.

They discussed EJ issues associated with the city of Marina and other disadvantaged communities bearing rate increases associated with the project and described what they saw as a lack of support for the project.

They stated that they understand the need for desalination and that they support desalination but not this project. They believe there are a lot of unresolved uncertainties like the right to use the water, which is pending before the State Water Resources Control Board.

There was discussion of the length of time this project has been in development and in general the need to be able to move projects forward.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Steve Padilla

1) Name or description of project: California American Water Project (Th7a & Th8a)

2) Date and time of receipt of communication: November 7, 2022,12:00pm

3) Location of communication: Virtual (Zoom)

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Anne Blemker

5) Identity of person(s) on whose behalf communication was made: California American Water Company (Applicant)

6) Identity of persons(s) receiving communication: Steve Padilla, Ian Fregosi

7) Identity of all person(s) present during the communication: Steve Padilla, Ian Fregosi, DJ Moore, Kathryn Horning, Anne Blemker, Susan McCabe

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Applicant and representatives described the merrits of the project and developments since the last time it was before coastal in 2020. Applicant explained that Pure Water Monterey Expansion was added to supply portfolio and that desalination was still needed to meet demand forecasts, and that the project has been modified in response to additional community input. Changes include a phased project that reduces CEMEX footprint, reduces number of well pads and slant walls, reduces potential ESHA impact by almost 1/3 of potential ESHA impact area, and includes pipeline route modifications. Applicant described plan for $1million in public improvements in Marina, public access plan, enhanced groundwater monitoring, and cost caps for qualifying low income customers. Applicant indicated support for staff's recommendation for conditional approval.

11/10/2022
Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Steve Padilla

1) Name or description of project: California American Water Project (Th7a & Th8a)

2) Date and time of receipt of communication: November 7, 2022, 1:00pm

3) Location of communication: Virtual (Zoom)

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Kathy Biala, Ted Harris

5) Identity of person(s) on whose behalf communication was made: Citizens for Just Water, City of Marina, Marina Coast Water Management District,

6) Identity of persons(s) receiving communication: Steve Padilla, Ian Fregosi

7) Identity of all person(s) present during the communication: Steve Padilla, Ian Fregosi, Rem Scherzinger, Layne Long, Skip Spaulding, Ted Harris, Ruth Muzzin, Kathy Biala, Liesbeth Visscher, Bruce Delgado

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Representatives from three different stakeholder groups (Citizens for Just Water, City of Marina, Marina Coast Water Management District) spoke about their reasons for opposing the Cal Am desalination project. Representatives of Citizens for Just Water spoke to the Environmental Justice (EJ) concerns of the project, and opined that the community outreach was inadequate. In addition to EJ concerns, representatives for the public agencies took issue with Coastal staff's conclusion that there is no feasible alternative to the project. They stated that Cal Am has compounded the demand numbers and discounted the alternatives in order to show that there isn't enough water and make the case for desalination. They said the staff report doesn't cite any of the supply and demand numbers from the Water District experts, which indicate that the Pure Water Monterey expansion is a feasible alternative and there's no need for this project. They requested a denial or continuance.

11/8/2022
Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Steve Padilla

1) Name or description of project: California American Water Project (Th7a & Th8a)

2) Date and time of receipt of communication: November 7, 2022 1:45pm

3) Location of communication: Virtual (Zoom)

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Melodie Chrislock, Dave Stoldt

5) Identity of person(s) on whose behalf communication was made: Public Water Now, Monterey Peninsula Water Management District

6) Identity of persons(s) receiving communication: Steve Padilla, Ian Fregosi

7) Identity of all person(s) present during the communication: Steve Padilla, Ian Fregosi, Melodie Chrislock, Dave Stoldt, Karen Paull

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Representatives from Public Water Now and the Monterrey Peninsula Water Management District raised concerns with the project and the staff report recommending conditional approval. MPWMD expressed their belief that, based on their data, the Pure Water Monterey expansion is a viable alternative and would meet all their supply and demand needs. They pointed out that said data was not included in the staff report, and that it disregarded the opinion of two qualified experts who contend that the Pure Water expansion would be sufficient to meet demand for 30 years. Public Water Now said this would be a terrible project for their rate payers, and stated that the water will cost over $7,000 per acre foot, which is three or four times as expensive as water from other controversial desal projects. They also took issue with ratepayers getting 50% rate increases to subsidize water to Castroville. They requested a continuance until after the PUC makes a decision about the need for this project in March of 2023.

11/10/2022
Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

11/07/2022 Ex-parte Zoom meeting with Commissioner Padilla
Notes Liesbeth Visscher, Citizens for Just Water

01 Photo collage: The truth behind CalAm's propaganda photos…
In the staff report it is mentioned that *"The Applicant belatedly increased its public outreach efforts…"* CalAm has done a terrible job reaching out to residents, and they are misusing photos of our supporters on their website. These photos were taken on August 9 during their only community meeting that had more than a few attendees. This was at CSUMB in Seaside (not Marina). On CalAm's website, our supporters are being presented as interested visitors, but they were there to PROTEST against CalAm's harmful desal project! Despite the short notice, more than 100 supporters attended; chanting and holding protest signs before entering the building. We could look at displays and then had to wait 1.5 hours for the "Q&A" to start. Questions were taken but only a few were answered. When it was clear that CalAm refused to answer our questions, a group of visitors angrily left the meeting.

Issues with each of CalAm's meetings:

- Meetings were announced only shortly in advance.
- Meetings were hard to find, due to complete absence of directional signs.
- It was unclear whether CalAm covered parking fees.
- Some questions were answered incorrectly.
- When asked, how Marina residents would be informed about a meeting at CSUMB, only one week later, the answer was "through social media, and information will be included with your invoice". Did they not realize that we are getting our water, and our invoices, from MCWD?
- For the Oct. 1 meeting at CSUMB, two different times (morning/afternoon) were posted on their website.
- Only the final two community meetings were held in Marina (Oct. 23 and 24).

02 Photo collage: empty room CalAm meeting Springhill Suites 10/24/2022
This photo collage of CalAm's final community outreach effort, on 10/24/2022 at the Springhill Suites in Marina, is representative of all those other meetings: an empty room with more CalAm reps than visitors. Only two members of the public attended, for a short time. The visitors in the photo are reps from MCWD, MPWMD, PWN and Just Water, who only attended to monitor the meeting.

It seemed that CalAm didn't really want any visitors. They clearly only organized these meetings to be able to scratch that requirement off their to-do list. You would expect a better job from a company that has staff, and plenty of financial means.

03 + 04 Photo collages: Forum 10/27/2022 (2 photos)
Citizens for Just Water has NO MONEY but, over the years, we have reached out to Marina residents through social media, by hosting ten very well attended public forums, beach walks, many group presentations, by knocking on doors, and countless one-on-one interactions.

05 Photo collage: Volunteers informing Farmers Market visitors
Two years ago, during Covid, we started a booth at the weekly Farmers Market. We worked very hard to prepare speakers for the **September 2020** Zoom hearing, which was cancelled because CalAm withdrew their application less than a day before that meeting. ***None of all that hard work was presented to the Coastal Commissioners.*** A few months ago, as soon as CalAm announced that their application would be back on the CCC agenda, we went back to the market. Our volunteers have been present every Sunday, 10AM-2PM, rain or shine, to inform Marina residents about CalAm's desal project. We use aerial photos to show the proposed locations of the desal plant next to the landfill, composting and sewer plant, and slant wells on the beach at the site where the Cemex sand mining plant soon will be gone. After more than 100 years, Marina finally has a chance to get a pristine beach with easy access at that location!

On three Sundays, CalAm had a table at the Marina Farmers' Market. Even though rubber duckies were handed out, just a few people visited.

06 Photo collage: Farmers Market 2022, Marina residents are urging to Stop CalAm!

I wish that you could hear the replies from Marina residents when we explain that our city will bear all the harms and risks of this project, without receiving any of the benefits. Most of Marina's residents will not be able to take a day out of their life to attend the Coastal Commission hearing. All we can do is use some of the hundreds of photos that we have taken, to try to show you –during one-minute public comments- how diverse Marina's population is, and that ALL residents that we have spoken with do not want this project in our city.

Please deny the permit for this harmful, unnecessary project, which is a classic case of Environmental Injustice!

Received on: 10/27/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Effie Turnbull

1) Name or description of project: Application No. 9-20-0603 (California American Water Co., Monterey Co.)

2) Date and time of receipt of communication: 10/21/22@12:05pm

3) Location of communication: Zoom Meeting

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Anne Blemker

5) Identity of person(s) on whose behalf communication was made: Cal.- Am Water Co

6) Identity of persons(s) receiving communication: Effie Turnbull

7) Identity of all person(s) present during the communication: DJ MooreLatham & Watkins LLP; Susan McCabe McCabe & Company; Ian Crooks California American Water; Josh Stratton California American Water

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

(See Attachment A) Cal. Am. representatives (Cal Am.) shared documents that they stated were previously provided to Coastal Commission Staff, inlcluding MPWSP Consistency with Commission's EJ Policy, Letter to Commission Staff re: MPWSP Community Benefits (October 19, 2022), MPWSP Outreach and Engagement Plan, MPWSP Community Questions and Responses Document, Latest Weekly Outreach Summary provided to Commission staff (through 10.17. 2022), During the meeting Cal Am. provided an overview of their efforts including addressing tribal concerns. They also explained that in addition to the CEQA process, they engaged tribal representatives in Sand City to explain the project and recieve input from such tribal representatives. Cal. Am. stated that they recieved support

10/26/22
Date

Signature of Commissioner

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from some Tribal representatives who favored Cal Am's use of slant well drilling instead of open water take and were also supportive of less water draws from the Carmel River.

Cal Am also stated they conducted outreach with Coastal Staff and that this project went above and beyond the outreach required by CEQA. Cal Am also stated they sought out Coastal Commission Staff input on how outreach on the project would be conducted and that Cal Am conducted outreach in local newspapers, that they translated the project description into Spanish, Vietnamese and Korean. Cal Am also stated they conducted community education workshops on weekdays, weekends, and evenings so that a broad range of the public could attend.

Cal Am staff also mentioned that they worked on meaningful engagement and that they have been engaged in continued outreach to other communities in the vicinity of the proposed project, including Seaside, Sand City, Marina and Salinas. Cal Am also indicated that they worked with an outside firm that has experience communicating with hard to reach communities in Monterey County to deepen their community engagement. Cal Am also state that they conducted outreach to local governments and made mailings to low income customers in order to broaden their outreach.

Cal Am also stated that they have a post operational community engagement plan to address any concerns regarding groundwater protection or contamination and this information would be shared in easy to understand terms.

In terms of environmental justice, Cal Am stated they had 12 community workshops and did outreach at local farmer's markets, outreach to local organizations and to Surfrider and to other organizations in Monterey Bay.

I asked if Cal Am spoke with any organizations or entities opposed to the project and they state that the City of Marina and some organized groups were opposed.

Cal Am also state that in response to community concerns about the size of the project, they reduced the project size and they believe this reduction will reduce construction related traffic and other impacts including less impacts to beach access.

Cal Am also stated that they proposed a $1 million amount for public infrastructure improvements within the City and they would work with the Coastal Commission to implement this. They said this could go to projects the City would like to see implemented and could include Marina Dunes Restoration.

Cal Am stated they have support from some surrounding areas which want a local water source for the peninsula. Cal Am state that this could also lead to potential opportunities for development of

affordable housing that had been permitted, but could not get approved because of lack of water connection.

Cal Am also stated that they were developing strategies for decreasing the cost of desalinated water to low income customers and they were working on a rate neutral project.

Cal Am also stated that they would potentially be open to selling a water well or storage area to the City of Marina.

During the meeting I asked how much outreach had been done to various contacts within tribal communities where there may be more than one recognized leader and questioned whether their outreach presented was sufficient. I also asked generally what outreach had been done to EJ groups, how extensive that was and whether that was sufficient, Cal Am referred to updates they provided to the Coastal Commission staff, and that they would continue to engage tribal communities and EJ communities until the matter was heard by the Coastal Commission. I also questioned the applicant on how they planned on getting the word out to low income customers on rate discounts and Cal Am stated that they were working with several community organizations to help with this effort.

Received on: 10/12/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Tom Gibson

1) Name or description of project: Cal-Am Desal Project

2) Date and time of receipt of communication: October 7, 2022, 1:15-2:15 pm

3) Location of communication: On-line Zoom Meeting

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Senator Laird

5) Identity of person(s) on whose behalf communication was made: Same

6) Identity of persons(s) receiving communication: Commissioner Gibson

7) Identity of all person(s) present during the communication: Senator Laird, Policy Advisor Kate Daniels, Snr Policy Advisor Kara Woodruff

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Senator Laird and Policy Advisor Daniels expressed Senator Laird's thoughts on the proposed Cal-Am Desal project, which tracked the Senator's Op-Ed which ran in the Monterey Herald on September 17 (a copy of which is attached).

October 12, 2022
Date

Thomas Gibson
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

https://www.montereyherald.com/2022/09/17/state-sen-john-laird-clock-is-ticking-on-our-water-problem/

State Sen. John Laird: Clock is ticking on our water problem

By **JOHN LAIRD** |
September 17, 2022 at 10:47 a.m.

As Tuesday's Regional Water Forum before the Monterey County Board of Supervisors nears and in the third year of the current California drought, the challenge of sustainable, permanent water for Monterey County remains daunting. Recent developments offer an opportunity to ground-truth various perspectives and provide new incentive to bring everyone to the table.

For the short-term, I am pleased to have helped get specific drought items in the state budget for Monterey County water agencies:

- $6.8 million in valve replacement projects for the Nacimiento and San Antonio Dams, which will allow for accessing water at lower levels in those reservoirs in the driest of times.
- $4.8 million for an additional well for Pure Water Monterey, which will allow for more water to be injected and pulled out from that project.

Since then, the federal budget allocated $20 million more for Pure Water Monterey. In addition, a competitive state grant program to support water systems that need upgrades for items such as dam safety, more water recycling, sustainable groundwater management and other drought and water resilience efforts was funded with billions of dollars at the end of legislative session. It could provide additional funds to local water systems through competitive grant processes.

As good of news as these allocations are – long-term water security for Monterey County is more complicated and will cost much more:

- The Sustainable Groundwater Management Act, which governs various basins in Monterey County, particularly in the Salinas Valley, will require sustainable groundwater basins by 2040, and in some cases require additional water efficiency and/or supply projects. The current drought and the need for dam repairs already threatens water supply from South County reservoirs to the Salinas Valley.
- Sea water intrusion continues to challenge the coastal end of the Salinas River watershed.
- Water infrastructure, particularly the Nacimiento and San Antonio Dams and Reservoirs require major upgrades, which stretch the ability of ratepayers to support financially.
- Building new affordable housing and preserving tourism and farming depends on reliable water.
- The State Water Board recently indicated they do not think the water developed thus far gives them enough confidence to remove the 1995 order that limits the amount of water that can be taken from the Carmel River – the historic water source for the Monterey Peninsula.
- Smaller communities such as San Lucas face challenges in guaranteeing good clean drinking water to their residents.
- The Cal Am application for a desal plant before the California Coastal Commission has a steep challenge ahead.
- The city of Marina has been left out and disadvantaged by the Cal Am desal project.
- Disagreements over the desal project have caused some desal advocates to slow down a genuine improvement in water supply that can be provided by the Monterey One recycling project.

- The fate of the Public Water vote of a few years ago is caught in a long legal process but is the backdrop for many of these discussions.

These challenges present policy decisions that have flummoxed area officials for decades but can't wait any longer. This drought might go on a few years – and with the strong changes in our climate, this is a picture of droughts to come. Local residents and businesses hang in the
balance, especially the construction of much-needed affordable housing projects.
A framework for a solution probably lies with the following:

- The Sustainable Groundwater Management Act process in the Salinas Valley must result in long-term sustainability.
- The Monterey One recycling project should build out as much as is feasible and proponents of other projects should step aside and let this happen.
- A smaller desal project should be considered – if the plant is in public ownership and Marina's concerns are addressed. It would be hard to start a new project all over if Cal Am's project fails at the Coastal Commission, so this should be considered in the short term.
- I am willing to approach the State Water Board and ask that they meet with local officials and have a subsequent workshop to provide a road map to lifting the state order – as well as bringing their efforts to the communities needing clean, safe drinking water.
- If local stakeholders can unite around these goals, it makes a stronger case for federal, state, and local officials to seek grant funding with ratepayer partnerships to make this happen.

The legal process between Cal Am and public water advocates will still take a few years to resolve and no short-term action appears able to resolve that conflict. The State Water Board has indicated current efforts will not lead to a lifting of the state order on the Carmel River.
Opposition to the Cal Am desal plant may well lead to that proposal dying if it is pursued in the current form.
That means that working together toward a larger framework is the only way out. It also means that not everyone might get 100% of what they want, but each stakeholder can get much of what they need. It's time to lay down arms and link together to work toward a solution. There's too much at stake to hold out for perfection – and various stakeholders have been locked in conflict for too long. I am ready to work together with everyone toward long-term solutions, I ask others to be ready as well. The clock is ticking.

John Laird is the California state senator for District 17, which encompasses the Central Coast, including the coastal Monterey Bay area. He will be one of the speakers at Tuesday's Regional Water Forum, which starts at 1:30 p.m. at the Board of Supervisors' meeting.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Gibson

1) Name or description of project: Cal Am

2) Date and time of receipt of communication: October 18, 2022, 8:30 AM

3) Location of communication: Telephone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Susan McCabe

5) Identity of person(s) on whose behalf communication was made: Cal Am

6) Identity of persons(s) receiving communication: Commissioner Gibson

7) Identity of all person(s) present during the communication: Susan McCabe, Commissioner Gibson

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

The primary purpose of the call was to schedule an Ex Parte Communication with Susan McCabe and DJ Moore, attorney for the applicant. She briefly touched on the fact the applicant is working through final issues and that she understood Commission staff were set for the hearing to take place in November unless the applicant requested a continuance. We briefly discussed the relative time urgency of Commission action.

October 24, 2022
Date

Thomas Gibson
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

Received on: 10/24/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Gibson

1) Name or description of project: Cal Am Desal Project

2) Date and time of receipt of communication: October 20, 2022, 1:30 PM

3) Location of communication: Zoom

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Susan McCabe

5) Identity of person(s) on whose behalf communication was made: Cal Am

6) Identity of persons(s) receiving communication: Commissioners Crowfoot and Gibson, Chris Calfee and Nancy Vogel from CNRA

7) Identity of all person(s) present during the communication: Kevin Tilden, Ian Crooks, Susan McCabe, DJ Moore, Scott Wetch, those ID'd in #6 above.

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

See attached.

10/24/2022
Date

Thomas Gibson
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

The discussion focused on the status of what appeared to be the remaining issues for resolution, including with respect to water rates, opposition by the City of Marina, and potential for harm to the groundwater aquifer. They indicated ongoing efforts with respect to these issues. In terms of groundwater aquifer impacts, they stated that an outcome of the CPUC process would already require them to pay for any negative impacts to the aquifer, but that they believe the science is already there to establish that those negative impacts will not occur.

The rest of the discussion centered around preparation for the November hearing. This discussion included potential tribal support and opposition and other local support from various sectors (including labor and environmental). The Doheny hearing was discussed in terms of similarities and potential differences, including the issue of public ownership. They reaffirmed their recent statement of openness to public involvement in future phases of the project and pointed out their regulation as a public utility by the CPUC. Presenting on other aspects of their water supply portfolio was also discussed, as well as current and continuing conservation efforts

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Wade Crowfoot

1) Name or description of project: Monterey Desalination project

2) Date and time of receipt of communication: July 18, 2022, 12pm

3) Location of communication: telephone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: CalAM Water

6) Identity of persons(s) receiving communication: Wade Crowfoot

7) Identity of all person(s) present during the communication: Scott Wetch and Wade Crowfoot.

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Mr. Wetch updated Secretary Crowfoot on the permit applicants' community outreach about the project, and specifically engagement with disadvantaged communities to meet the Coastal Commission's Environmental Justice policy.

July 19, 2022

Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oraldisclosure.

Received on: 04/06/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Wade Crowfoot

1) Name or description of project: Monterey Desalination Project

2) Date and time of receipt of communication: 4/5/22 2:30pm

3) Location of communication: Telephone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Kevin Tilden, Scott Wetch

5) Identity of person(s) on whose behalf communication was made: CalAM Water

6) Identity of persons(s) receiving communication: Wade Crowfoot and Mark Gold

7) Identity of all person(s) present during the communication: Wade Crowfoot, Mark Gold, Kevin Tilden, Scott Wetch

Complete, comprehensive description of communication content (attach complete set ofany text or graphic material presented):

Mr. Tilden and Mr. Wetch updated Secretary Crowfoot and Mr. Gold on the project's permit application before the Coastal Commission and provided the applicant's perspective on current issues that have been raised about the project.

4/5/22
Date

W.J. Crowfoot
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oraldisclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Mark Gold

1) Name or description of project: Cal-Am Desalination Facility

2) Date and time of receipt of communication: 2/3/22

3) Location of communication: phone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: Cal-AM Water.

6) Identity of persons(s) receiving communication: Wade Crowfoot

7) Identity of all person(s) present during the communication: Kathryn Horning Wade Crowfoot, Chris Calfee, Mark Gold, Scott Wetch, Ian Crooks, Kevin Tilden

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

The CalAm group updated CNRA on the status of their latest application. They discussed groundwater, ESHA, the Carmel River pumping prohibition and the SWRCB CDO, Status of the One Water Monterey water recycling facility expansion, litigation issues with Marina, water rates and EJ impacts, the brine line, their urban water management plan submission to DWR, and Coastal Commission permit application review concerns and timing.

2/9/22

Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

Received on: 9/15/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Wade Crowfoot

1) Name or description of project: California-American Water Company Desalination Project

2) Date and time of receipt of communication: September 9, 2022, at 9:00am

3) Location of communication: Telephone Call

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Wade Crowfoot

5) Identity of person(s) on whose behalf communication was made: Wade Crowfoot

6) Identity of persons(s) receiving communication: CalAm Water

7) Identity of all person(s) present during the communication: Scott Wetch and Wade Crowfoot.

Complete, comprehensive description of communication content (attach complete set ofany text or graphic material presented):

Spoke by phone with Scott Wetch to check-in on the progress of Cal-Am to conduct community outreach about its application before the Coastal Commission, which is necessary to meet the Commission's Environmental Justice policy.

9/14/22
Date

W.de Crowfoot
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oraldisclosure.

Received on: 09/15/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Wade Crowfoot

1) Name or description of project: California-American Water Company Desalination Project

2) Date and time of receipt of communication: September 13, 2022, at 3:00pm

3) Location of communication: Zoom video conference

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Wade Crowfoot

5) Identity of person(s) on whose behalf communication was made: Wade Crowfoot

6) Identity of persons(s) receiving communication: CalAm Water

7) Identity of all person(s) present during the communication: Wade Crowfoot, Chris Calfee, Nancy Vogel Moises Moreno-Rivera, Scott Wetch, Fred Meurer

Complete, comprehensive description of communication content (attach complete set ofany text or graphic material presented):

Secretary Crowfoot met virtually with Scott Wetch and Fred Meurer, of the Governor's Military Council and Monterey Bay Defense Alliance, about Monterey communities concern with water scarcity in the Monterey Peninsula, the need for affordable housing, and his support for the proposed desalination permit before the Coastal Commission.

9/14/22
Date

W. C. Crowfoot
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oraldisclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Mark Gold

1) Name or description of project: Cal-Am Desalination Facility

2) Date and time of receipt of communication: 2/3/22

3) Location of communication: phone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: Cal-AM Water.

6) Identity of persons(s) receiving communication: Wade Crowfoot

7) Identity of all person(s) present during the communication: Kathryn Horning Wade Crowfoot, Chris Calfee, Mark Gold, Scott Wetch, Ian Crooks, Kevin Tilden

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

The CalAm group updated CNRA on the status of their latest application. They discussed groundwater, ESHA, the Carmel River pumping prohibition and the SWRCB CDO, Status of the One Water Monterey water recycling facility expansion, litigation issues with Marina, water rates and EJ impacts, the brine line, their urban water management plan submission to DWR, and Coastal Commission permit application review concerns and timing.

2/9/22

Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

Received on: 04/05/2021

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Carole Groom

1) Name or description of project: AEM Studies Workshop

2) Date and time of receipt of communication: April 5, 2021 at 1:00 p.m.

3) Location of communication: Zoom

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Sara Wan

5) Identity of person(s) on whose behalf communication was made: Sara Wan

6) Identity of persons(s) receiving communication: Carole Groom Hunter

7) Identity of all person(s) present during the communication: Carole Groom, Sara Wan, Gina Quiney

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Sara Wan suggested that the Coastal Commission hold a workshop by the Department of Water Sources on AEM groundwater studies.

APR 5 2021
Date

Carole Groom
Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Mark Gold

1) Name or description of project: Cal-Am Desalination Facility

2) Date and time of receipt of communication: 2/3/22

3) Location of communication: phone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: Cal-AM Water.

6) Identity of persons(s) receiving communication: Wade Crowfoot

7) Identity of all person(s) present during the communication: Kathryn Horning Wade Crowfoot, Chris Calfee, Mark Gold, Scott Wetch, Ian Crooks, Kevin Tilden

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

The CalAm group updated CNRA on the status of their latest application. They discussed groundwater, ESHA, the Carmel River pumping prohibition and the SWRCB CDO, Status of the One Water Monterey water recycling facility expansion, litigation issues with Marina, water rates and EJ impacts, the brine line, their urban water management plan submission to DWR, and Coastal Commission permit application review concerns and timing.

2/9/22

Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Mark Gold

1) Name or description of project: Cal-Am Desalination Facility

2) Date and time of receipt of communication: 2/3/22

3) Location of communication: phone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: Cal-AM Water.

6) Identity of persons(s) receiving communication: Wade Crowfoot

7) Identity of all person(s) present during the communication: Kathryn Horning Wade Crowfoot, Chris Calfee, Mark Gold, Scott Wetch, Ian Crooks, Kevin Tilden

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

The CalAm group updated CNRA on the status of their latest application. They discussed groundwater, ESHA, the Carmel River pumping prohibition and the SWRCB CDO, Status of the One Water Monterey water recycling facility expansion, litigation issues with Marina, water rates and EJ impacts, the brine line, their urban water management plan submission to DWR, and Coastal Commission permit application review concerns and timing.

2/9/22

Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

Received on: 03/15/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Wade Crowfoot

1) Name or description of project: Monterey Desalination Project

2) Date and time of receipt of communication: 3/9/22 / 2pm

3) Location of communication: Telephone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: CalAM Water

Identity of persons(s) receiving communication: Wade Crowfoot

6) Identity of all person(s) present during the communication: Wade Crowfoot, Scott Wetch

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Mr. Wetch updated Secretary Crowfoot on the project's permit application before the Coastal Commission and provided the applicant's perspective on current issues that have been raised about the project.

3/15/22
Date


Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oraldisclosure.

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Mark Gold

1) Name or description of project: Cal-Am Desalination Facility

2) Date and time of receipt of communication: 2/3/22

3) Location of communication: phone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch

5) Identity of person(s) on whose behalf communication was made: Cal-AM Water.

6) Identity of persons(s) receiving communication: Wade Crowfoot

7) Identity of all person(s) present during the communication: Kathryn Horning
Wade Crowfoot, Chris Calfee, Mark Gold, Scott Wetch, Ian Crooks, Kevin Tilden

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

The CalAm group updated CNRA on the status of their latest application. They discussed groundwater, ESHA, the Carmel River pumping prohibition and the SWRCB CDO, Status of the One Water Monterey water recycling facility expansion, litigation issues with Marina, water rates and EJ impacts, the brine line, their urban water management plan submission to DWR, and Coastal Commission permit application review concerns and timing.

2/9/22
Date

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

Received on: 02/09/22

EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Wade Crowfoot

1) Name or description of project: Monterey Desalination Project

2) Date and time of receipt of communication: 2/3/22 at 10:30am

3) Location of communication: Telephone

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Scott Wetch on behalf of his Client Cal AM Water President Kevin Tilden

5) Identity of person(s) on whose behalf communication was made: Kevin Tilden

Identity of persons(s) receiving communication: Wade Crowfoot

6) Identity of all person(s) present during the communication: Wade Crowfoot, Mark Gold, Chris Calfee, Kevin Tilden, Scott Wetch, Ian Crooks, Kathryn Horning

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Cal AM leaders provided an overview on their proposed permit before the Coastal Commission and updated on recent action that Cal AM has taken to address feedback it received from the Coastal Commission staff and Commissioners in past communications and hearings.

2/9/2022

Date

W.J. Crowfoot

Signature of Commissioner

TIMING FOR FILING OF DISCLOSURE FORM: File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oraldisclosure.

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

California American Water's Desal Plant Should Not Be Approved

Application No: 9-20-0603 (Staff Report Th7a & 8a) should be denied for several reasons:

1. The application is pre-mature – there are at least nine other regulatory permits and/or permissions still required

2. An alternative exists with less environmental impact and outside the Coastal Zone – the Staff Report failed to disclose 2 expert reports

3. The desalination plant supply is not needed – Commission's staff report consistently mis-states future customer demand for water

4. The proposal differs substantially from Doheny Desal

5. Approval is a blank check – Cal-Am costs not updated since 2017, cost of water is double that of alternatives, less than full operation exacerbates cost to ratepayers, unknown future mitigation costs

6. Phasing implementation (4.8 MGD) is worse – and was specifically not approved by Public Utilities Commission

7. Environmental Justice issues remain unresolved

8. Impacts to Marina's water supply and environment are unresolved

Each of these key problems is discussed below:

5 Harris Court, Building G, Monterey, CA 93940 • P.O. Box 85, Monterey, CA 93942-0085
831-658-5600 • Fax 831-644-9560 • www.mpwmd.net

The Application is Premature:

- Cal-Am's Monterey County permits were revoked subject to additional environmental review. This issue is in the Superior Court and many months from resolution;
- Cal-Am's exclusive negotiating agreement with Monterey One Water for use of their outfall has expired, an additional party has expressed desire to also utilize the outfall, and no agreement is in place with either party;
- The State Lands Commission has not agreed to a lease for the project's intake wells;
- On October 3, 2022 the State Water Board removed Cal-Am from its Intended Use Plan for state revolving loan funding of $279.2 million due to a "lack of progress";
- Cal-Am has not applied for an amendment to its Water Distribution System permit through our District;
- Marina Coast Water District contends that Cal-Am has no rights to take water from the CEMEX site and water extractions there are limited by an agreement with CEMEX's predecessor Lonestar. That case is currently being heard in Superior Court.
- The CPUC has on-going proceedings regarding supply and demand for additional water supplies that are expected to continue into March 2023;
- The CPUC has previously approved only a 6.4 MGD plant and specifically discouraged the 4.8 MGD plant as little to no ratepayer savings, less water, no contingency, increased environmental impacts, and so on. Cal-Am would likely need to revisit its CPUC permission to build the plant to pursue a phased approach; and
- The CPUC's cost cap for the project is $279.1 million. To expend funds that Cal-Am intends to recover from ratepayers beyond the capital cost cap, Cal-Am must file a petition to modify the CPUC decision. The Construction Cost Index since the last estimate would imply costs for the project far in excess of the CPUC cost cap.

An Alternative Exists with Less Environmental Impact and Outside the Coastal Zone

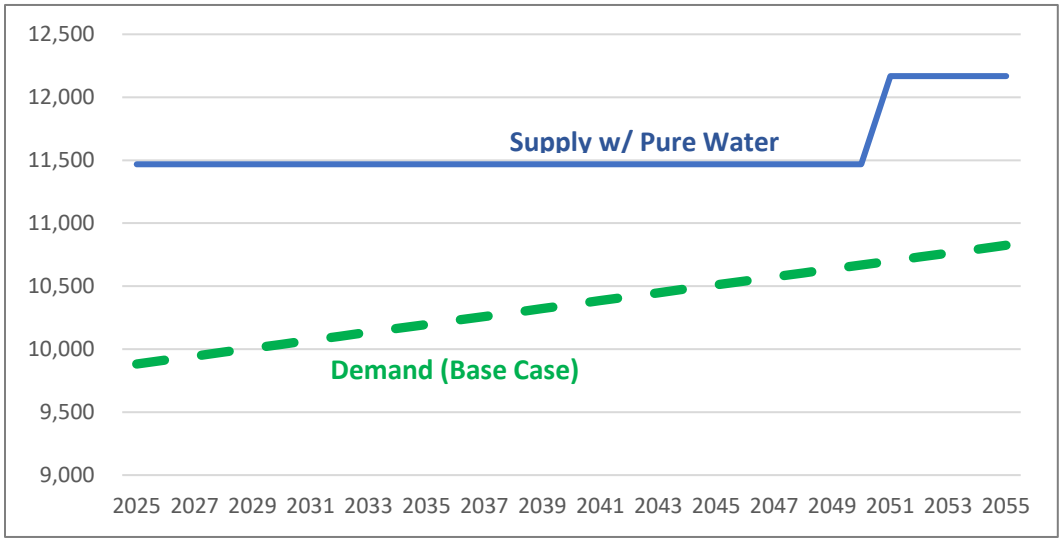
- In its current proposed decision in the proceeding A.21-11-024 the Public Utilities Commission states "California-American Water Company is authorized to enter into the Amended and Restated Water Purchase Agreement" for the Pure Water Monterey Expansion project ("PWM Expansion"). PWM Expansion will supply all the water that is needed for housing and economic growth for the next thirty years and has zero impact on the Coastal Zone.

The Desalination Plant Supply is Not Needed – Commission's Staff Report Consistently Mis-states Future Customer Demand for Water

- The Commission staff report erroneously states "the Pure Water Expansion project alone is likely inadequate to meet demand over the next twenty years" multiple times and without evidence. The District's evidence includes an adopted forecast that has translated the Association of Monterey Bay Area Governments (AMBAG) independent third-party Regional Growth Forecast to the future water needs for the next thirty years. Existing supplies, with the addition of PWM Expansion, will be more than sufficient to meet water demand for the 30-year period WITHOUT desalination. To ensure the reliability of the AMBAG population projections, their consultants compared results with a cohort-component forecast, a growth trend forecast, and the most recent forecast

published by the California Department of Finance (DOF). **All four models** resulted in similar population growth trends. As a result of these reliability tests, AMBAG chose to implement the employment-driven model for a third four-year cycle for the 2022 Regional Growth Forecast.

The graph below shows water supply versus demand utilizing the AMBAG 2022 Regional Growth Forecast. Existing supplies plus PWM Expansion meets 30 years of water demand. Failure by the Coastal Commission to more thoroughly investigate this data would be remiss.



The Proposal Differs Substantially from Doheny Desal (Dana Point)

The Cal-Am and Doheny projects are similar sized, but they are dramatically different:

Doheny	Cal-Am
Public Ownership	Private Profit-Driven
Benefits Host City	Host City Receives No Benefits
ESHA Impacts Minimized in Already Disturbed Areas	ESHA Impacts Magnified on Virgin Habitat
Slant-wells Prominent Under Ocean	Slant-Wells Not Proven to Reach Ocean
No Subsidized “Return Water”	Heavy Subsidy Paid by Ratepayers
$140 million estimated cost	$400 million estimated cost
Less than $2,000 per AF	Likely over $7,000 per AF

Approval is a Blank Check

- Cal-Am’s numbers are over 5-years old.
- The District estimates the cost will now exceed the Public Utilities Commission “cost cap” requiring a return to the PUC for permission, which can take over a year.
- The Construction Cost Index implies current cost is close to $426 million and cost per acre-foot over $7,000 – more than twice PWM Expansion.
- Costs are unfair to disadvantaged ratepayers; How can you assess Environmental Justice issues with no cost data?

Phasing Implementation (4.8 MGD) is Worse

- Starting with a 4.8 MGD plant, yet asking the Coastal Commission to approve the 6.4 MGD footprint, does not serve the environment or ratepayers. Rather, it is pandering to receive Commission approval. In its 2018 decision that approved the Cal-Am desalination plant, the Public Utilities Commission found that a 4.8 MGD plant resulted in no ratepayer savings, produced less water, weakened contingencies, and increased environmental impacts. The Public Utilities Commission specifically recommended against a 4.8 MGD plan and Cal-Am does not have their permission to build it.

Environmental Justice Issues Remain Unresolved

- As stated earlier, without updated cost information, the Commission cannot possibly assess Environmental Justice issues. The desalination facility would locate another industrial facility in the already overburdened and disadvantaged City of Marina with no benefits to that city. And the desalination facility would result in higher water rates for disadvantaged and low-income populations on the Peninsula and Seaside. Although the desalination project would provide subsidized water to the Castroville community, there are seven times more disadvantaged and lower income ratepayers on the Peninsula than there are in Castroville, and they would pay higher rates to subsidize Castroville. To assess Environmental Justice effects of the project and its alternative, the Coastal Commission must have the same information it needs to assess the public welfare effects: accurate and stable information about the project size, its timing in relation to demand, its capacity utilization, its costs, and the resulting water rates for the project and its alternative.

Impacts to Marina's Water Supply and Environment Remain Unresolved

- The City of Marina filed a lawsuit that is presently pending in Monterey County Superior Court (*City of Marina v. RMC Lonestar*, Case No. 20CV001387), including a cross-complaint by MCWD, that will determine whether the Project would violate groundwater agreements and whether Cal-Am can obtain sufficient water rights to operate the slant wells for its proposed Project. On October 7, 2021, the Court ordered a reference to the State Water Resources Control Board ("State Water Board") seeking an opinion from the State Water Board on several questions, such as: (i) Where are the subsurface drawing source points (including capture zones) for each of the currently proposed Cal-Am wells located in relation to; (ii) Would water drawn by any of the currently proposed Cal-Am wells come from any source other than seawater from directly beneath the Ocean? (iii) What is the hydrogeological connectivity, if any, between the areas from which Cal-Am proposes to draw water and the areas from which MCWD extracts water? (iv) Is it likely that any of the proposed draw for the Cal-Am wells would (a) result in or (b) increase any seawater intrusion into the Subbasin Interface Zone, the 180/400 foot Aquifer or the Monterey Aquifer, or any source for the MCWD production wells? And so on – These issues need to be addressed first, before Commission approval.

Coastal Commission's Compact with the Public

Coastal Act Section 30260 requires specific findings in order to issue a CDP for a coastal dependent industrial facility that is inconsistent with Coastal Act Chapter 3 policies. It is undisputed that the proposed project is inconsistent with policies for protection of biological resources (ESHA), i.e., the rare coastal dune habitat. Thus, the Coastal Commission must make Section 30260 findings that (1) there is no feasible alternative with lesser environmental impacts; (2) denial of the permit would adversely affect public welfare; and (3) environmental impacts are mitigated to the maximum extent feasible.

To find there is no feasible alternative, the Coastal Commission must have accurate information about supply and demand to assess the actual need for the project and the feasibility of the alternative. To assess public welfare effects of the project, the Coastal Commission must have accurate and stable information about the desalination project size, its timing in relation to water supply and demand, its utilization and costs, and the resulting water rates for the project its alternative. The Commission's staff report has not provided the necessary evidence in support of several of its claims.

Fifth Supplemental
Expert Report and Recommendations of

Peter Mayer, P.E.

Regarding Water Supply and Demand in the California American Water Company's Monterey Main System

Prepared for:

The Marina Coast Water District

August 18, 2022

WaterDM
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SCOPE OF INVESTIGATION

This report is intended as a fifth supplement to the report WaterDM submitted to the Marina Coast Water District on April 21, 2020 and supplemental reports WaterDM submitted on July 1, September 11, and November 25, 2020, and March 22, 2022 that expanded on the research, analysis, and forecasts prepared for the original report.

For this fifth supplement, I was specifically asked to:

1. Review and respond to the July 20, 2022 Phase 2 direct testimony provided by the California-American Water Company ("Cal-Am") as updated on July 25, 2022.[1]

2. Update and extend to 2050 the demand forecast WaterDM prepared for Cal-Am's Monterey Main System in a series of expert reports,[2] incorporating new information and data.

3. Review Cal-Am's available water supplies if the Amended and Restated Water Purchase Agreement is adopted or if it is not adopted.

My opinions are based on my understanding of the information available as of the date of this report and my experience evaluating municipal and industrial water supplies and demands and conservation measures. In forming my opinions, I also considered the documents, testimony, and other materials listed in Appendix A. Should additional information become available to me, I reserve the right to supplement this report based on any additional work that I may conduct based on my review of such materials.

[1] Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022.

[2] WaterDM. April 21, 2020. Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

WaterDM. July 1, 2020. Supplemental Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

WaterDM. September 11, 2020. Second Supplemental Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

WaterDM. March 22, 2022. Fourth Supplemental Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

SUMMARY OF OPINIONS AND CONCLUSIONS

As a result of my review of the items listed in Appendix A and other related and relevant documents and reports, my own independent analysis, and my expertise in municipal and industrial water use, water management, and engineering, I offer the following supplemental analysis and opinions regarding Cal-Am's water demand and supply:

Since my prior reports, Cal-Am's water demand further declined as customers have become more efficient and system water losses have been reduced.

WaterDM concluded in its April 21, 2020 expert report that Cal-Am's per capita use would continue to decrease due to ongoing conservation program implementation, conservation pricing, and water loss control measures. This has proven true and the trend towards increased efficiency is expected to gradually continue. WaterDM's updated demand forecasts for this supplemental report include continuing population growth in the Cal-Am service area and gradual efficiency improvements.

Cal-Am's revised 2022 water demand forecast provided in Ian Crooks' testimony is overstated.

The new Cal-Am forecast ignores the impacts of future conservation, includes population that is not in Cal-Am's service area, and includes double counts, all of which improperly increase future demand. Furthermore, the forecast in Crooks' testimony differs radically from Cal-Am's independently prepared 2022 PUC 3-year rate case forecast, which projects a decline in demand in the near-term.

A more realistic demand forecast prepared by WaterDM projects Cal-Am's 2050 demands to be 11,160 AF, which is more than 3,400 AF lower than Cal-Am's overstated forecast.

The growth rate in WaterDM's forecast is based on Cal-Am's current stated service area population and on AMBAG's anticipated population growth through 2050 including additions from the RHNA. WaterDM's forecast includes the impacts of ongoing efficiency improvements from Cal-Am's conservation program and state mandates. The result is a 6.1% reduction in per capita use and the conservation of 774 AF over 25 years.

With the addition of 2,250 AF from the Pure Water Monterey Expansion, Cal-Am can meet future demand in 2050.

By adding this additional source and continuing its water conservation efforts, Cal-Am should have sufficient supplies that the local development moratorium can be lifted, while still complying with the State Water Board's limits on Cal-Am's annual Carmel River diversions. Key to the success of this approach will be making necessary physical and management improvements to Cal-Am's aquifer storage and recovery ("ASR") system so it performs as designed and approved by the CPUC. This includes use of the Monterey Pipeline and continuing and extending water conservation and efficiency measures. With prudent management and

investment, Cal-Am should be able to steadily build up ASR reserves, essential for managing through drought periods.

If the Amended and Restated Water Purchase Agreement is not adopted and water from the Pure Water Monterey Expansion is not available, Cal-Am would face supply short falls starting in 2025 without additional action. If this supply shortfall were to be met with an alternative water supply source such as desalination, a supply sized similarly to the Pure Water Monterey Expansion (2,000 – 3,000 AF) would be adequate to meet future demand based on WaterDM's continued efficiency forecast.

ANALYSIS

Overview

The purpose of this report is to review and respond to the testimony provided by Cal-Am on July 20, 2022 (updated July 25) and to update and extend to 2050 the demand forecast WaterDM prepared in a series of expert reports, incorporating new information and analyses.

In its April 21, 2020 report, WaterDM prepared forecasts for the Cal-Am Monterey Main System to estimate future average annual production, inclusive of treatment losses and non-revenue water.[3]

For this report, WaterDM revised its demand forecasts for Cal-Am using the same basic assumptions but incorporating actual demand and population in 2021, as reported by Cal-Am. WaterDM's revised forecasts were then extended through 2050 based on the AMBAG population forecast with RHNA additions from Cal-Am's July 2022 testimony.[4] These forecasts were used to compare against Cal-Am's available water supply to assess the necessary size and scope of proposed future supply projects.

Water Production and Demand

Annual Production

Annual water production for the Monterey System from 2000 – 2021 updated with data from Cal-Am's July 2022 testimony is shown in Figure 1 along with boxes added to indicate the influence of mandatory drought restrictions and recession. For the purposes of this report, total water production is assumed to be equivalent to the total annual water demand in the system inclusive of all water use, non-revenue water, and treatment losses.

[3] Non-revenue water is the industry-standard replacement term for the antiquated "unaccounted for" water category. Non-revenue water is the technical term used to describe water that produces no revenue to the supplier, and it includes physical losses from water system as well as authorized consumption such as hydrant flushing.

[4] Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022.

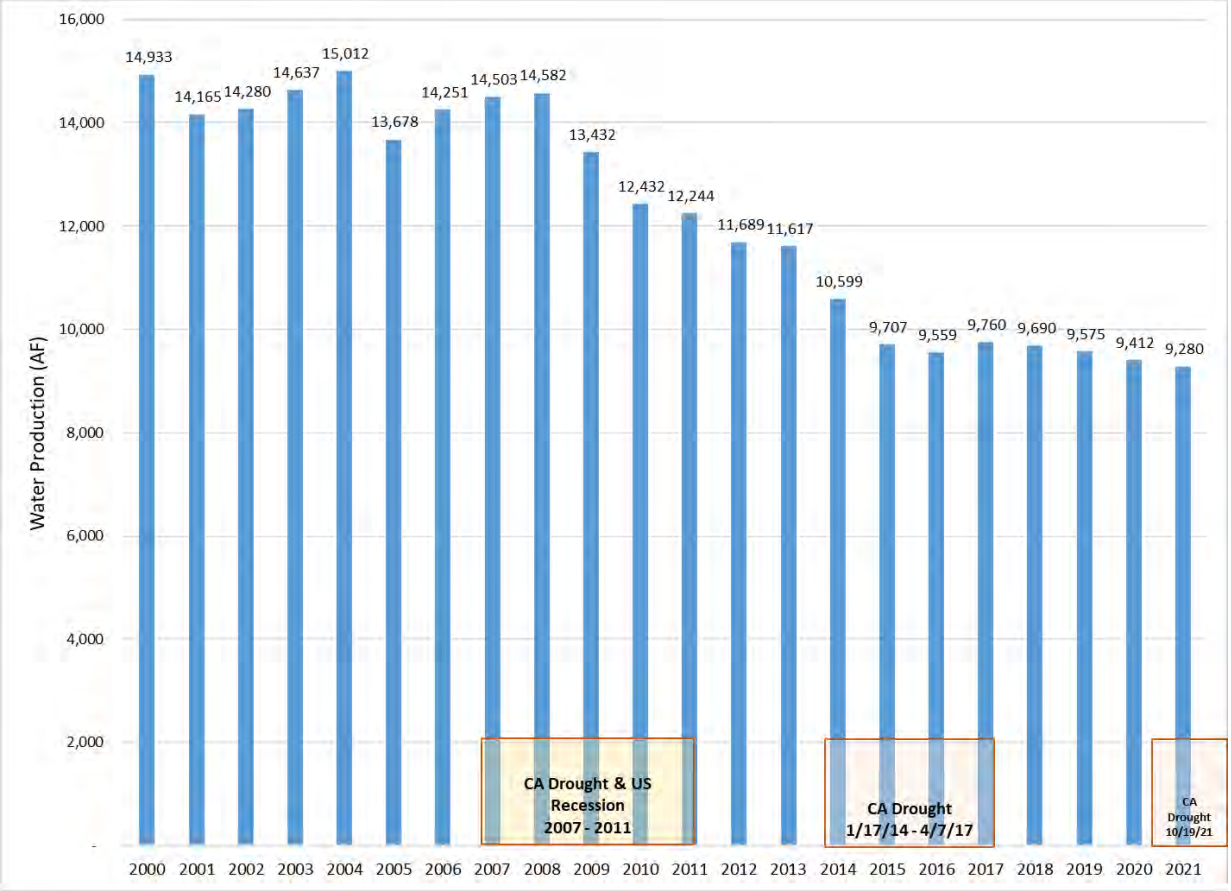

Figure 1: Cal-Am Monterey Main water production, 2000 - 2021[5]

From Figure 1 it is evident that water production in the Monterey System declined steeply from 2008 – 2016 and has continued to decline gradually since 2017. In this 8-year period, steep demand reductions occurred during years when California was in an officially declared drought paired with an economic recession. Production reductions also occurred in 2012 and 2013 which were non-drought and recession influenced years. Over the most recent five-year period, 2017 – 2021, water production in the Monterey Main service area averaged 9,543 AF per year. Over the most recent two-years, production averaged just 9,346 AF. Cal-Am water production in 2021 was the lowest in more than 20 years of records at 9,280 AF.

Comment on Data Sources

Recent data in Figure 1 comes from Cal-Am's July 2022 testimony. Additionally, Cal-Am publishes and regularly updates monthly and annual water deliveries for Monterey Main,

[5] Includes treatment and distribution losses. 2013 – 2021 from Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022. 2000 – 2012 From Monterey Peninsula Water Management District. 2019. Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt, General Manager.

Hidden Hills, Ryan Ranch & Bishop on its website for the desalination project.[6] Monthly data going back to 2007 are available from the testimony of Ian Crooks (2012)[7]. I compared these published records with the production data set used in a 2020 Monterey Peninsula Water Management District report[8] and with Cal-Am's quarterly and annual reports to the California State Water Resources Control Board.

Treatment and distribution losses come from Table Eight of Cal-Am's quarterly reports to the State Water Resources Control Board pursuant to condition eight of SWRCB Order WR 2016-0016 and condition six of WR 2009-0060.

For the purposes of the demand forecasts prepared in this report, WaterDM used Cal-Am's production in 2020 and 2021 as reported in Ian Crooks' July 2022 testimony to establish the starting point for the demand forecast to develop the most realistic updated demand forecast possible for the Monterey Main System.

Monthly Deliveries

While not relied upon as the starting point for WaterDM's demand forecasts, Cal-Am's published delivery data were used to analyze the seasonality of demand on the Monterey Main System. Monthly production is shown in Figure 2 with the period of recent drought declaration highlighted. A linear trendline is also added.

[6] https://www.watersupplyproject.org/system-delivery (accessed 7/30/2022), and Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022.

[7] Direct Testimony of Ian Crooks Before the Public Utilities Commission of the State of California. Application 12-04-019 (Filed April 23, 2012). (p.9).

[8] Monterey Peninsula Water Management District. 2020. (MPWMD Report) Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt. (3-13-2020, 12-3-2019, and 9-16-2019).

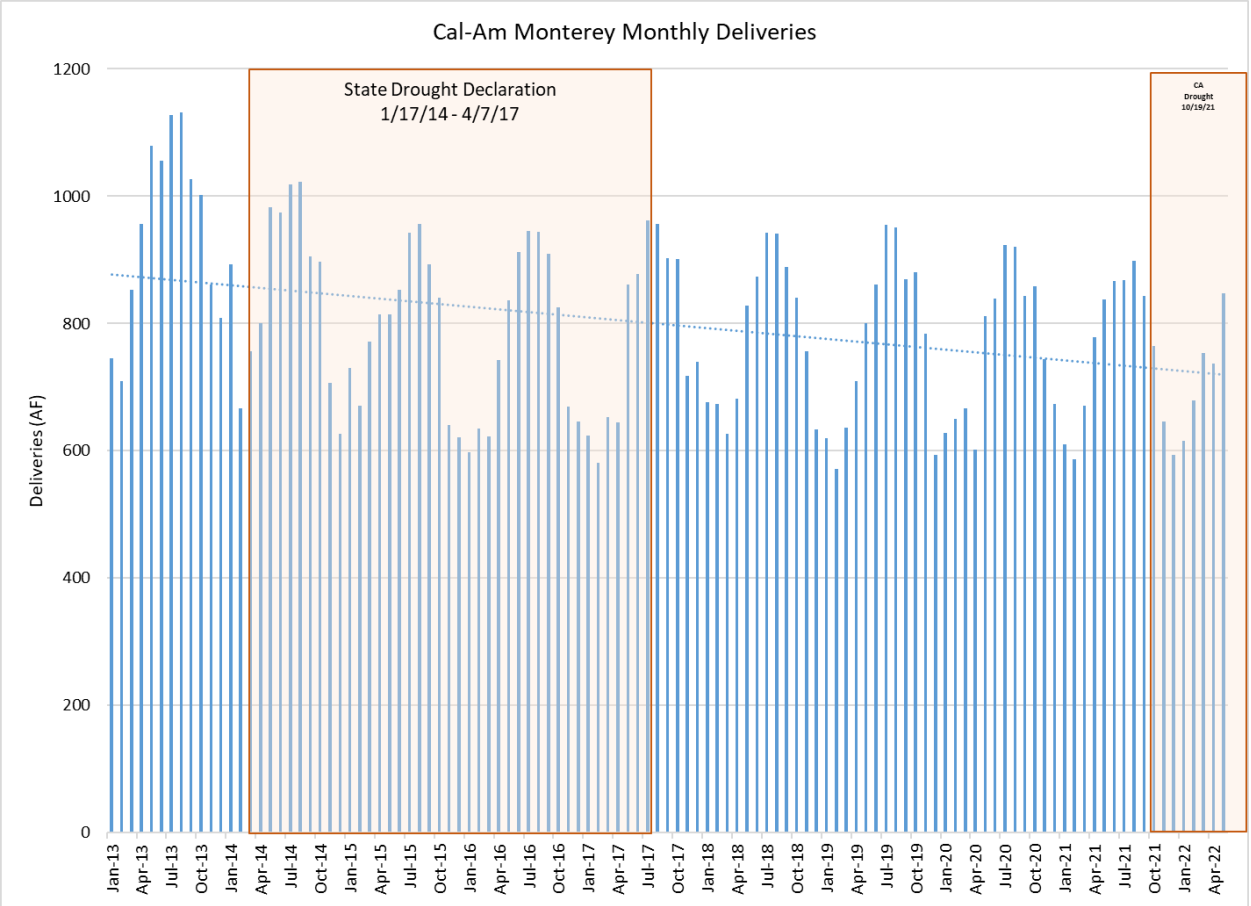

Figure 2: Cal-Am Monterey monthly deliveries

Using these published monthly data, I found the minimum and maximum month of delivery for each year. The average annual non-seasonal (predominantly indoor) deliveries for each year were calculated as the average water use in January, February, November, and December multiplied by 12. Seasonal production for each year was calculated by subtracting non-seasonal from total production. These data and results are shown as a chart in Figure 3 and in Table 1.

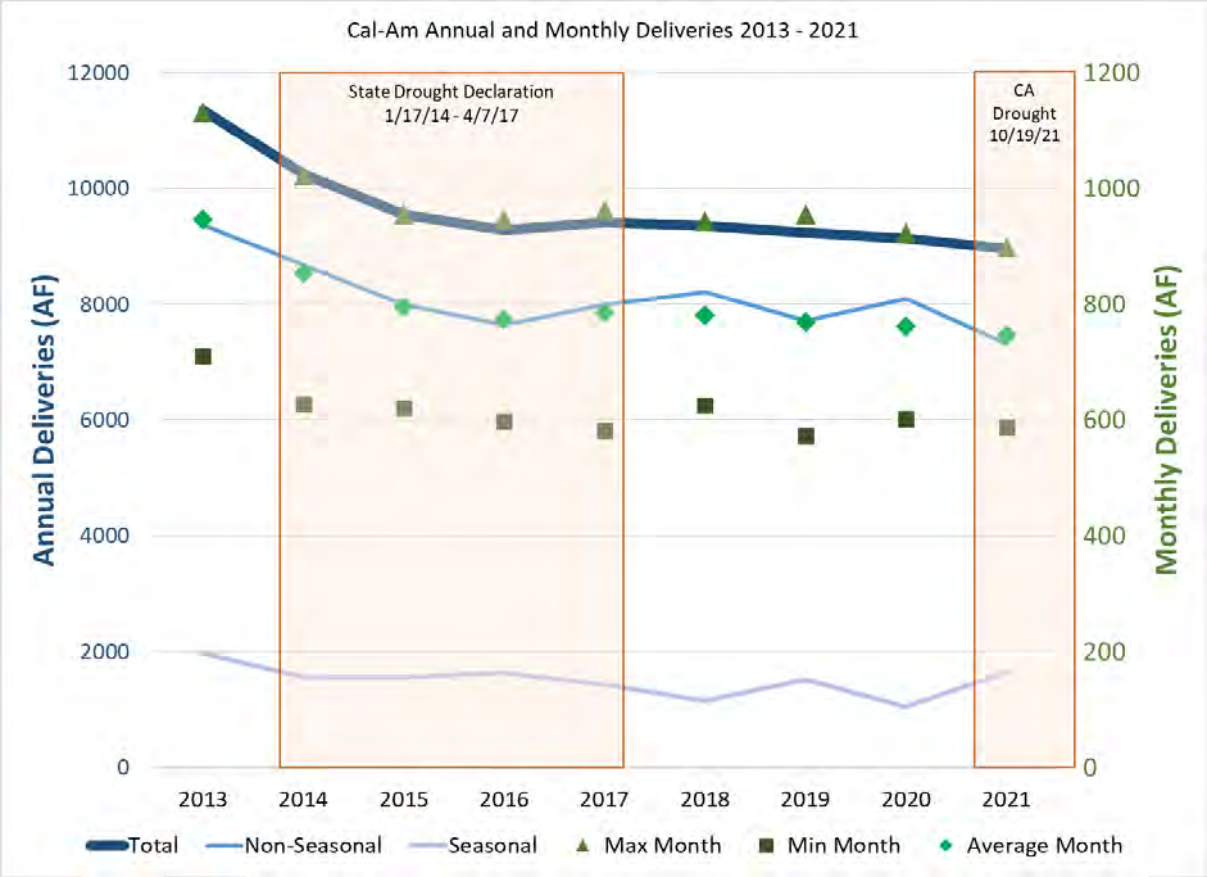

Figure 3: Cal-Am Monterey annual and monthly deliveries, 2013 - 2021[9]

Seasonal deliveries provide an estimate of summertime demand including outdoor irrigation and summertime tourism use. Non-seasonal deliveries provide an estimate of baseline indoor use and non-revenue water that occur throughout the year.

On average, seasonal deliveries accounted for 15.7% of Cal-Am's total across these nine years and ranged between 12.3% and 18.4%. Non-seasonal deliveries accounted for between 81.6% and 88.3% of usage from 2013 – 2021.

This analysis shows that the demand reductions achieved from 2013 - 2016 were largely in the non-seasonal category (predominantly indoor use). Seasonal demand did decline during this period, but not nearly as much as non-seasonal demand.

Both the minimum and the maximum month deliveries for each year have also been declining since 2013. The minimum month of delivery in 2021 was one of the lowest of any of the past nine years.

[9] From production data published at: https://www.watersupplyproject.org/system-delivery (accessed 7/25/2022).

Table 1: Cal-Am monthly deliveries and annual statistics[10]

Month	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Jan	745	893	730	597	624	676	620	628	611	616
Feb	710	667	671	635	581	673	572	650	587	679
Mar	853	757	771	623	653	626	636	644	671	754
Apr	957	800	814	742	645	682	710	602	778	737
May	1079	982	814	836	861	828	801	811	838	848
Jun	1056	975	853	912	878	874	861	839	867	
Jul	1127	1018	942	946	962	943	955	923	868	
Aug	1131	1023	956	944	957	941	951	920	898	
Sep	1027	906	893	909	902	889	870	843	843	
Oct	1002	897	840	826	901	841	881	859	765	
Nov	861	707	640	670	717	756	784	744	647	
Dec	809	627	621	646	740	633	594	674	594	
Total Annual Deliveries	11,356	10,250	9,545	9,285	9,421	9,362	9,234	9,138	8,966	
Maximum Month	1131	1023	956	946	962	943	955	923	898	
Minimum Month	710	627	621	597	581	626	572	602	587	
Average Month	946.4	854.3	795.4	773.8	785.1	780.2	769.6	763.4	747.2	
Annual Non-Seasonal	9,375	8,682	7,986	7,644	7,986	8,214	7,710	8,088	7,315	
Annual Seasonal	1,981	1,568	1,559	1,641	1,435	1,148	1,524	1,049	1,652	
%Seasonal	17.4%	15.3%	16.3%	17.7%	15.2%	12.3%	16.5%	11.5%	18.4%	
Total Annual Production (from Figure 1)	11,617	10,599	9,707	9,559	9,760	9,690	9,575	9,412	9,280	
Difference between Production and Deliveries	261	349	162	274	339	328	341	275	314	
% Difference	2.3%	3.4%	1.7%	3.0%	3.6%	3.5%	3.7%	3.0%	3.5%	
System Per Capita (gpcd)	116.8	106.1	96.7	94.7	96.2	95.1	93.2	91.6	90.3	

Note on Data Differences

The volume of water produced by Cal-Am annually as shown in Figure 1 is based on Cal-Am's quarterly and annual reports to the State Water Resources Control Board (2017-2021) which

[10] From delivery data published at: https://www.watersupplyproject.org/system-delivery (accessed 7/25/2022) Includes: Monterey Main, Hidden Hills, Ryan Ranch & Bishop.

treat water loss explicitly. Prior years are based on the MPWMD Report and are higher than the delivery values reported on Cal-Am's website (Figure 2, Figure 3, and Table 1).

For the purposes of the demand forecasts prepared in this report, WaterDM used Cal-Am's production in 2020 and 2021 as reported in Ian Crooks' July 2022 testimony to establish the starting point for the demand forecast to develop the most realistic and updated demand forecast possible for the Monterey Main System.

Per Capita Water Use

WaterDM prepared an independent calculation of per capita water use based on the production volumes shown in Figure 1 and population data from Ian Crooks' testimony. System per capita use is calculated as the total volume of water produced at the source divided by the service area population and the number of days in the year. This calculation of system per capita use is based on production and thus inclusive of all water use, non-revenue water, and treatment losses.

System per capita use in the Cal-Am Monterey Main System in 2010 was 127.0 gpcd. This was the highest level of gpcd over the past 10 years. In 2021, system per capita use was 90.3 gpcd and in 2020 it was 91.6 gpcd. Twelve years of daily system per capita use for the Monterey Main System in shown in Table 2 and Figure 4. Per capita use has decreased in every year except for 2017.

Table 2: Per capita water use, 2010 - 2021

Year	Population	Production (AF)	Per Capita (GPCD)	Source of Production Data
2010	87,419	12,432	127.0	MPMWD Report
2011	87,866	12,244	124.4	MPMWD Report
2012	88,312	12,052	121.8	MPMWD Report
2013	88,759	11,617	116.8	Crooks July 2022 Testimony
2014	89,205	10,599	106.1	Crooks July 2022 Testimony
2015	89,652	9,707	96.7	Crooks July 2022 Testimony
2016	90,098	9,559	94.7	Crooks July 2022 Testimony
2017	90,545	9,760	96.2	Crooks July 2022 Testimony
2018	90,991	9,690	95.1	Crooks July 2022 Testimony
2019	91,717	9,575	93.2	Crooks July 2022 Testimony
2020	91,717	9,412	91.6	Crooks July 2022 Testimony
2021	91,717	9,280	90.3	Crooks July 2022 Testimony

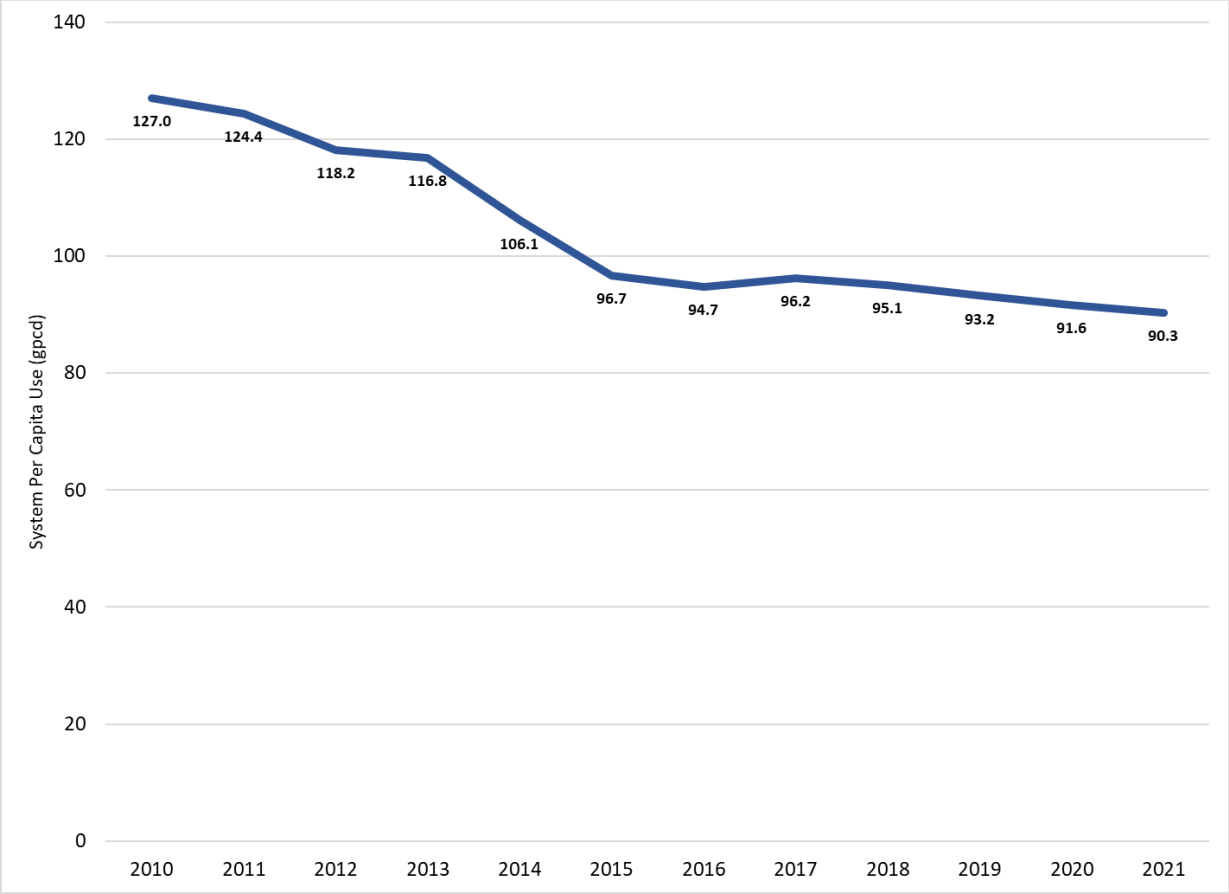

Figure 4: Cal-Am system-wide per capita use, 2010 - 2021

Water Demand by Sector

Cal-Am's 2021 water demand by sector is shown as a pie chart in Figure 5, based on data presented in Cal-Am's recent general rate cases.[11, 12] Residential use including single- and multi-family customers used 64% of the total produced in 2021. Commercial and industrial customers used 27%, the public / other sector used 5%, and non-revenue was 4%. Non-revenue water includes real and apparent water loss as well as authorized and unauthorized uses for which the utility does not collect revenue.

[11] Decision 21-11-018 November 18, 2021, Application of California-American Water Company (U210W) for Authorization to Increase its Revenues for Water Service, Decision Approving and Adopting Settlement and Authorizing California-American Water Company's General Rate Increases for 2021, 2022, and 2023.

[12] Direct Testimony of David Mitchell. Application A.22-07-001. Public Utilities Commission of California. July 1, 2022, (Tables 38 and 39, p.36).

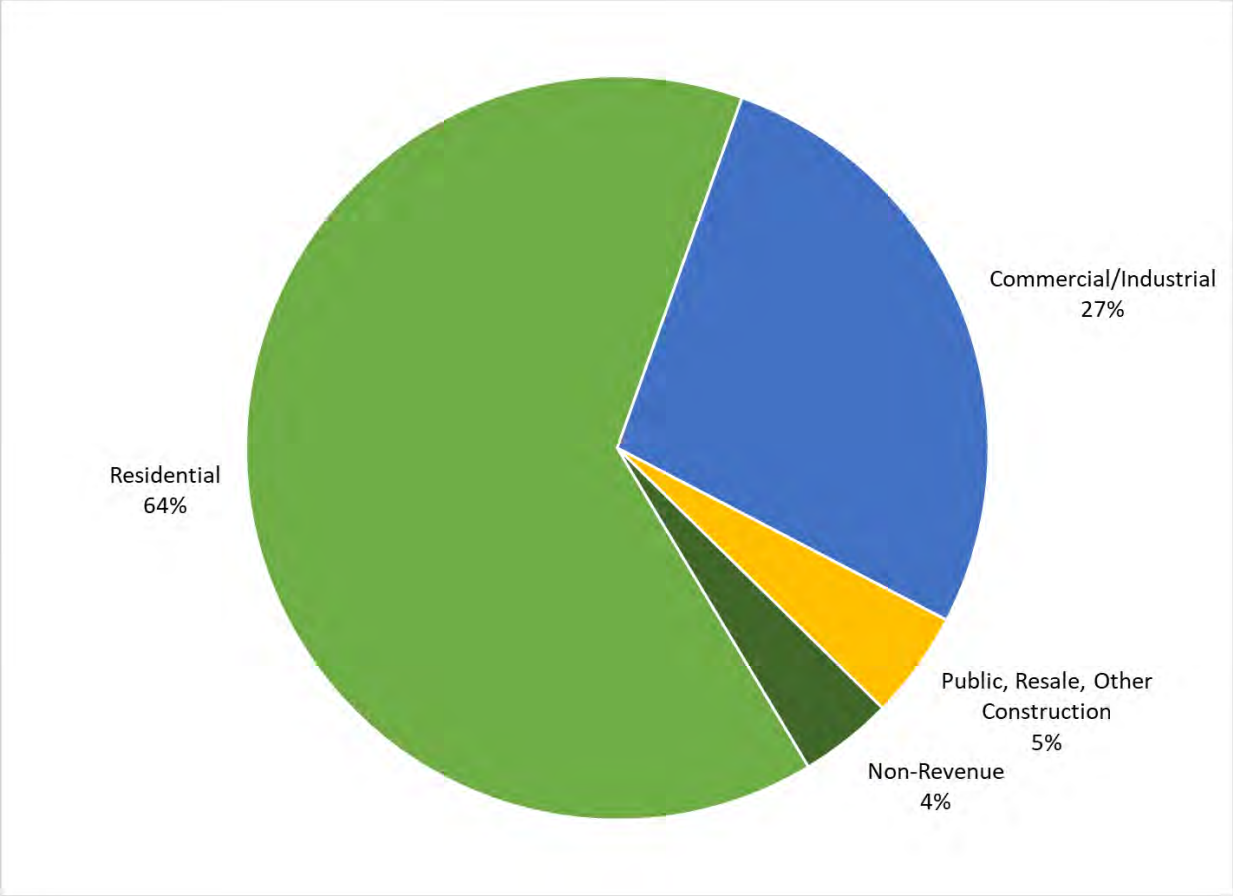

Figure 5: 2021 Cal-Am Monterey System demand by sector[13]

Updated Water Demand Forecast

Cal-Am's Updated Forecast

The updated demand forecast provided in Ian Crooks' July 2022 testimony extends Cal-Am's demand forecast out to 2050 and includes additional population growth from the RHNA, beyond the AMBAG forecast.[14] The updated forecast also includes questionable additions that could easily result in double counting demand such as a "Tourism Rebound" and "Legal Lots of Record" that both seem to be included within the population and economic growth forecasts. The forecast fails to include the impacts of Cal-Am's own ongoing water efficiency and state regulations to reduce demand. In Cal-Am's updated forecast, per capita water use is assumed to *increase* by 14% by 2050 – exactly the opposite to what has been happening and what the State of California has legislated. On top of these inflations, Cal-Am further pads its demand

[13] Direct Testimony of David Mitchell. A.22-07-001. Public Utilities Commission of California. July 1, 2022, Tables 38 and 39, p.36.

[14] Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022, (Table 5, p.24).

forecast with an additional 10% contingency buffer. Cal-Am's recent demand forecasts are shown in Figure 6 and summarized in Table 3.

Cal-Am's 2022 updated demand forecast[15] differs substantially from Cal-Am's own recent (and independently prepared) General Rate Case Application forecast which estimated demand for 2024.[16] The magnitude of the changes in demand and the differences in the forecasts are significant. On July 1, Cal-Am submitted an independently prepared demand forecast that estimated water demand in 2024 (including losses) to be 9,036 AF.[17] Then, just 19 days later on July 20 Cal-Am testified to the PUC that it needs 10,110 AF in 2025,[18] an increase of 12%. Cal-Am has consistently used less than this amount of water for eight years as shown in Table 1. The starting point of Cal-Am's 2022 updated demand forecast is too high.

Cal-Am has a poor track record with recent CPUC demand forecasts as shown in Figure 6. Cal-Am's 2017 demand forecast provided to the CPUC as part of the application for the proposed desalination plant predicted water use in 2020 would be 12,350 AF. In reality, Cal-Am's water use in 2020 was 9,412 AF as shown in Figure 1. Cal-Am's demand forecast was 2,938 AF (31.2%) higher than actual use, just three years after it was submitted. Errors of this magnitude are expensive for rate payers. Infrastructure projects sized based on an overstated demand forecast would almost certainly be sized larger than needed, imposing a costly and unnecessary burden on rate payers for years to come. Cal-Am's 2022 updated demand forecast repeats the same error of starting from an unrealistically high demand rather than the actual demand.

[15] Crooks, July 2022.

[16] Direct Testimony of David Mitchell. Application A.22-07-001. Public Utilities Commission of California. July 1, 2022

[17] Mitchell, July 1, 2022.

[18] Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022, (Table 5, p.24).

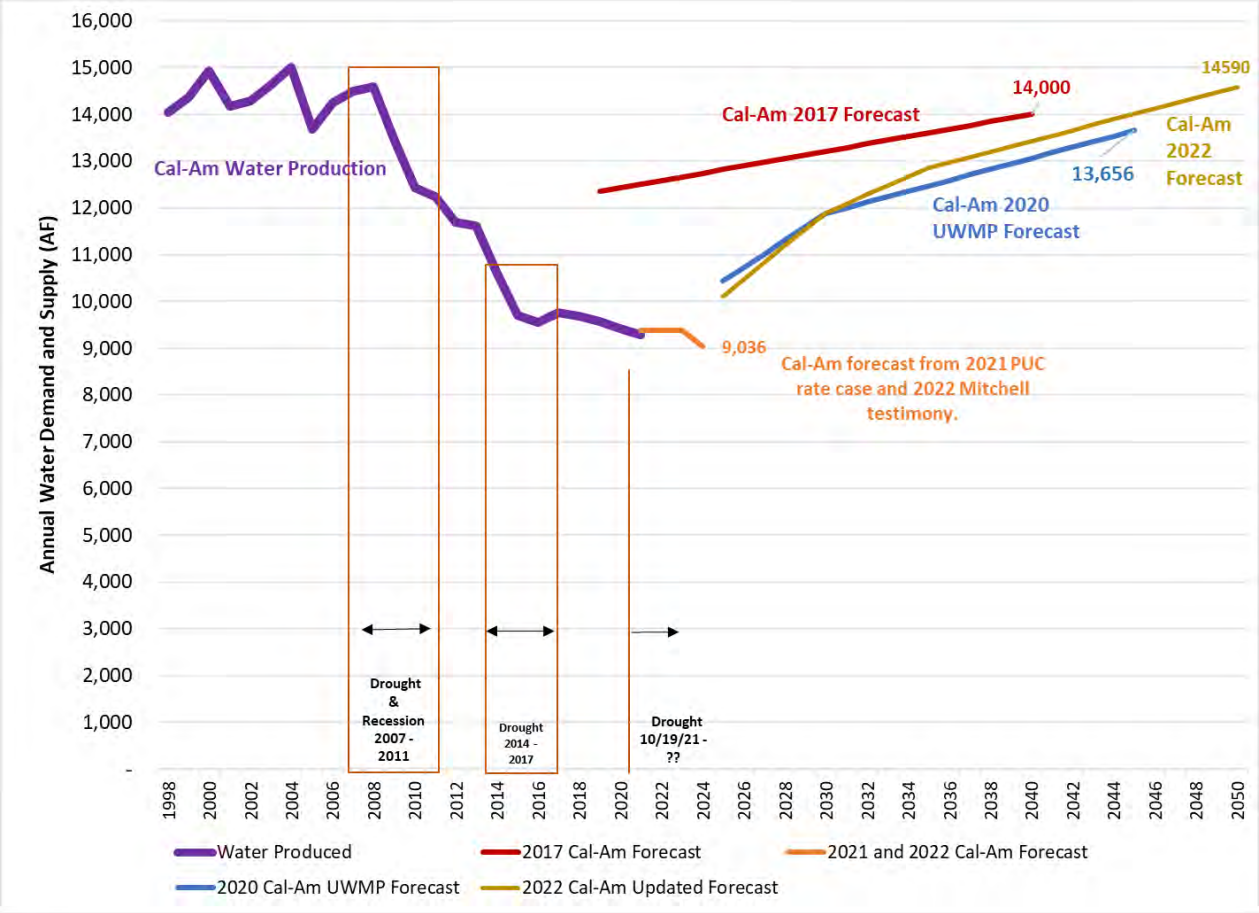

Figure 6: Cal-Am water production (1998 – 2021) and Cal-Am water demand forecasts

Table 3: Cal-Am demand forecasts and actual use

Forecast	Starting Year	Starting Volume	Starting Per Capita Use	Ending Year	Ending Volume	Ending Per Capita Use
2022 Ian Crooks Testimony	2025	10,110 AF	96.5 gpcd	2050	14,590 AF	110.0 gpcd
2021 and 2022 Cal-Am rate case testimony	2021	9,390 AF	91.4 gpcd	2024	9,036 AF	86.6 gpcd
2020 Cal-Am UWMP	2025	10,443 AF	99.6 gpcd	2045	13,656 AF	104.6 gpcd
2017 Cal-AM application to CPUC	2020	12,350 AF	120.0 gpcd	2040	14,000 AF	109.0 gpcd
2021 Cal-Am Actual Use and WaterDM Current gpcd forecast	***2021***	***9,280 AF***	***90.3 gpcd***	***2050***	***11,934 AF***	***90.3 gpcd***

Summary of Cal-Am Forecast Inflations

Based on WaterDM's analysis, Cal-Am's forecasted 2050 demand is improperly inflated by more than 2,500 AF. The Cal-Am forecast has been overstated through the following means, each of which is described below:

- Unlikely increasing per capita trend
- Improper RHNA inclusions, not within Cal-Am's service area
- Mis-categorization of multi-family housing as "Non-Residential"
- Tourism "bounce-back" lacks analysis, method, or supporting data and is based on events from 15 years ago
- Double counts of future demand as growth from "Legal Lots of Record" and "Pebble Beach Entitlements"

An overstated demand forecast can be very expensive for rate payers. If accepted without correction or modification, the inflated 2022 Cal-Am forecast could result in over-sizing of supply and delivery infrastructure and substantial unnecessary expenses to rate payers.

Unlikely Increasing Per Capita Trend

Cal-Am's 2022 updated forecast starts at an inflated level and results in a further overstated value for gpcd in the future. In 2021, Cal-Am customers used 90.3 gpcd. Cal-Am's 2022 updated forecast assumes 96.5 gpcd to start in 2025, which is 7% higher than current use. As shown in Figure 4, Cal-Am's per capita use has declined steadily since 2010. Cal-Am's starting point for the demand forecast assumes higher per capita use and thus less water efficiency than today. The starting point for Cal-Am's updated 2022 forecast is too high.

Next Cal-Am's 2022 forecast further rejects the impacts of water efficiency by projecting that per capita use in the future will *increase* over the next 30 years by 14% ending at 110 gpcd – higher than any previous Cal-Am forecast.

This significant increase in per capita use essentially means that Cal-Am expects its customers to become less and less efficient in the future. This doesn't square with Cal-Am's stated intent to spend more than $1.8 million over three years on its water conservation programs, nor does it comport with state regulations and policies that incentivize demand reductions.

A 2050 level of 110 gpcd is unlikely given that water use in 2021 was 90.3 gpcd. Such a dramatic and remarkable reversal in water use efficiency is inconsistent with the state and local directives and contradicts recent sworn testimony from Cal-Am in its current General Rate Case.

Customers in the Cal-Am Monterey service area are among the most water efficient in the state. Cal-Am's updated 2022 forecast unreasonably assumes that these customers will go from being the most efficient to becoming remarkably less water efficient in California over the next 30 years. This is unlikely to occur.

Improper RHNA Inclusions

Additional RHNA housing will increase Cal-Am's future population beyond the previous AMBAG forecast. But Cal-Am has improperly overstated the updated 2022 demand forecast by including additional RHNA housing that is not within their service territory. In his July 2022 testimony, Ian Crooks assumed 50% of the new RHNA housing units in the City of Seaside will be served by Cal-Am.[19] An estimate of 20% is conservative and the actual amount is likely less than 10%. Mr. Scherzinger will address this in his testimony.

Using 20% as an estimate for Cal-Am's portion of Seaside, WaterDM recalculated the RHNA units that are within the Cal-Am Monterey service area and found it to be 6,028 units rather than the 6,213 offered by Cal-Am.[20]

Cal-Am mis-categorizes multi-family housing as "non-residential"

The sectoral breakdown and associated volumes shown in Figure 5 above, which comes from Cal-Am's metered data and PUC rate case differs from the breakdown of residential and non-residential demand provided in Ian Crooks' July testimony as part of the 2050 demand forecast. Mr. Crooks' testimony (Table 5, p. 24) states the baseline residential sector demand (2017 – 2021) is 4,857 AF (51% of total) and the non-residential demand (including non-revenue water) is 4,686 AF (49% of total). This discrepancy is apparently due to Cal-Am's mis-categorization of multi-family housing as non-residential.

In Mr. Crooks' testimony, total demand appears correctly stated, but Cal-Am has understated residential demand and over-stated non-residential demand. WaterDM's analysis suggests this is caused by the inclusion of multi-family housing within the non-residential category.[21] This is a practice of some water utilities, but in the context of demand forecasting where future efficiency and growth are to be considered, it is best to either treat multi-family demand separately or to combine it with single-family residential demands.

The over statement of non-residential demand improperly accelerates the growth rate of the multi-family sector. That is because, in Cal-Am's updated 2022 demand forecast, growth in non-residential demand is accelerated by the "Service Area Employment" which grows much faster than the population. The mis-categorization of multi-family housing as "non-residential" contributes to Cal-Am's inflated demand forecast.

Tourism "Bounce-back"

Cal-Am has improperly added in 500 AF to its forecast for what is described as a "tourism bounce-back" from the "Great Recession" which occurred 15 years ago in 2007. Additional commercial demand in the Cal-Am service territory is anticipated along with population growth

[19] Crooks, July 2022, (p. 16).

[20] Crooks, July 2022, (p. 16).

[21] Crooks, July 2022, Table 5, (p. 24).

out to 2050, but that is not what Cal-Am has done. The flat addition of 500 AF to account for demand changes that are more than a decade old improperly inflates demand based on "discussions"[22] rather than data.

According to Mr. Crooks' testimony, hotel occupancy is only off by "12 to 15" percent but there is no attempt to connect the volume of 500 AF with this additional occupancy.[23] Furthermore, Mr. Crooks misquotes the source quotation found in CPUC D.18-09-017[24] which states, (emphasis added), "The Coalition of Peninsula Businesses bases part of its additional need on its assertion that the 'tourism industry intends to increase hotel occupancy by approximately 12 to 15 percent *over the next two decades* to re-attain the occupancy levels of decade ago.'" Cal-Am ignores this and forecasts the 500 AF increase to occur over the next 10 years.[25]

Mr. Crooks also oddly blamed the CDO moratorium for the tourism slump when he testified, "Although time has passed since the Great Recession, as a result of the CDO's moratorium, the recovery of the tourism industry has been slow."[26] Mr. Crooks did not explain how or why a moratorium of water taps might reduce visitors to a hotel or motel.

Cal-Am has improperly added 500 AF (~ 4% inflation) without real analysis, method, or supporting data based on events from 15 years ago or the CDO, or both. This problem has persisted in Cal-Am forecasts since at least 2017.

Legal Lots of Record

Cal-Am inflates its future demand by 1,180 AF in 2050 stating there is undeveloped residential and commercial land in its service area and there is a backlog of remodel development. There are numerous problems with these claims as they relate to future water demand.

First off, remodel development does not usually increase water use and frequently results in a decrease in use as older fixtures and appliances are replaced with more efficient models and stricter landscape codes are applied. It is not clear why Cal-Am assumes remodel development will increase demand, when it will likely do the opposite.

Second, not all of the Legal Lots of Record are in fact developable, a point Cal-Am ignored.[27]

Third, the 1,180 AF estimate is not based on any current analysis and instead originates in a 2009 Coastal Water Project environmental impact report.[28] The MPWMD observed in 2017 that

[22] Crooks, July 2022, (p. 23 line 1).

[23] Crooks, July 2022, (p. 22).

[24] https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M229/K424/229424336.PDF

[25] Crooks, July 2022, Table 5, (p. 24)

[26] Crooks July 2022, (p. 24).

[27] Monterey Peninsula Water Management District. 2020. Presentation of Updated Regional Water Demand Forecasts Related to Association of Monterey Bay Area Government 2018 Regional Growth Forecast and Regional Housing Needs Allocation Plan: 2014-2023, and Inclusion of 2019 Water Year.

development of lots of record has occurred since the estimates were prepared in the early 2000s and that some vacant lots on improved parcels that were included in MPWMD's vacant lot study may never be split from the main property and developed.[29]

Undeveloped residential and commercial land could certainly be developed between 2025 and 2050 and thus require water, but Cal-Am has already included this water demand in its forecast. Thus, the addition of 1,180 AF amounts to a double count. Both AMBAG and RHNA have forecast future growth in the Cal-Am service area. Where else would this growth occur but on undeveloped residential and commercial land? Cal-Am's forecast already includes the water demand associated with development of these properties.

Ian Crooks admitted this double count problem when he testified, "Future development on Legal Lots of Record may have some overlap with growth projections prepared by AMBAG and future housing demands projected by AMBAG's RHNA plan for the AMBAG area."

It is clear, and Cal-Am admits, that Legal Lots of Record has overlap with the growth forecast by AMBAG and the RHNA plan. The result is the improper addition of 1,180 AF of future demand.

1989 Pebble Beach Entitlements

Pebble Beach entitlements amount to an additional 325 AF of water Cal-Am committed in 1989 to the Pebble Beach Company, but which have not been used to date. Like the Legal Lots of Record, this 325 AF is claimed to be needed for undeveloped lots in the Pebble Beach area. This amounts to an exaggeration of future demand at best and a double count at worst.

Undeveloped land owned by the Pebble Beach Company could certainly be developed between 2025 and 2050 and thus require water, but Cal-Am has already included this water demand with the population and commercial growth baked into its forecast. This future growth is treated by Cal-Am as outside of the AMBAG/RHNA realm, and no explanation other than the contractual obligation is offered.

Further, as of 2016, the Pebble Beach entitlements stood at 304 AF,[30] yet Cal-Am maintains 325 AF to be a "reasonable estimate". This "reasonable" estimate inflates Cal-Am's future demand forecast by at least 21 AF.

The addition of 325 AF to the demand forecast amounts to a double count unless Cal-Am establishes a sound reason for why growth in Pebble Beach falls outside of AMBAG/RHNA forecasts for the Cal-Am service area. Cal-Am's forecast likely already includes the water demand associated with development of these properties.

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[28] IBID.

[29] Monterey Penninsula Water Management District. 2020.

[30] Crooks July 2022. Attachment G, EIR/EIS 2018 of CalAm's MPWSP, (pp. 2-13).

WaterDM's Updated Forecast

For this report, WaterDM updated its two forecasts for the Cal-Am Monterey Main System which estimate future average annual production, inclusive of treatment losses and non-revenue water. The growth rate in each forecast is based on Cal-Am's current stated service area population and on AMBAG's anticipated population growth through 2050 including additions from the RHNA.[31],[32] Assuming 2.5 persons per unit, it is anticipated that the additional 6,028 RHNA units within Cal-Am's service territory will add 15,071 additional people by 2050. This RHNA population increase is incorporated into WaterDM's demand forecast. The total population of the Cal-Am service area in 2050 including the RHNA units is forecast to be 117,948.

The WaterDM forecasts are conservative and notably, both of these forecasts are higher than the forecasts Cal-Am itself produced for its most recent General Rate Case Application, which estimated demand for 2024 at 9,036 acre-feet per year as shown in Table 3.

- The "Current gpcd"[33] forecast assumed the 2021 rate of 90.3 gpcd continues into the future, without any increases in efficiency or conservation reductions. This forecast projects a demand of 11,934 AF in 2050.

- The "Continued efficiency" forecast includes the impacts of ongoing efficiency improvements from Cal-Am's conservation program and state mandates by applying reduction factors to seasonal and non-seasonal use by sector. The result is a 6.1% reduction in per capita use and the conservation of 774 AF over 25 years. The continued efficiency forecast projects a demand of 11,160 AF in 2050.

For this fifth supplemental report, the original forecasts were updated to reflect actual demands reported in 2020 and 2021 and to extend the forecast timeframe to 2050.

WaterDM's annual demand projections were built up from the analysis of historical production and deliveries presented above. The year 2022 is the first year of the projection, which then continues to produce average annual demands through 2050. Demand in 2021 was used as the starting point for WaterDM's revised forecast.

Production was split out by sector and future demand was increased proportionally with population and employment increases to 2050. The four sectors included in the model are:

- Residential (single-family + multi-family)
- Commercial and industrial

[31] This likely over-estimates Cal-Am's future growth because it includes new population in portions of the cities of Monterey, Seaside, and Del Rey Oaks within the Fort Ord Buildout that will be served water by the Marina Coast Water District, not Cal-Am.

[32] Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 25, 2022.

[33] gpcd = gallons per capita per day.

- Public, resale, other, construction
- Non-revenue water

The summed annual demand of these four categories equals the estimated water supply requirement under average future conditions. The model allows specific factors to be applied to the non-seasonal or seasonal component of annual demand for each demand category, to simulate the impacts of water efficiency and conservation programs.

WaterDM's continued efficiency forecast is shown in Figure 7 along with Cal-Am's updated 2022 forecast from Ian Crooks' testimony and the 3-year 2022 rate case forecast prepared by independent consultant David Mitchell.

Notably, WaterDM's 2022 – 2024 forecasts are higher than the most recent forecasts Cal-Am submitted for its General Rate Case in July 2022.[34]

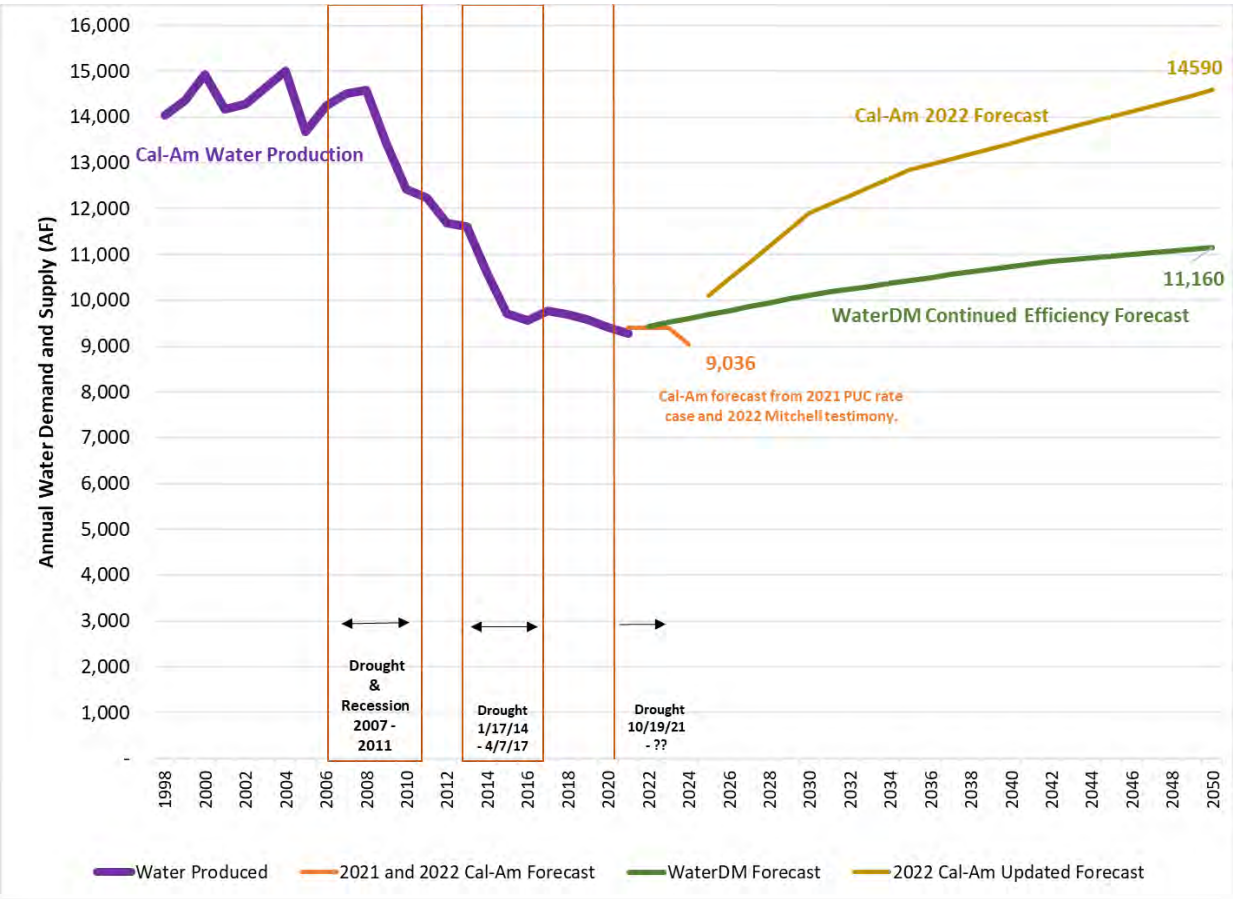

Figure 7: Cal-Am production 1998 – 2021 and demand forecasts prepared by WaterDM and Cal-Am, (2022 – 2050)

[34]Direct Testimony of David Mitchell. Application A.22-07-001. Public utilities Commission of California. July 1, 2022

Cal-Am has a habit of producing overstated water demand forecasts as evidenced in the 2017 forecast submitted to the PUC, shown in Figure 6. The 2017 forecast was the latest in a series of erroneous projections that continue to over-estimate needs as Cal-Am's water demand has declined over time. Cal-Am's shorter-term rate case forecasts produced by David Mitchell of the consulting firm M.Cubed have consistently proved more accurate than any other forecast Cal-Am has offered the PUC.

WaterDM's forecasts include all forecasted growth as well as the on-going impacts of water efficiency and avoid double counts. In comparison, Cal-Am's updated 2022 forecast remains unreasonably high largely because it assumes per capita use will increase, ignores the ongoing impacts of water conservation, and double counts growth.

Should projected RHNA growth fail to materialize in the Cal-Am service area, a distinct possibility given the limited opportunities and associated expenses, Cal-Am's future demand could be even lower than WaterDM has projected.

Water Supply Under Normal and Drought Conditions

Water Supply for the Monterey Main System

Cal-Am delivers water to its Monterey Main system from a diverse collection of water sources. Cal-Am has historically relied heavily on diversions from the Carmel River and Seaside Basin native groundwater to provide water to the Monterey Main system. Withdrawals from the Carmel River have now been reduced to mandated levels. In the future, when an additional supply source becomes available, withdrawals from the Seaside Basin should be reduced. Each of Cal-Am's water sources was evaluated to determine what level of production can reasonably be expected under normal conditions and during drought conditions.

Table 4 presents the water supply sources available to Cal-Am for the coming years under normal conditions and under drought conditions. Figure 8 shows how each source of supply contributed to Cal-Am's total production from 2000 – 2021 and the available sources of supply available into the future along with WaterDM's Continued Efficiency forecast. WaterDM's demand forecast includes all forecasted population growth in the Cal-Am service area (ABMAG+RHNA). WaterDM's forecasts are higher than the 3-year Cal-Am General Rate Case forecasts.

During normal years, Cal-Am has 10,050 AF of water supply available and with the addition of the Pure Water Monterey Expansion, this will grow to 12,300 AF. During a drought year Cal-Am currently has 8,550 AF of available supply (exclusive of stored supply and purchases), which will grow to 10,800 AF by 2026.

With the addition of the 2,250 AF from Pure Water Monterey Expansion, Cal-Am can steadily build up storage reserves even as population grows. By adding this additional source, Cal-Am should have sufficient supplies that the local development moratorium can be lifted, while still complying with the State Water Board's limits on Cal-Am's annual Carmel River diversions.

Key to the success of this approach will be continuing and extending water conservation and efficiency measures. Cal-Am's conservation-oriented rate structure and active water conservation program will help ensure efficient water use across the service area. The addition of landscape water budgets and strict water waste ordinances and enforcement should be considered as well.

Table 4: Annual Cal-Am Monterey Main System water supply sources under normal and drought conditions, 2022 - 2050

Water Source	Normal AF	Drought AF	Notes	Data Source
Carmel River – Cease and Desist Order	3,376 AF	3,376 AF	2,179 AF from License 11866; 1,137 AF of pre-1914 appropriative rights; and 60 AF of riparian rights.	Cal-Am reports to the SWRCB
Carmel River – Permit 21330	200 AF	0 AF	Only available Dec. – May. Assumed not available during a drought.	Cal-Am reports to the SWRCB
Seaside Basin Native Groundwater	1,474 AF	1,474 AF	Reflects deferral of 700 AF payback for Cal-Am's over-pumping of the Seaside Basin until a replacement desalination supply is online. Once the Pure Water Monterey Expansion comes fully online payback may be possible.	Watermaster's annual reports.
ASR Recovered Water	1,300 AF	0 AF	Cal-Am must operate the system opportunistically and store water when possible. During a drought this water source is assumed to be unavailable to Cal-Am. But already stored ASR water would be available, if needed. ASR reserves as of March 2022 were 1,307.3 AF.[35]	Cal-Am reports to the SWRCB
Sand City Desalination Plant	200 AF	200 AF	300 AF capacity. Has averaged 209 AF over life of plant. During a drought it is possible this supply could produce more, but it was restricted in this analysis.	Cal-Am reports to the SWRCB
Pure Water Monterey	3,500 AF	3,500 AF	Starting in 2022, capable of delivering the full volume contracted to Cal-Am in a normal or a drought year.	Cal-Am reports
Pure Water Monterey Expansion	2,250 AF	2,250 AF	Starting in 2025, capable of delivering 2,250 AF to Cal-Am in a normal or a drought year.	TBD
Additional Withdrawal from storage (excluding ASR recovery)	As needed	As needed	Variable volume of additional recoveries from storage or Pure Water Monterey drought reserves taken as required.	Various
TOTAL	**10,050 AF in 2022 12,300 AF in 2025**	**8,550 AF in 2022 10,800 AF in 2025**[36]		

[35] March 11, 2022 Supplemental Testimony of Ian C. Crooks before the Public Utilities Commission of the State of California, (p. 4).

[36] Does not include stored supplies, potential purchases, and demand management options.

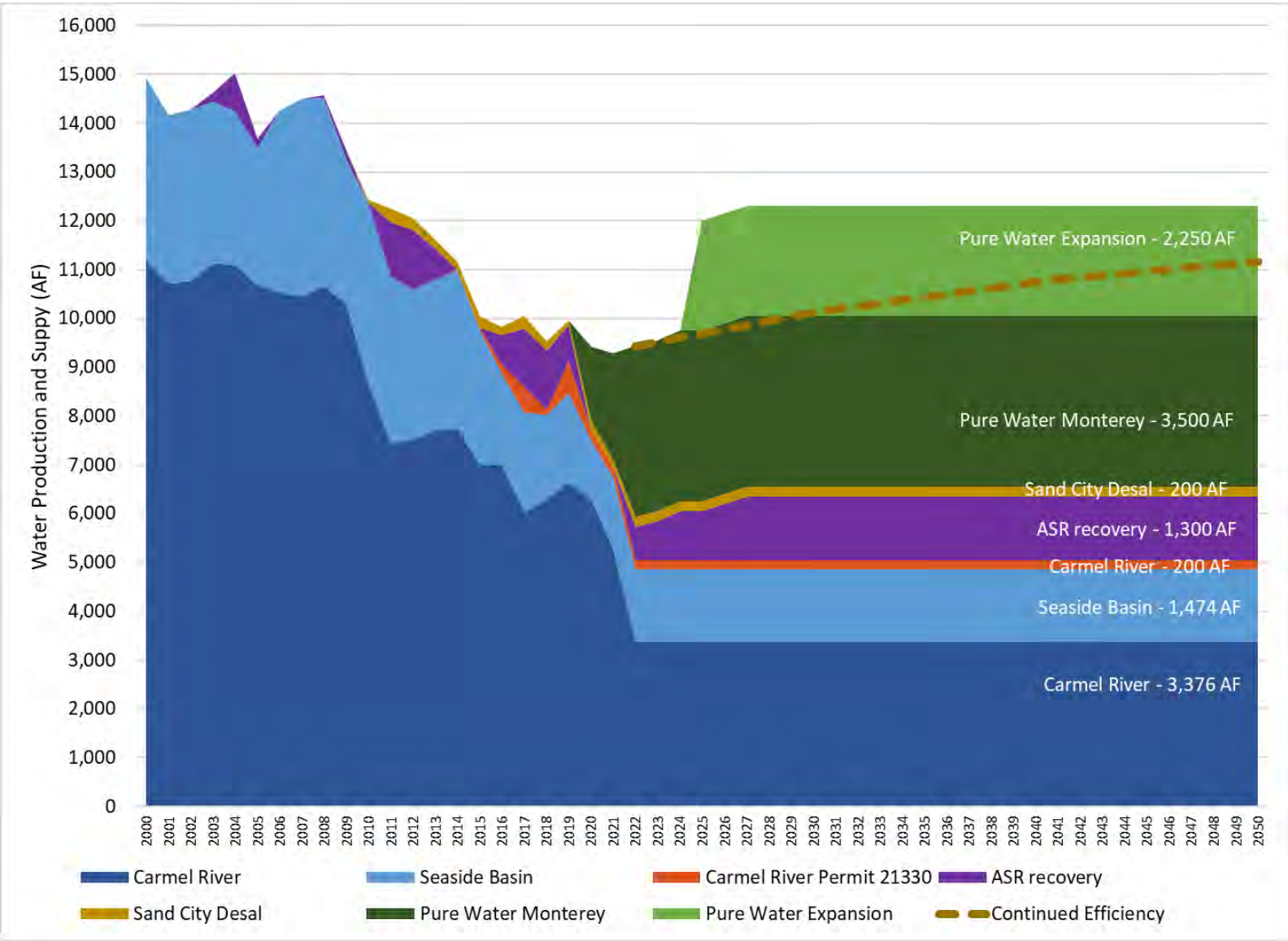

Figure 8: Cal-Am water production and future supply by source and WaterDM's Continued Efficiency forecast

Each source of water and the annual volume of available reliable supply during a normal year and drought year is described in detail in the sections below.

Carmel River

Diversions from the Carmel River, Cal-Am's primary water source, have been reduced in accordance with a cease-and-desist order from the State Water Resources Control Board. The original order, issued in 1995, determined that Cal-Am was extracting over 14,000 acre-feet per year from the river when it had a legal right to only 3,376 acre-feet. The State Water Resources Control Board determined that these illegal diversions were adversely affecting the river's population of federally threatened Central Coast steelhead and its riparian habitat. The Board ordered Cal-Am to develop or purchase alternative water supplies so it could end its illegal diversions.

Table 4 shows Carmel River production reduced to the mandated 3,376 AF in 2022. This is the volume to which Cal-Am has a legal right and is comprised of 2,179 AF from License 11866; 1,137 AF of pre-1914 appropriative rights; and 60 AF of riparian rights.[37]

During a drought year it is assumed Cal-Am will have access to its full 3,376 AF legal entitlement.

Table 4 also shows an additional 200 AF of Carmel River supply under normal conditions based on Permit 21330.[38] Cal-Am's annual Progress Reports of Permitee to the State Water Resources Control Board show that it has withdrawn an average of 300 AF from 2019-2021 under this permit. During a drought it is assumed this supply will be unavailable.

Seaside Groundwater Basin – Native Groundwater

The Seaside Basin was over pumped by Cal-Am prior to the 2006 Seaside Groundwater Basin adjudication which imposed triennial reductions in operating yield until the basin's "Natural Safe Yield" is achieved. For Cal-Am, the last reduction occurred on October 1, 2021 and Cal-Am now has rights to 1,474 acre-feet per year. However, Cal-Am has over-drafted the Seaside Basin and has agreed to payback 700 AF of its 1,474 AF entitlement over 25 years or more "following final completion and acceptance of all MPWSP components"[39, 40] which means once a desalination supply comes online.

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[37] Monterey Peninsula Water Management District. 2020. (MPWMD Report) Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt. (3-13-2020, 12-3-2019, and 9-16-2019), (p.3),

[38] "In 2013, Cal-Am received Permit 21330 from the State Water Board for 1,488 AFA from the Carmel River. However, the permit is seasonally limited to December 1 through May 31 each year and subject to instream flow requirements." MPWMD Report, (p.3).

[39] Seaside Basin WaterMaster. 2008. Memorandum of Understanding between the Seaside Basin WaterMaster and California American Water, December 3, 2008.

The potential desalination supply will not be available for eight years at the earliest, but at Cal-Am's discretion, payback of 700 AF per year could begin sooner when the full capacity from the Pure Water Monterey Expansion is available to Cal-Am.

The Seaside Basin Watermaster's 2019 report to the Court overseeing the groundwater adjudication states that the total usable storage space in the entire Seaside Groundwater Basin is 52,030 AF. The report also describes the current allocation of that usable storage space among the Seaside Basin pumpers with Cal-Am allocated 28,733 acre-feet.[41] This allocation allows Cal-Am to bank water as described in the Seaside Basin Storage Reserve section below. This reserve will be an available supply "cushion" for Cal-Am to meet demand.

Aquifer Storage and Recovery

Cal-Am participates in an aquifer storage and recovery (ASR) project that allows for the capture of excess Carmel River flows through its wells along the river from December through May. This river water is then transferred through the new Monterey Pipeline and Crest Pipeline and injected into the Seaside Groundwater Basin for later extraction and use. This project operates with a series of ASR well sites capable of both injection and extraction. Ownership and operation of this source water project has various components split between Cal-Am and the Monterey Peninsula Water Management District.[42]

There are two water rights that support the ASR system: Permit 20808A which allows maximum diversion of 2,426 AF and Permit 20808C which allows up to 2,900 AF for a total potential maximum annual diversion of 5,326 AF.[43]

The ASR is a supply system that requires Cal-Am to capture and store water opportunistically. It can provide an important long-term supply if managed prudently so that storage can be built up well beyond the current 1,307 AF noted by Mr. Crooks.[44] In the coming five years, Cal-Am and its partners must work to remove operational constraints, take advantage of the increased conveyance capacity of the new Monterey Pipeline, upgrade existing river wells, and make other improvements to assure optimal operation of the system.

Cal-Am has taken steps to improve capacity by planning to install new Pure Water Monterey extraction wells in the Seaside Basin as addressed in Phase 1 of its CPUC application.

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[40] Seaside Basin WaterMaster. 2014. Amendment No. 1 to the Memorandum of Understanding between the Seaside Basin WaterMaster and California American Water, June 6, 2014.

[41] Seaside Basin Watermaster Annual Report – 2019, December 5, 2019.

[42] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Christopher Cook, (p.7).

[43] MPWMD 2020. Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt. (3-13-2020, 12-3-2019, and 9-16-2019), (p.3).

[44] Crooks July 2022, (p.35).

Attachment K to Ian Crooks' July 2022 testimony states that in 2025, when additional extraction wells are available, all four existing ASR wells will be available for injection.[45]

Cal-Am's 2018 FEIR/EIS stated, "Together, the ASR-3 and ASR-4 Wells provide the capacity to yield an additional 1,000 AF from the ASR system, resulting in a total capacity of 1,920 AF for Phases I and II combined (Denise Duffy & Associates, 2012). The Phase I and Phase II ASR projects correspond to MPWMD and CalAm's existing State Water Board Permits 20808A and 20808C, which authorize the diversion of up to 2,426 AF for ASR Phase I, and up to 2,900 AF for ASR Phase II (State Water Board, 2007, 2011)"[46] for an annual production total of 5,326 AF under both permits.

The 2018 FEIR/EIS goes on to state, "the estimated combined long-term average annual yield from ASR is 1,300 AF for the Phase I and Phase II projects (RBF, 2013)."[47]

WaterDM has assumed that starting in 2025 an average of 1,300 AF can be delivered from the ASR during normal years. During a drought, WaterDM conservatively assumed that Cal-Am will not be able to divert and inject any ASR water. Table 4 assumes 0 AF of ASR diversion and injection in drought years.

Sand City Desalination Plant

Cal-Am has an operating agreement for the Sand City Desalination Plant, a small facility designed to produce 300 acre-feet of water per year. Due to discharge permit requirements, to date the Sand City plant has never produced the full 300 AF and the maximum that it has ever produced was 276 AF in 2011. Over the life of the plant it has averaged 209 AF of production per year.[48] Table 3 assumes this facility can continue to produce 200 AF during drought years.[49] Once the Pure Water Monterey Expansion comes on line, Cal-Am can reduce its reliance on this source.

Crooks' July 2022 testimony states that Cal-Am is only able to take 94 AF from the Sand City Desalination Plant with the remaining 206 AF belonging to Sand City for new use. Much of the future new use, which has not materialized yet, will be for Cal-Am customers in Sand City. As Sand City growth occurs, it is assumed 200 AF of this supply will be available to Cal-Am into the future to serve what will eventually be Cal-Am customers in Sand City.

[45] Crooks, July 2022, Attachment K, (p 2).

[46] Crooks, July 2022, Attachment G, Excerpts from Cal-Am MPWWP FEIR/EIS - March 2018, (p. 2-19).

[47] IBID, (p. 2-20).

[48] MPWMD 2020.

[49] Ian Crooks' 3/11/22 testimony states Cal-Am is only allocated 94 AF from the Sand City Desalination plant with the remaining 206 AF allocated for growth in Sand City. However, until the growth and demand in Sand City materialize, Cal-Am can and has taken additional supply from this source. Furthermore, much of the future growth in Sand City is anticipated within Cal-Am's service area and thus eligible for reserved allocation.

Pure Water Monterey

Monterey One Water in partnership with the Monterey Peninsula Water Management District and Marina Coast Water District developed the Pure Water Monterey Groundwater Replenishment Project. The project provides a reliable source of water supply to replace illegally diverted Carmel River withdrawals and permanently supplement existing water supply sources for the Monterey Peninsula. The Pure Water Monterey project also makes available advanced treated water to the Marina Coast Water District.

The Pure Water Monterey Project is designed to produce 3,500 acre-feet per year of purified recycled water to compose a portion of Cal-Am's water supply and to assist in complying with the State Water Resources Control Board orders. The source waters for Cal-Am's 3,500 AF portion of the Pure Water Monterey Project are agricultural produce wash water and drainage flows from the Blanco Drain and Reclamation Ditch.

The Pure Water Monterey Project includes a 5 million gallon per day capacity water purification facility for treatment and production of purified recycled water that is conveyed and stored in the Seaside Basin using injection wells. Project conveyance facilities include the pipeline from the purification facility to injection wells in the Seaside Basin and a tank storage reservoir. This pipeline and tank storage are owned and operated by the Marina Coast Water District.

Once injected, the purified recycled water augments existing groundwater supplies to provide 3,500 acre-feet per year of water to Cal-Am for extraction and direct use. Pure Water Monterey is operational and Table 4 includes 3,500 AF of recovery from the Pure Water Monterey project during a continuous drought.

Pure Water Monterey Expansion

Monterey One Water and the MPWMD are developing an expansion of the Pure Water Monterey project to increase the capacity available to Cal-Am, which is the subject of Phase 1 of Cal-Am's PUC application. The Pure Water Monterey Expansion is expected to provide an additional 2,250 acre-feet per year to augment existing groundwater supplies.

The source water for the Pure Water Monterey Expansion is municipal wastewater and agricultural drainage water. Analysis of the water sources under four conditions including drought concluded that the project can reliably produce water under each circumstance and arguments to the contrary have been repeatedly and thoroughly rebutted by Monterey One Water and the MPWMD and their consultants.[50, 51]

WaterDM's analysis assumes that the full 2,250 AF will be available to Cal-Am in 2025 in normal and drought years. With the addition of this supply, Cal-Am could choose to reduce reliance from year to year on other sources such as the Seaside Basin.

[50] April 11, 2020. Source Water Operational Plan Technical Memorandum. Prepared by Bob Holden, PE, and Alison Imamura, PE, Monterey One Water.

[51] See also - Marina Coast Water District's Preliminary Response to Cal-Am's Presentation Materials dated 9/2/20.

Seaside Basin Groundwater Storage Reserve

Cal-Am is allocated 28,733 AF of total storage in the Seaside Groundwater Basin.[52] Ian Crooks' testimony on March 11, 2022 stated current ASR reserves to be 1,307.30 AF.[53]

Under the current Water Purchase Agreement, the first 1,000 AF of water produced in the Pure Water Monterey facility has been injected and stored as an operating reserve in the Seaside Basin. The operating reserve is owned by the Monterey Peninsula Water Management District and is available to ensure Cal-Am can recover 3,500 AF. An additional drought reserve of up to 1,750 AF is provided under the water purchase agreement. Banked storage provides a valuable and necessary buffer for Cal-Am to use if drought or higher demand than forecasted should occur.

Additional Supply and Reliability Considerations

Reliability, Cost of Desalination Not Considered

Mr. Crooks' July 2022 testimony applies intense scrutiny to the future reliability of the Pure Water Monterey Expansion yet fails to consider the future reliability and cost of the desalination facility Cal-Am has proposed.

Recent desalination projects in California have sometimes failed to produce expected volumes[54] and there many examples world-wide of production problems associated with desalination projects. Cal-Am need look no farther than the local Sand City Desalination plant on which it relies for an example of a facility that has failed to produce at its designed capacity. WaterDM's forecast includes only 200 acre-feet of annual production from the Sand City facility designed to produce 300 acre-feet annually.

Desalination is also the most expensive supply option currently available on the Monterey Peninsula and water from Cal-Am's proposed desalination project would cost at least three times as much as water from the Pure Water Monterey Expansion. The economic track record of desalination is problematic. Desalination plants must be paid for even if they do not produce any water. Victoria Australia's desalination facility, built in response to an intense drought, resulted in ongoing annual service payments of $649 million (Australian dollars), and "annual service payments rise every year, even if no water is ordered."[55]

Cal-Am justifies its need for desalination with an overstated demand forecast and chooses to ignore the negative long-term economic impacts to the community of oversizing such a project.

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[52] Seaside Basin Watermaster Annual Report – 2019, December 5, 2019.

[53] March 11, 2022 Supplemental Testimony of Ian C. Crooks before the Public Utilities Commission of the State of California (p. 4).

[54] https://www.voiceofsandiego.org/topics/science-environment/desal-plant-producing-less-water-promised/

[55] https://www.dailymail.co.uk/news/article-5749621/Melbourne-desalination-plant-costs-tax-payers-eye-watering-649-million-year-operate.html

Cal-Am is far less interested in purchasing more recycled water, because that would be an operating cost in contrast to the desalination infrastructure, which would generate a profit for decades through the return on equity in water rates – paid by customers. This perhaps explains why Cal-Am fails to apply the same scrutiny to the reliability and expense of desalination that it used in its critique of the Pure Water Monterey recycled water projects.

Additional Demand Management

One item notably missing from Cal-Am's future water demand planning portfolio is additional demand management and water conservation. Cal-Am and the Monterey Peninsula Water Management District both operate robust water conservation programs documented in WaterDM reports,[56] but they have not implemented all of the best practices and options available to them.

WaterDM's April 21, 2020 report noted that the Monterey region has been regarded as a model for water conservation programs for many years. Cal-Am and the Monterey Peninsula Water Management District implement an array of effective demand management policies and programs that are likely to extend water efficiency gains. Cal-Am implements an active water conservation program including a steeply inclining four tier block rate pricing structure and customer incentives for installing drought tolerant landscapes and high-efficiency fixtures and appliances. Cal-Am also implements a rigorous utility-scale water loss control program aimed at reducing real losses in its distribution system. Local development regulations ensure that all new and remodeled buildings are equipped with high-efficiency fixtures and appliances.

Cal-Am's local efforts are in parallel to broader policy measures at the state level, designed to further increase efficiency. The State of California has implemented a series of laws and directives to ensure future water efficiency across the state including Assembly Bill 1668 and Senate Bill 60 which effectively mandate an ongoing reduction in per capita use. Cal-Am's continued compliance with these regulations and its active efforts to reduce customer water demand in the future are likely to gradually decrease per capita water use across the service area.

All of the measures currently implemented will be extremely helpful in increasing water efficiency in the region, but even more can be done to manage demand in the Monterey Main system.

Water Budgets to Manage Demand

One of the most effective methods for managing and reducing outdoor water use are customer-specific water budgets. A water budget represents a reasonable volume of usage for each customer, based on the specific needs and requirements of each customer and the available water supply. The water budget is a volumetric target based on the legitimate needs

[56] Expert Report of Peter Mayer, P.E., April 21, 2020. (pp.24-25).

of the customer and the available water supply and provides a customer-specific mechanism for monitoring compliance with demand management measures.[57]

Water budgets are a familiar concept in the region with Santa Cruz, Hayward, and Visalia all utilizing water budgets in some form. In Southern California water budgets are utilized by LADWP, Irvine Ranch, Eastern Municipal, and many other urban water providers.

The approach of using water budgets to manage demand was successfully implemented during California's last intense period of drought in 2016 by the California Water Company in its Visalia District. For the Visalia District, the mandated drought reduction goal was 32% below its 2013 residential per capita water use to be achieved by February 2016. This state-mandated goal served as motivation for the creation of customer level budgets, set at 32% reduction from 2013 usage.[58] Drought surcharges were based on the extent of overuse. Customers using less than their monthly budget could bank savings in that month and use it to offset excess use in a future billing period. The Visalia water budget program was successful in achieving the demand reduction goals.[59]

The water budgets implemented by Cal-Am need not be tied to the water rate or penalty structure and can be primarily informational. Even without a connection to the water rate structure, water budgets serve the dual purpose of communicating with customers what is a reasonable and expected volume of use during a time of shortage and informing Cal-Am and/or the Monterey Peninsula Water Management District every time usage exceeds a budgeted amount. This enables the customer to immediately act if their usage exceeds budgeted amounts and it empowers the utility to address any customer with usage that is deemed unreasonable given the supply limitations. This in turn enables demand management across the entire system, tuned to the desired level of consumption to the extent possible.

Other Demand Management Measures

Other measures that Cal-Am should consider for managing demand until additional supply comes online include:

- adjust irrigation schedules – particularly during peak summer months
- strictly enforce water waste ordinances
- eliminate all but essential line flushing and hydrant testing
- limits on all non-essential uses

[57] Mayer, P.W. et. al. 2008. Water Budgets and Rate Structures: Innovative Management Tools. Journal of the American Water Works Association. May 2008. Vol. 100, No. 5.

[58] Exceptions were made if the reduction resulted in a water budget that fell below a specified health-and-safety volume. If this happened, the larger health-and-safety budget was used instead. Visalia also offered an appeals and variance process.

[59] Bamezai, A. L. Maddaus, et. al. 2019. Use and Effectiveness of Municipal Irrigation Restrictions During Drought. Alliance for Water Efficiency. Chicago, IL.

- leak detection – utilize metering technology like AMI and adaptive technology like home flow monitoring to reduce customer-side leakage

Additional, more robust demand management planning may be required. Running out of water is not an acceptable option and an effective demand management plan must be readied by Cal-Am so that necessary measures can be implemented when and if they are needed in the coming years.

Maximum Month Demands

Mr. Crooks' July 22 testimony states that a desalination plant is "necessary to provide system firm capacity to ensure MMD can be met over the near-term and long-term planning horizon."[60] MMD refers to maximum monthly demand which for Cal-Am typically occurs in the summer months when customers increase use by about 21% over average.[61] There are several problems with Mr. Crooks' statement.

First off, the desalination plant may not be available to Cal-Am until 2030. It is inaccurate to consider desalination a solution for the "near-term" planning horizon, which, like Cal-Am's PUC rate forecast, is generally five years in the future or less. It is important not to confuse and conflate requirements for meeting the peak demand and annual demand planning practices. WaterDM addressed this issue in its first expert report of April 21, 2020 (pp. 37-39).

Meeting maximum monthly demand is usually accomplished by storing enough water ahead of time, not by producing enough water in the moment. Cal-Am's analysis appears to ignore the impact of available storage to help meet the MMD. Furthermore, a 21% difference between the average month and the maximum month is not a particularly large difference compared with many other providers that see a doubling of demand (or more) during summer months.

Perhaps most significantly, over the long-term, Cal-Am has based its calculation of MMD on a demonstrably overstated water demand forecast.

Peaking management approaches are available to Cal-Am to address maximum monthly and daily demands. In fact, peak demand management to shift the timing to off peak periods is already being practiced to some degree in the Cal-Am service area but could be expanded and adjusted if necessary to impact MMD.

Peak demand days usually occur during the hot and dry part of the year when outdoor irrigation occurs simultaneously across the service area. Currently Cal-Am restricts outdoor irrigation between 9 a.m. and 5 p.m. on any day. Irrigation is only permitted on two specific days per week (Wednesdays and Saturdays) unless the customer is equipped with a weather-responsive "smart" controller that automatically adjusts irrigation to meet prevailing climate conditions. These are all effective measures but focusing some irrigation demand on Wednesdays and Saturdays could have the unintended impact of creating peaks on those

[60] Crooks, July 2022. (p.26).

[61] Crooks, July 2022. (p.25).

particular days. Cal-Am does not report measured peak day demand data so it was not possible to determine if this is in fact the case. Spreading the irrigation demand more evenly through the week could help alleviate daily peak concerns.

Should peak demands become a concern in the future, Cal-Am has a variety of effective, low-cost management options available which do not require construction of a desalination facility.

Interim Supply Options

Over the next three years, until water from the Pure Water Monterey Expansion becomes available, it is possible Cal-Am will require additional supplies. These supplies could come in three ways: 1) withdrawal from stored reserves including 1,307 AF of ASR plus Pure Water Monterey reserves; 2) additional purchases; and/or 3) additional demand management.

Amended and Restated Water Purchase Agreement

Adoption of the Amended and Restated Water Purchase Agreement will provide Cal-Am with necessary additional water supply from the Pure Water Monterey Expansion to meet anticipated future growth

If the Amended and Restated Water Purchase Agreement is not adopted and water from the Pure Water Monterey Expansion is not available, Cal-Am would face supply short falls starting in 2025 without additional action. Without the Pure Water Monterey Expansion Cal-Am could face a supply shortfall of 1,110 AF in 2050.

If this supply shortfall were to be met with an alternative water supply source such as desalination, a supply sized similarly to the Pure Water Monterey Expansion (2,000 – 3,000 AF) would be adequate to meet future demand based on WaterDM's continued efficiency forecast.

SUMMARY

As a result of my review of the items listed in Appendix A and other related and relevant documents and reports, my own independent analysis, and my expertise in municipal and industrial water use, water management, and engineering, I offer the following supplemental analysis and opinions regarding Cal-Am's water demand and supply:

Since my prior reports, Cal-Am's water demand further declined as customers have become more efficient and system water losses have been reduced.

WaterDM concluded in its April 21, 2020 expert report that Cal-Am's per capita use would continue to decrease due to ongoing conservation program implementation, conservation pricing, and water loss control measures. This has proven true and the trend towards increased efficiency is expected to gradually continue. WaterDM's updated demand forecasts for this supplemental report include continuing population growth in the Cal-Am service area and gradual efficiency improvements.

Cal-Am's revised 2022 water demand forecast provided in Ian Crooks' testimony is overstated.

The new Cal-Am forecast ignores the impacts of future conservation, includes population that is not in Cal-Am's service area, and includes double counts, all of which improperly increase future demand. Furthermore, the forecast in Crooks' testimony differs radically from Cal-Am's independently prepared 2022 PUC 3-year rate case forecast, which projects a decline in demand in the near-term.

A more realistic demand forecast prepared by WaterDM projects Cal-Am's 2050 demands to be 11,160 AF, which is more than 3,400 AF lower than Cal-Am's overstated forecast.

The growth rate in WaterDM's forecast is based on Cal-Am's current stated service area population and on AMBAG's anticipated population growth through 2050 including additions from the RHNA. WaterDM's forecast includes the impacts of ongoing efficiency improvements from Cal-Am's conservation program and state mandates. The result is a 6.1% reduction in per capita use and the conservation of 774 AF over 25 years.

With the addition of 2,250 AF from the Pure Water Monterey Expansion, Cal-Am can meet future demand in 2050.

By adding this additional source and continuing its water conservation efforts, Cal-Am should have sufficient supplies that the local development moratorium can be lifted, while still complying with the State Water Board's limits on Cal-Am's annual Carmel River diversions. Key to the success of this approach will be making necessary physical and management improvements to Cal-Am's aquifer storage and recovery system so it performs as designed and approved by the CPUC. This includes use of the Monterey Pipeline and continuing and extending water conservation and efficiency measures. With prudent management and investment, Cal-Am should be able to steadily build up ASR reserves, essential for managing through drought periods.

If the Amended and Restated Water Purchase Agreement is not adopted and water from the Pure Water Monterey Expansion is not available, Cal-Am would face supply short falls starting in 2025 without additional action. If this supply shortfall were to be met with an alternative water supply source such as desalination, a supply sized similarly to the Pure Water Monterey Expansion (2,000 – 3,000 AF) would be adequate to meet future demand based on WaterDM's continued efficiency forecast.

Appendix A – Materials Considered[62]

Bamezai, A., L. Maddaus, et. al. 2019. Use and Effectiveness of Municipal Irrigation Restrictions During Drought. Alliance for Water Efficiency. Chicago, IL.

California-American Water Company. 2022. Phase 2 Direct Testimony of Ian C. Crooks. Public Utilities Commission of the State of California. Application 21-11-024. July 20, 2022, updated July 25, 2022.

California-American Water Company. 2022. Direct Testimony of David Mitchell. Application A.22-07-001. Public Utilities Commission of California. July 1, 2022.

California-American Water Company. 2022. Supplemental Testimony of Ian C. Crooks before the Public Utilities Commission of the State of California. March 11, 2022.

California-American Water Company. 2020. State Water Resources Control Board Order WR 2016-0016 / WR 2009-0060, 4th Quarterly Report for the 2019-2020 Water Year Addressing Operations for the Period of July 1, 2020 to September 30, 2020.

California-American Water Company. 2021. (U-210-W) Application to Obtain Approval of the Amended and Restated Water Purchase Agreement for the Pure Water Monterey Groundwater Replenishment Project. Supplemental Testimony of Ian Crooks, filed March 11, 2022.

California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Christopher Cook

California-American Water Company. 2012. Direct Testimony of Ian Crooks Before the Public Utilities Commission of the State of California. Application 12-04-019 (Filed April 23, 2012).

California Department of Water Resources. 2020. Urban Water Management Plan Guidebook 2020 (Aug. 2020 draft).

Marina Coast Water District. 2020. Marina Coast Water District's Preliminary Response to Cal-Am's Presentation Materials dated 9/2/20.

Mayer, P.W. et. al. 2008. Water Budgets and Rate Structures: Innovative Management Tools. Journal of the American Water Works Association. May 2008. Vol. 100, No. 5.

Monterey One Water. Aug. 20, 2020. Letter from Paul A. Sciuto, General Manager, to Mr. Tom Luster, California Coastal Commission.

Monterey One Water. April 11, 2020. Source Water Operational Plan Technical Memorandum. Prepared by Bob Holden, PE, and Alison Imamura, PE.

Monterey Peninsula Water Management District. 2020. Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt. (3-13-2020, 12-3-2019, and 9-16-2019)

[62] Materials Considered also includes all materials cited in the footnotes of this Report.

Monterey Peninsula Water Management District. 2020. Presentation of Updated Regional Water Demand Forecasts Related to Association of Monterey Bay Area Government 2018 Regional Growth Forecast and Regional Housing Needs Allocation Plan: 2014-2023, and Inclusion of 2019 Water Year.

Seaside Basin Watermaster Jan. 8, 2020 Letter to Rachel Gaudoin. Subject: Draft Supplemental Environmental Impact Report for the Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project (Draft Supplemental EIR)

Seaside Basin Watermaster Annual Report – 2019, December 5, 2019

Seaside Basin WaterMaster. 2008, 2014. Amendment No. 1 to the Memorandum of Understanding between the Seaside Basin WaterMaster and California American Water, Dated December 3, 2008; amended June 6, 2014.

State of California Water Code Sections 10631 (effective Jan. 1, 2020) and 10635 (effective Jan. 1, 2019).

WaterDM. April 21, 2020. Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

WaterDM. July 1, 2020. Supplemental Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

WaterDM. September 11, 2020. Second Supplemental Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

WaterDM. March 22, 2022. Fourth Supplemental Expert Report and Recommendations of Peter Mayer, P.E. Regarding Water Supply and Demand in the California American Water Company's Monterey Main System.

Monterey Peninsula Water Management District
Technical Memorandum

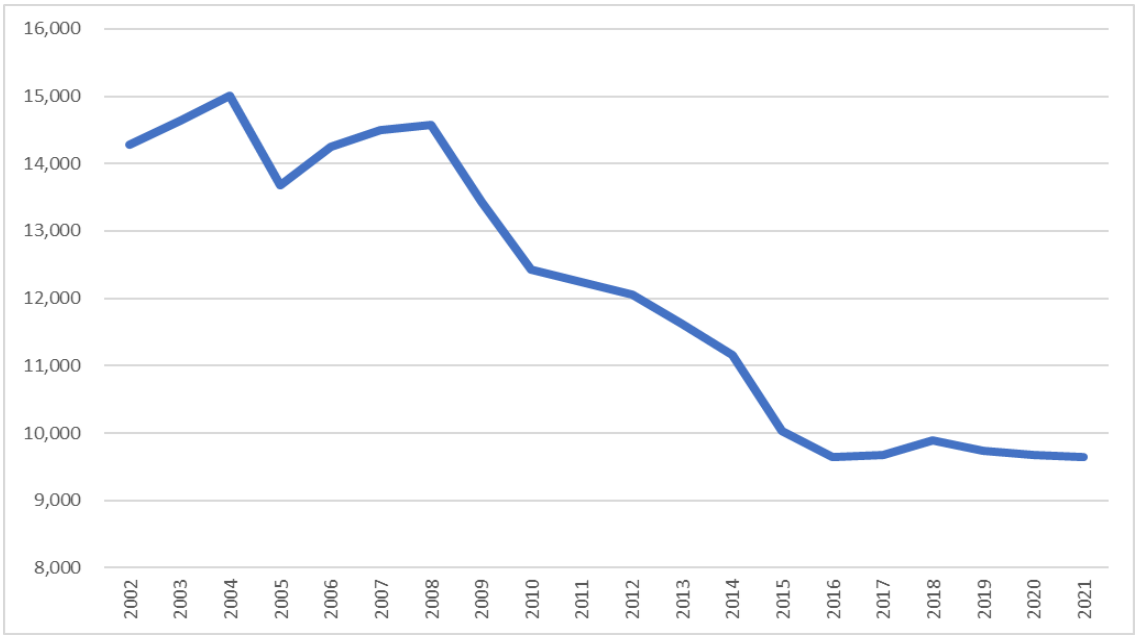
2022 Supply and Demand Forecast
September 2022

Water Demand

At its basic level, planning water supply is being able to answer three simple questions: (i) What is our usage today (current demand)? (ii) What will we need in the future (future demand)? and, (iii) when will we get there (growth rate)? The answers translate to how much supply will be needed each year going forward. In addition, the planner also has to examine if there is enough supply available to reliably serve the 10-Year Maximum Daily Demand (MDD) and Peak Hour Demand (PHD) in the higher demand months, per the California Code of Regulations (CCR) section 64554.

The 5-year average demand from 2017-2021 was 9,725 AFY. As can be seen in Figure 1 below, the trend in water demand has been declining, but relatively steady the past seven years.

Figure 1
Trend in Annual Water Demand



Using a fully-vetted third-party growth forecast is a very objective way for projecting water demand increase. AMBAG implemented an employment-driven forecast model for the first time in the 2014 forecast and contracted with the Population Reference Bureau (PRB) to test and apply the model again for the 2018 Regional Growth Forecast (RGF). To ensure the reliability of the population projections, PRB compared the employment driven model results with results from a cohort-component forecast, a growth trend forecast, and the most recent forecast published by the California Department of Finance (DOF). All four models resulted in similar

population growth trends. As a result of these reliability tests, AMBAG and PRB chose to implement the employment-driven model again for the 2022 Regional Growth Forecast.

AMBAG has captured the factors that influence both residential and non-residential water demand growth in its Regional Growth Forecast. AMBAG's Final 2022 Regional Growth Forecast is utilized by AMBAG in its 2045 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) adopted in May 2022. The 2045 MTP/SCS includes a planning period through 2045. The years forecasted include 2025, 2030, 2035, 2040, and 2045. The forecast the same model that predicts employment growth using a shift-share model based on local data as well as state and national trends. Population growth is then driven by employment growth. Household and housing growth are driven by population growth, demographic factors and external factors. While the methodology for the 2022 Regional Growth Forecast has remained the same through three planning cycles, the models have been updated for the Moving Forward 2045 Monterey Bay Plan to include current data, a revised base year of 2020 and a new horizon year of 2045.

Houses and empty lots do not use water, people do. The portion of the AMBAG Regional Growth Forecast that forecasts population captures that water demand for residential purposes. Hence, the housing envisioned for Legal Lots of Record, within Pebble Beach, or elsewhere is affiliated with the population growth forecast.

Similarly, economic growth is captured in the AMBAG Regional Growth Forecast by the growth in jobs. Both Cal-Am[1] and the District have utilized job growth as a proxy for non-residential water demand growth. Hence, the commercial growth envisioned for Legal Lots of Record, within Pebble Beach, or due to increased tourism is affiliated with the growth in the jobs forecast.

AMBAG conducted 22 one-on-one meetings with local jurisdictions in the Cal-Am Main service area,[2] where AMBAG discussed the Regional Growth Forecast estimates, subregional allocations, and recent trends at the Planning Directors Forum in August 2019, January 2020, and August 2020. Those meetings were the opportunity for the jurisdictions to voice concerns that other growth-related activities needed to be reflected and incorporated into the growth forecast.

[1] Phase 2 Direct Testimony of Ian C. Crooks, Attachment A, 2022 Urban Water Management Plan, p.4-7: "For non-residential customers, water use will increase at the rate of employment growth forecasted by AMBAG."
[2] Attachment A hereto, Final 2022 Regional Growth Forecast, Attachment 1.

Regional Housing Needs Allocation (RHNA) housing numbers are also embedded in the Regional Growth Forecast. "The regional growth forecast (RGF) is an important reference point in the RHNA process."[3]

"The 2045 MTP/SCS includes an updated RHNA. The 6th Cycle Regional Housing Needs Determination (RHND) from HCD to AMBAG is 33,274 units."[4] The final growth forecast was adopted along with the 2045 Metropolitan Transportation Plan/Sustainable Communities in June 2022. The 6th Cycle RHNA Plan itself recognizes that it is contained within the 2045 MTP/SCS which utilizes the AMBAG 2022 Regional Growth Forecast. "May 2022 – AMBAG releases final 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) accommodating RHNA."[5] They are all tied together.

Since the City of Seaside is not entirely served by Cal-Am's service area, only half of the future units for Seaside are assumed to be within the Cal-Am service area." However, any future housing permitted and built in the old Fort Ord area of the cities of Monterey, Del Rey Oaks, or Seaside would also be served by Marina Coast Water District, not Cal-Am. Similarly, any housing units to be built in unincorporated Carmel Valley may be served by existing supplies that are not Cal-Am's future supplies, but perhaps "wheeled" by Cal-Am – including 130 units at Carmel Valley Village, as well as September Ranch, that will apply against the RHNA goal, but not require a new supply to be met by Cal-Am. MPWMD believes the water for housing requirements that will be met by others should be as follows: Seaside 50% (same as Cal-Am's own assumption), Del Rey Oaks 20%, Monterey 10%, unincorporated County 30% and should be applied as a discount to future residential water demand. These discounts will be reflected in MPWMD's demand forecast shown below.

Many people incorrectly interpret the RHNA process as requiring housing units to be built within the next 8 years. That is not the case. The role of local governments is to participate in the development of the allocation methodology and to update their Housing Elements within the County General Plans and local zoning to show how they will accommodate their share of the housing, following the adoption of the RHNA methodology. It is a planning and zoning process. It is not a building process.

The September 8-14, 2022 edition of The Monterey County Weekly states: "Cities and counties do not have to guarantee the units will be built by 2031, but they do have to rezone areas and remove barriers to developer who may take on the actual construction." The City of Lafayette describes the process as "the RHNA allocation is not a prescription to build any units. And, the

[3] Attachment C hereto, Draft 6th Cycle Regional Housing Needs Allocation Plan 2023-2031, April 2022, p. 5.

[4] Attachment B hereto, Monterey Bay 2045 – Moving Forward, AMBAG, June 2022, Excerpts, pp. 4-38.

[5] Attachment B hereto, Draft 6th Cycle Regional Housing Needs Allocation Plan 2023-2031, April 2022, p. 13.

City itself does not build units; private developers do. The City is only required to show that there is enough land zoned at appropriate densities to accommodate this need, should a developer want to build these units. In addition, the City must demonstrate that its codes and requirements do not unduly constrain the building of housing (for example, it needs to show that housing can be built "as-of-right" in some zones, without requiring a land use permit)."[6] Or, as the City of Santa Monica adds: "It is important to recognize that the RHNA is a targeted housing number - Cities and counties do not have to build this number of units, but rather they are required by the state to plan for them and demonstrate that under the current land use and development standards, there is capacity to accommodate for this number of housing units."[7]

This concept is reinforced by Sand City's appeal and statement "it is inconceivable how the City could meet the goals of the current RHNA allocation. The City of Sand City requests AMBAG lower Sand City's allotment to a number that is actually achievable in light of its small size and noted constraints" and Pacific Grove Councilmember's statement "Do I think Pacific Grove will really build all (1,125 units)? No, but we're putting a policy in place that is supportive of additional housing. Our staff's job is to show that the city in good faith is implementing policing, zoning or incentives to do so."[8]

The ability of the Monterey Peninsula to generate or "absorb" the housing and commercial growth will help determine when such water supply is needed. The average growth in, or absorption of, water use in the decade preceding the Cease and Desist Order (CDO) was during a period of relative economic stability, available property, no moratorium on new service connections, and lower water rates, yet only resulted in 16.4 AF per year of absorption. Things do not develop quickly on the Monterey Peninsula. MPWMD analysis below shows 31.4 AF per year, almost twice as much as the historical rate, based on the AMBAG forecast.

To summarize:

- Legal Lots of Record: Population moves to the area and lives in either existing housing stock or new housing stock built on Legal Lots of Record. Housing is already included in the AMBAG Regional Growth Forecast. Thus, Legal Lots of Record is not additive.
- Tourism Rebound: Non-residential economic growth is captured in the AMBAG Regional Growth Forecast and is not additive.
- Pebble Beach Entitlements: The entitlements represent new housing and commercial growth in the unincorporated County area of Pebble Beach. Hence, it is encapsulated within the AMBAG Regional Growth Forecast and is not additive.

[6] Attachment E hereto, Frequently Asked Questions About RHNA, pp. 17, 19 et al.

[7] Id., p. 16.

[8] Id., pp. 21, 23-24.

- RHNA Housing Numbers: The new 6th Cycle Regional Housing Needs Allocation Plan 2023-2031 is reflected within the AMBAG Regional Growth Forecast and is not additive.

MPWMD's forecast is based on the AMBAG 2022 Regional Growth Forecast and uses current 5-year average water production, a measure of the total water required to "feed" the system for customer use, before losses and fire flows, as the base. Starting with three years of actual consumption data (2017, 2018, and 2019 – pre-COVID), MPWMD allocated consumption for residential and non-residential by political jurisdiction, based on the proportionate percentages of each then mapped the current base production to the same proportions.[9]

Assuming all prospective population and housing growth is captured in AMBAG's Regional Growth Forecast and all commercial economic expansion occurs at the same rate as AMBAG's employment projections, MPWMD offers the following water demand forecast:

Table 1
Water Required for Population Growth[10]

	Monterey	Pacific Grove	Carmel-by-the-Sea	Seaside	Del Rey Oaks	Sand City	County[11]	TOTAL
Population in 2020	28,170	15,265	3,949	33,537	1,662	385	8,916	91,884
Population in 2045	29,639	15,817	3,984	38,316	2,650	1,198	9,916	101,520
Increase	5.2%	3.6%	0.9%	14.2%	59.4%	211.2%	11.2%	10.5%
Acre-Feet in 2020	1,675	908	413	1,015	92	21	2,221	6,345
Acre-Feet by 2045	1,762	941	417	1,160	146	65	2,471	6,961
AF Served by Others[12]	9	-	-	72	11	-	75	167
Net AF in 2045	1,753	941	417	1,087	135	65	2,396	6,795

[9] Attachment D hereto, Data and Methodology to Support MPWMD Forecast of Water Demand

[10] Attachment A hereto, Final 2022 Regional Growth Forecast

[11] To estimate unincorporated County population, use Cal-Am service area population reported in SWRCB Urban Water Supplier Monthly Reports (Raw Dataset), May 2022 value, minus urban areas. Estimate 1,000 residents added by 2045.
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html.

[12] This represents the portion of new residents in the jurisdiction who will reside in units served by water other than Cal-Am's Main system. Non-Residential water demand served by others has not been designated.

Table 2
Water Required for Employment Growth[13]

	Monterey	Pacific Grove	Carmel-by-the-Sea	Seaside	Del Rey Oaks	Sand City	County[14]	TOTAL
Jobs in 2020	40,989	8,016	3,566	10,476	748	2,092	4,300	70,187
Jobs in 2045	45,509	8,445	3,915	11,543	834	2,259	4,721	77,226
Increase	11.0%	5.4%	9.8%	10.2%	11.5%	8.0%	9.8%	10.0%
Non-Residential AF in 2020	1,547	332	225	336	22	66	853	3,380
Non-Residential AF in 2045	1,718	349	247	370	24	71	936	3,716
Increase	171	18	22	34	3	5	83	336

These AMBAG Regional Growth Forecast values can be converted to a long-term water demand forecast in the following manner:

Table 3
Calculation of Future (Year 2045) Water Demands

	Base Year (2020)	Estimate For 2045 AMBAG	AF per Year
Net Water for Population	6,345 AF	6,795 AF	18.00
Water for Non-Residential	3,380 AF	3,716 AF	13.44
Total	9,725 AF	10,511 AF	31.44

This future year growth rate, applied annually, results in the following water demand forecast:

[13] Attachment A hereto, Final 2022 Regional Growth Forecast.

[14] California Employment Development Department, Monthly Labor Force Data for Cities and Census Designated Places. November 15, 2019. Sum of Carmel Valley Village CDP and Del Monte Forest CDP. Escalated at same rate as Carmel-by-the-Sea.

Table 4
MPWMD Water Demand Forecast

	2020	2025	2030	2035	2040	2045	2050	2055
Water Demand - AF	9,725	9,882	10,039	10,196	10,353	10,511	10,668	10,825

This demand forecast does not need to be increased by a "peaking factor" to meet the Maximum Month Demand, Maximum Day, or Peak Hourly Demand. As explained later in the section about "Water Supply", it is not necessary to provide additional supplies if water resources stored can be utilized to meet peak demands. Instead, stored water can be accessed with increased production well capacity, rather than over-building supplies. It is always in the ratepayer's interest to build one or two additional production wells for $3 million each, rather than a $321 million[15] desalination plant if stored water can be utilized to meet peak demands.

WATER SUPPLY

Available sources of supply are shown in Table 5 below and are described in the discussion that follows.

Table 5
Monterey Peninsula Available Supply
(Acre-Feet Annually)

Supply Source	w/ PWM Expansion
Pure Water Monterey	3,500
PWM Expansion	2,250
Carmel River	3,376
Seaside Basin	774
Aquifer Storage & Recovery (ASR)	1,300
Sand City Desalination Plant	210
Table 13 Water Rights	0
Malpaso Water Rights	58
Total Available Supply	**11,468**

[15] From Attachment C-3 of Advice Letter AL 1220-A, September 10, 2019. Proposed costs for Cal-Am desalination plant have not been updated for many years. Given current inflation, supply chain issues, and increased construction cost environment, the desalination plant costs should be updated.

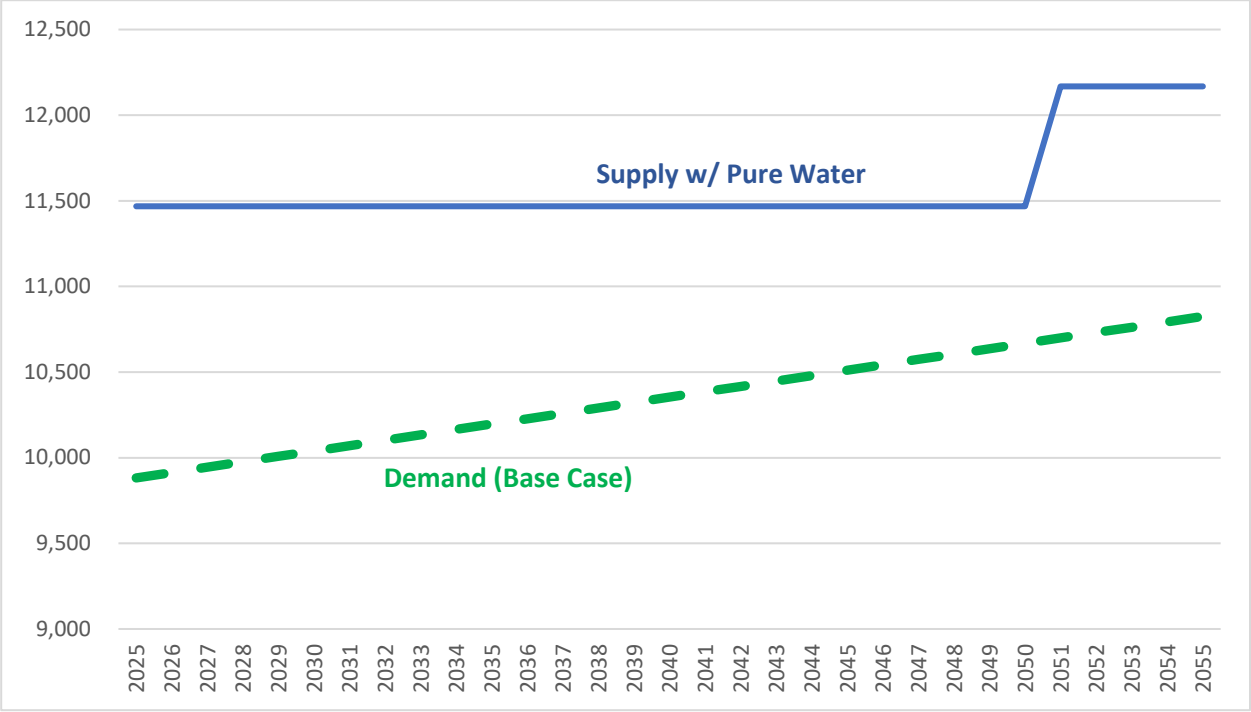
SUPPLY v. DEMAND

By comparing future supplies available inclusive of Pure Water Monterey Expansion and comparing to the expected long-term water demand[16], future water supply beyond a Pure Water Monterey Expansion, such as a desalination plant, can be determined if needed for the Monterey Peninsula

The future Supply versus Demand analysis shows that the addition of the Pure Water Monterey Expansion meets the region's demand needs for over 30 years and a new Cal-Am desalination plant, or some other alternative, is not needed.

Applying the 31.44 AFY from Table 3 linearly across a 30-year horizon results in the demands shown in the figure below showing expected supply versus demand.

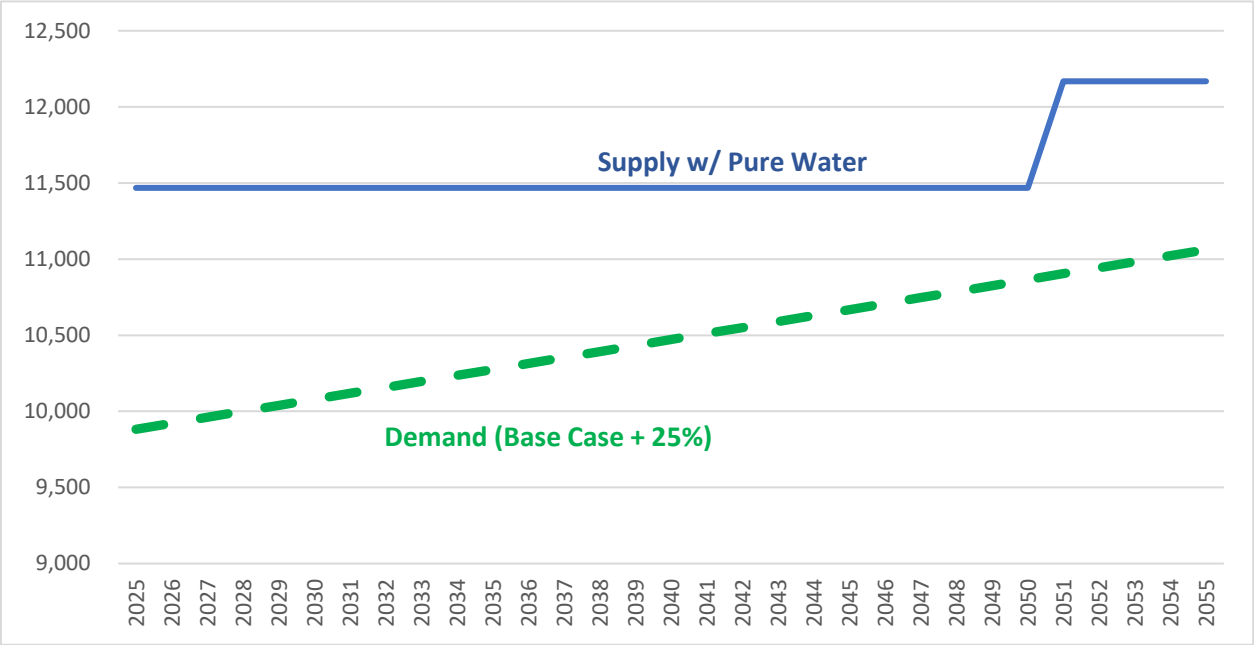
Figure 2
Water Supply Available
vs.
Water Demand for AMBAG 2022 Regional Growth Forecast



[16] Attachment F hereto, Evaluation of Water Supply Available versus Water Demand.

MPWMD also analyzed a demand forecast 25% higher, at 39.3 AF per year of average growth. That result is shown in Figure 3, below:

Figure 3
Water Supply Available
vs.
Water Demand for AMBAG 2022 Regional Growth Forecast
Plus 25% for Forecasting Error



MPWMD also analyzed a demand forecast 50% higher, at 47.2 AF per year of average growth. At that level, available supplies (with Pure Water Monterey Expansion, without a desalination plant) exceed water demand for over 30 years. In fact, MPWMD's model shows that at 63 AF per year of average growth – 200% of or twice the water forecasted to be required for the AMBAG 2022 Regional Growth Forecast – supplies are available for over 30 years.

A contingency can be achieved by having additional stored water available to call upon at any time. This can be achieved by building up available storage in the early years where supply exceeds demand. As seen in Figures 2 and 3 above, and in the last columns of Attachment F, in the initial years following completion and availability of Pure Water Monterey Expansion (2025) the available supplies exceed demands by over 1,500 AF per year. In the very first year, more than 10% of available supplies (1,147 AF) can be stored to satisfy any contingency.

Water for available storage is shown below:

Table 6
Water Available for Storage
(With Pure Water Monterey Expansion, without Desalination)

Year	Storage Available Base Case Demand	Storage Available Base Case Demand + 25% Error		Year	Storage Available Base Case Demand	Storage Available Base Case Demand + 25% Error
2025	1,586	1,586		2041	1,083	957
2026	1,555	1,547		2042	1,052	918
2027	1,523	1,507		2043	1,020	879
2028	1,492	1,468		2044	989	839
2029	1,460	1,429		2045	957	800
2030	1,429	1,390		2046	926	761
2031	1,397	1,350		2047	894	721
2032	1,366	1,311		2048	863	682
2033	1,334	1,272		2049	831	643
2034	1,303	1,232		2050	800	604
2035	1,272	1,193		2051	1,469	1,264
2036	1,240	1,154		2052	1,437	1,225
2037	1,209	1,114		2053	1,406	1,186
2038	1,177	1,075		2054	1,374	1,146
2039	1,146	1,036		2055	1,343	1,107
2040	1,114	997		Total	38,046	34,392

In addition to eliminating a need for a contingency from bigger water supply construction, the stored water can be used for peaking to meet maximum month demands (MMD), maximum day demand (MDD), and peak hourly demand (PHD) without building more supply projects. As stated earlier, it is always in the ratepayer's interest to build one or two additional production wells for $3 million each, rather than a $321 million desalination plant if stored water can be utilized to meet peak demands.

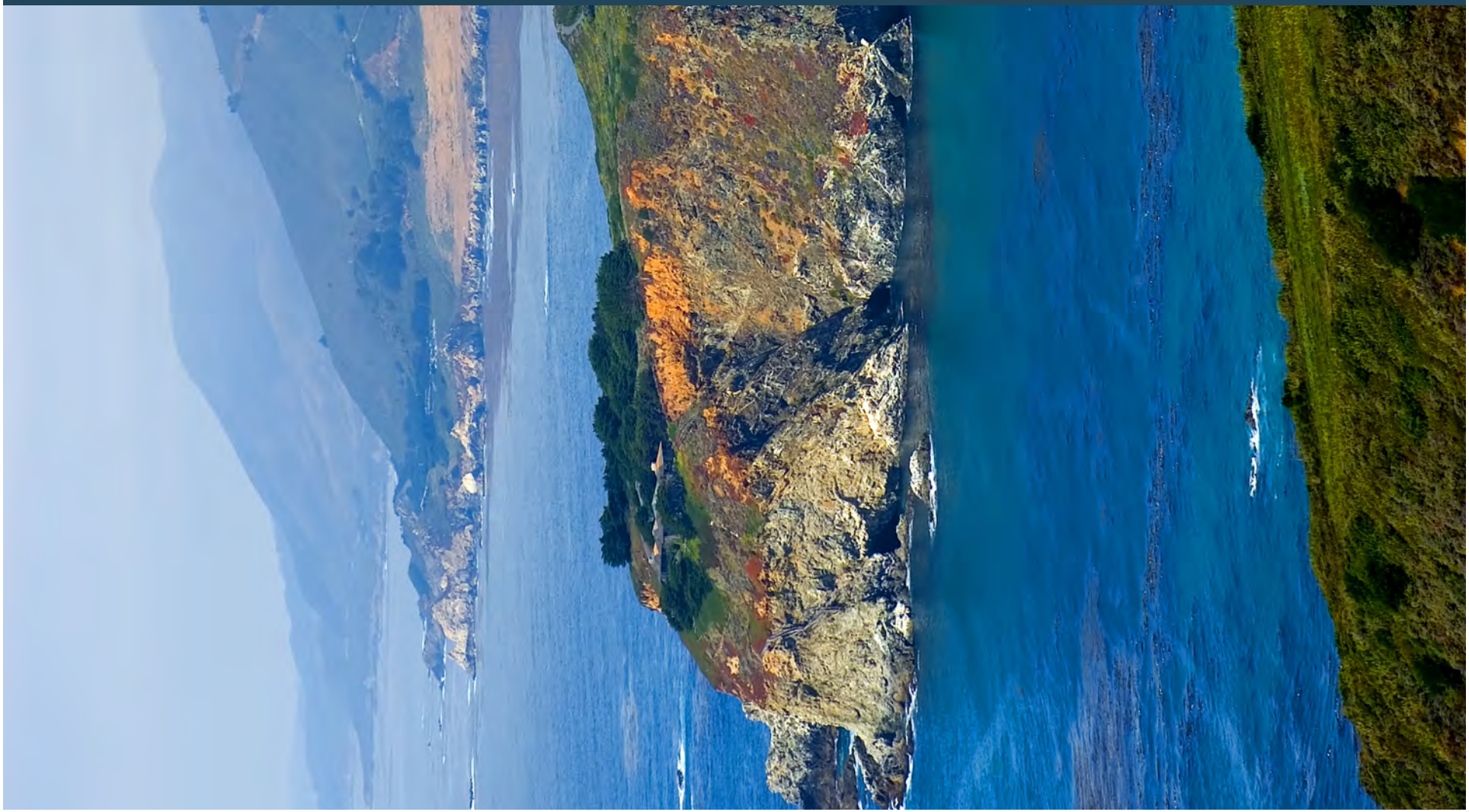
Stored water can also be used as a drought reserve and to provide protective water levels in the Seaside Groundwater Basin. In fact, the average water to storage in the base case above in Table 6 is 1,268 AFY – far in excess of recommended protective water levels for the basin.

If the Monterey Peninsula were to experience drought during the initial "buildup period" of ASR reserves following the completion of new water supply and the lifting of the CDO, ASR would arguably be delayed in building up a drought reserve, but it should not be overlooked that a Pure Water Monterey Expansion is new capacity without an immediate offsetting demand. That is, 2,250 AFA from Pure Water Monterey Expansion would provide an off-set in the early years if

ASR's drought reserve has not yet built-up. Just a few years of Pure Water Monterey Expansion water could also provide drought-resilience to the Monterey Peninsula.

Attachment A

A Regional Growth Forecast



2022 Regional Growth Forecast

Technical Documentation

Association of Monterey Bay Area Governments
Scheduled for Adoption June 2022

Contents

2022 Regional Growth Forecast

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Executive Summary

As the Metropolitan Planning Organization (MPO), the Association of Monterey Bay Area of Governments (AMBAG) carries out many planning functions for the tri-county area including development and maintenance of the regional travel demand model (RTDM), long range transportation planning and programming and acting as a regional forum for dialogue on issues facing the region. Most of AMBAG's projects are carried out in support of these major functions, including but not limited to the regional growth forecast. AMBAG develops the forecast with a horizon year that matches the planning timeline of the Metropolitan Transportation Plan (MTP) and the model years for the Regional Travel Demand Model (RTDM). In addition to informing regional planning processes, the forecast is used by local jurisdictions and special districts to inform local and subregional planning.

The last regional growth forecast was adopted in 2018. AMBAG staff began the process of developing a new forecast in spring 2019. This new forecast is referred to as the 2022 Regional Growth Forecast (2022 RGF).

In preparation for this forecast, AMBAG staff conducted a review of recently completed population, housing and employment forecasts. The results of this review indicated that most of the other MPOs in California are using a methodology that emphasizes employment growth as the primary driver of long-term population change at the regional scale. The traditional approach to forecasting population uses a cohort-component approach that considers three factors: births, deaths and migration. While birth and death data are readily available and trends are relatively predictable over time, migration tends to be much more difficult to track and forecast as it is heavily influenced by political and economic climates. For the development of the new forecast, AMBAG chose to progress towards a more contemporary approach that places a greater emphasis on employment. The assumption is that the economy is a reliable predictor of population growth.

AMBAG implemented an employment-driven forecast model for the first time in the 2014 forecast and contracted with the Population Reference Bureau (PRB) to test and apply the model again for the 2018 RGF and the 2022 RGF. To ensure the reliability of the population projections, PRB compared the employment-driven model results with results from a cohort-component forecast, a growth trend forecast, and the most recent forecast published by the California Department of Finance (DOF). All four models resulted in similar population growth trends. As a result of these reliability tests, AMBAG and PRB chose to implement the employment-driven model again for the 2022 RGF.

To disaggregate the forecast for each jurisdiction, AMBAG and PRB used the most current data available to update a series of shift-share models and replicate the methodology used in the prior forecast.

This technical document provides a description of the methodology for the development of the regional growth forecast figures in addition to the methodology for disaggregation of those figures. The regional and subregional forecast figures for population, jobs and housing were accepted by the AMBAG Board of Directors at the November 18, 2020 meeting.

Summary of the Forecast

The 2022 RGF projects that the region will add 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. The regional growth rate is slightly slower than nation- and state-level forecasts, reflecting historical growth rates that have tended to be slightly slower than either the state or nation. Furthermore, job growth is expected across most employment sectors. The fastest-growing industries include Site-Based Skilled Trade, Health Care and Social Assistance, and Other Services. Conversely, Retail is expected to be the slowest-growing industry. Notably, while many models for the U.S. predict declines in agricultural job growth, the AMBAG region is experiencing steady agricultural job growth.

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. This is slightly lower than prior forecasts and follows the slowing growth rates seen at both the state and national level. This revised growth trend also reflects the most current population estimate for the region. As a result of declining fertility, stalled improvements in life expectancy, and falling international migration, the 2020 population estimate was more than 16,000 lower than prior forecasts predicted. In addition to slower growth, the new forecast predicts an older age distribution, with a larger proportion of the population age 65 and older.

An aging population affects the household and housing unit forecasts. While population growth will slow, which reduces future housing demand, older people are more likely to live alone or in small households. This shift offsets the lower population forecast with a slight upward effect on housing demand. The net result is that the region is expected to build just over 42,200 housing units by 2045, for a total of approximately 304,900 units.

Section 1: Process for Forecast Completion

Following the preparation of the regional forecast figures, AMBAG staff began the process of disaggregating the figures to each of the jurisdictions using historical data to develop a baseline disaggregated forecast. The initial results were a purely quantitative application of the methodology. These preliminary draft disaggregated numbers were presented for discussion purposes at one-on-one meetings held by AMBAG staff with each of the jurisdictions, the Local Agency Formation Commissions,

the Fort Ord Reuse Authority, the University of California, Santa Cruz and the California State University, Monterey Bay. AMBAG staff also provided materials for these meetings that outlining the data sources and methodology for the regional forecast figures as well as the preliminary draft disaggregated forecast figures. The intent of the first round of meetings was to gather information and data that was then used to make adjustments to the forecast. (See Attachment 1 for a list of meeting dates, times and attendees.)

These preliminary draft disaggregated numbers were adjusted based on information and feedback provided by each jurisdiction. In addition, new data became available. The release of vintage 2020 estimates from the California Department of Finance showed 2019 population approximately 7,000 lower than in the preliminary estimate, although housing estimates were relatively stable. These updates necessitated minor revisions to the regional forecast.

Staff updated the regional growth forecast to reflect the most current information. The entire revised forecast, regional and subregional, was re-circulated for a second round of comments. After the second round of comments were received, AMBAG staff incorporated additional input and prepared a revised draft of the disaggregated forecast figures. Staff circulated the revised population, employment and housing forecast which incorporated additional comments from the Board of Directors. The final draft was accepted for planning purposes only by the AMBAG Board of Directors at its meeting on November 18, 2020. The final growth forecast is scheduled for adoption along with the 2045 Metropolitan Transportation Plan/Sustainable Communities in June 2022.

Section 2: Development of the Regional Growth Forecast

In spring 2019, AMBAG asked PRB to prepare regional employment, population and housing projections to 2045. This section documents the findings of the work by PRB and includes a summary of the methodology, a description of the projections and an explanation of past, current and projected job growth in the region.

Summary of the 2022 Regional Growth Forecast

The 2022 RGF projects that the region will add 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. (See Table 1) The regional growth rate is similar to national forecasts but slightly slower than state-level forecasts. Furthermore, job growth is expected across most employment sectors. The fastest-growing industries include Site-Based Skilled Trade, Health Care and Social Assistance, and Other Services. Conversely, Retail is expected to be the slowest-growing industry. Notably, while many models for the U.S. predict declines in agricultural job growth, the AMBAG region is experiencing steady agricultural job growth.

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. (See Table 1) This is slightly lower than prior forecasts and follows the slowing growth rates seen at both the state and national level. This revised growth trend also reflects the most current population estimate for the region. Despite an upward revision to the estimate, the revised DOF population estimate for 2015 was more than 3,000 lower than prior forecasts predicted. As such, an adjustment was made in this forecast of population growth to account for the sharp fall in fertility rates and international migration that occurred during the recession years that have not fully rebounded. In addition to slower growth, the new forecast predicts an older age distribution, with a larger proportion of the population age 65 and older.

An aging population affects the household and housing unit forecasts. While population growth will slow, which reduces future housing demand, older people are more likely to live alone or in small households. This shift offsets the lower population forecast with a slight upward effect on housing demand. The net result is that the region is expected to build just over 42,200 housing units by 2045, for a total of approximately 304,900 units. (See Table 1)

Table 1: Forecast Summary

	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
Population	**710,598**	**719,561**	**732,708**	**762,241**	**774,729**	**800,726**	**824,992**	**842,189**	**857,828**	**869,776**
Change		8,963	13,147	29,533	12,488	25,997	24,266	17,197	15,639	11,948
% Change		1%	2%	4%	2%	3%	3%	2%	2%	1%
Households	**228,260**	**234,869**	**236,059**	**238,862**	**243,863**	**253,106**	**262,493**	**269,175**	**273,462**	**276,730**
Change		6,609	1,190	2,803	5,001	9,243	9,387	6,682	4,287	3,268
% Change		3%	1%	1%	2%	4%	4%	3%	2%	1%
Housing	**247,080**	**256,467**	**260,256**	**262,660**	**267,812**	**277,645**	**288,386**	**296,352**	**301,307**	**304,900**
Change		9,387	3,789	2,404	5,152	9,833	10,741	7,966	4,955	3,593
% Change		4%	1%	1%	2%	4%	4%	3%	2%	1%
Jobs				**377,335**	**406,280**	**410,017**	**418,132**	**425,845**	**434,147**	**442,824**
Change				25,600	28,945	3,737	8,115	7,713	8,302	8,677
% Change					8%	1%	2%	2%	2%	2%

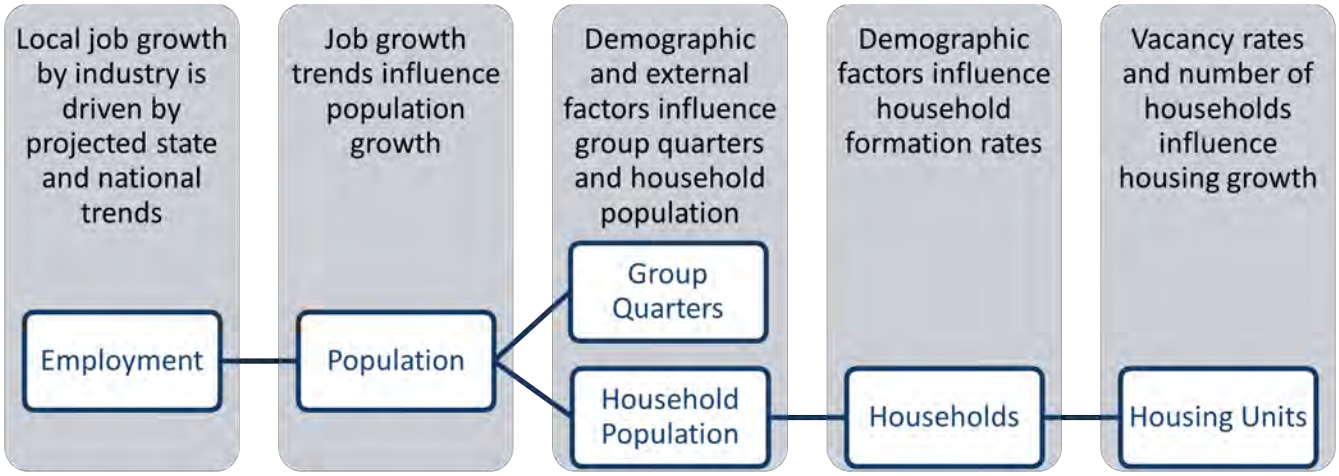
Sources: Jobs data for 2000-2015 are from California Employment Development Department and InfoUSA; population, household, and housing data for years 2000-2020 are from the U.S. Census Bureau and the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Regional Growth Forecast Methodology

As shown in the flow chart below, the forecast uses a model that predicts employment growth using a shift-share model based on local data as well as state and national trends. Population growth is then driven by employment growth. Household and housing growth are driven by population growth, demographic factors and external factors (explained below). This approach was vetted and approved by the AMBAG Board of Directors in 2014 for use in the metropolitan transportation plan, Moving Forward 2035 Monterey Bay. While the methodology for the 2022 RGF remains the same, the models

have been updated to include current data, a revised base year of 2015 and a new horizon year of 2040.

Figure 1: Regional Growth Forecast Process



1. Employment: Employment is measured as the number of jobs by place of work.
   Employment growth by industry is driven by projected national and statewide trends for all industries in the region using a shift-share model.
2. Population: Population is the total resident population of the region.
   Job growth trends influence population growth. The forecast of total population is based on historical trends in the ratio of population to employment in the AMBAG region.
   Projections of demographic characteristics (i.e., population by age, sex, and race/ethnicity) in the 2022 RGF relied on a proportional approach based on demographic projections from the California Department of Finance (DOF).
3. Household Population and Group Quarters: Household population is the population that lives in a housing unit. Group quarters population is the population that lives in a group living arrangement such as a dorm, barracks, correctional institution, or congregate care facility.
   Demographic factors (e.g., age, sex, race/ethnicity) and external factors (e.g., major group quarters facilities like colleges and universities, correctional facilities, etc.) influence the household population and group quarters population.
4. Households/Occupied Housing Units: A household is a person, or group of people, living in a house. Because a household, by definition, occupies a housing unit, households are equivalent to and synonymous with occupied housing units.
   Household projections are driven by household formation rates. Household formation rates are calculated as the ratio of households divided by the household population. Household formation rates are the inverse of average household size.
5. Housing Units: Housing is the total number of housing units, including both occupied and vacant structures. Housing includes primary residences, second homes, accessory dwelling

units, vacation rentals, farmworker housing, and any other habitable structure—including unauthorized units. The only type of dwelling excluded from the housing inventory is group quarters (dorms, barracks, congregate care, etc.).

Housing projections are driven by the household population projection, demographic characteristics of the household population (age, sex, race/ethnicity), household formation rates, and housing vacancy rates. Vacancy rates are calculated as the share of all units (including vacation rentals, unauthorized dwellings, etc.) that are not currently occupied.

Data sources include the California Department of Finance, California Employment Development Department, the U.S. Bureau of Labor Statistics and the U.S. Census Bureau.

For more information on the definitions of housing and group quarters, see Attachment 4.

Step 1: Employment

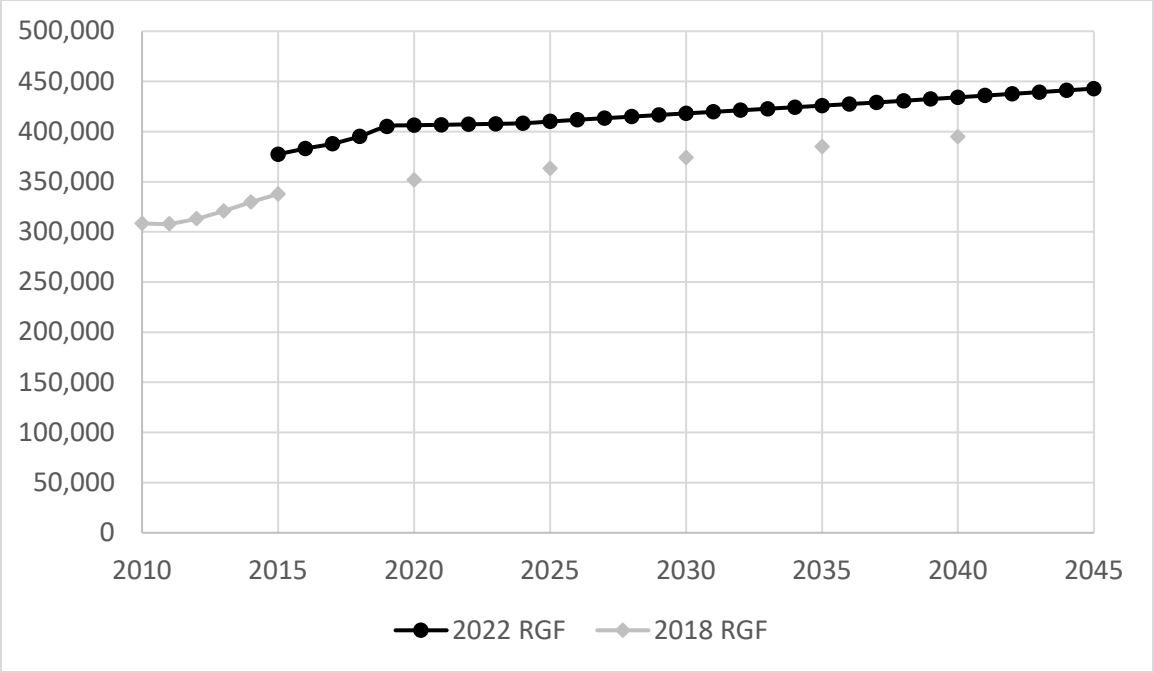
The AMBAG region is projected to add 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. The 2015 base year data were re-benchmarked to reflect revisions to county totals published by the California Employment Development Department, as well as an employer database from InfoUSA, and extensive ground-truthing conducted by AMBAG staff. (See Table 2 and Figure 2.) Employment grew faster in the 2015-2020 time period than had been anticipated in the 2018 RGF, but is expected to return to a slow-growth trend.

Table 2: Forecast Comparison of Employment

Forecast	2010	2015*	2020	2025	2030	2035	2040	2045
2018 RGF	308,300	337,600	351,800	363,300	374,100	384,800	395,000	N.A.
% Change		10%	4%	3%	3%	3%	3%	N.A.
2022 RGF		377,335	406,280	410,017	418,132	425,845	434,147	442,824
% Change			8%	1%	2%	2%	2%	2%

*Sources: Data for years 2010 and 2015 are from the California Employment Development Department. *In the 2022 RGF, data for 2015 were re-benchmarked using updated estimates from the California Employment Development Department, an employer database InfoUSA, and extensive ground-truthing. Forecast years were prepared by AMBAG and PRB.*

Figure 2: AMBAG Region Employment Forecast



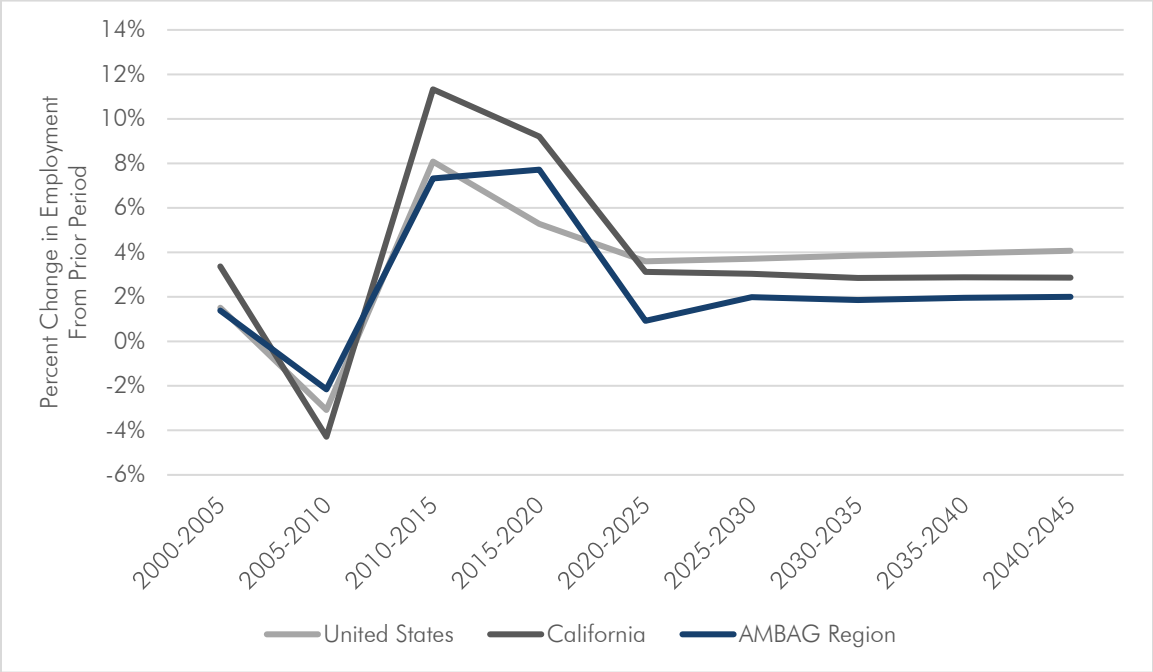
Sources: Data for years 2010-2014 are from the California Employment Development Department. In the 2022 RGF, data for 2015 were re-benchmarked using updated estimates from the California Employment Development Department, an employer database InfoUSA, and extensive ground-truthing. Forecast years were prepared by AMBAG and PRB.

Job projections to 2045 were developed for each major NAICS industry category by projecting the AMBAG region share of state job growth based on the analysis of trends in the period from 2005 to 2019. The NAICS industries were then grouped into major industry sectors for the transportation model. Industry categories are described in Attachment 2.

The AMBAG region experienced job growth slower than the state, and similar to the nation between 2000 and 2019. (See Figure 3.) The region is projected to experience job growth at a slightly slower rate than the state and nation. The primary reason for this below-average job growth is the region's below-

average concentration in fast-growing sectors such as information and professional services. The region also has a below-average exposure to growth in foreign trade.

Figure 3: Employment Change



Sources: Data for years 2000-2015 from the U.S. Bureau of Labor Statistics and California Employment Development Department. Forecast years were prepared by AMBAG and PRB with input from U.S. Bureau of Labor Statistics, Employment by Major Industry Sector: 2014-2024; California Department of Transportation, California County-Level Economic Forecast 2014-2040, September 2014; and from the California Employment Development Department, Industry Employment Projections.

Positive growth factors include above-average performance relative to state trends in tourism and agriculture. Agriculture has shown strong growth for several years, and new crops such as cannabis as well as new investments in processing facilities, portend that the industry will continue to grow. However, any job growth due to new crops may be mitigated by losses due to increased mechanization in agriculture and agricultural processing.

Method for Producing the Employment Forecast

The AMBAG region job projections were developed using three guiding principles:

1. The AMBAG region projections were based on projections of job growth in the nation and state. The national and state projections provide the **pool of job opportunities** and the AMBAG region projections reflect historical trends in the **share** of national and state job growth that will locate in the AMBAG region.

2. The AMBAG region **share** of national and state job growth is determined by the industry composition of job growth and the projected share of job growth locating in the AMBAG region. If national and state job growth is concentrated in sectors where the AMBAG region has a competitive advantage, the region's projected job growth will be higher than if national and state job growth is concentrated in sectors where the region has a below-average share of jobs and a relatively poor competitive position.
3. The analysis of competitive advantage is focused on sectors in the AMBAG region **economic base.** The region's economic base consists of those sectors that sell a high proportion of goods and services to customers outside the region. They export goods and services to customers in world and national markets and markets throughout California. Key examples of economic base sectors in the AMBAG region are agriculture a]nd tourism. The UC Santa Cruz campus and state prison are also examples of activities that do not primarily serve local residents.

U.S. and California Job Growth to 2045

The starting point for the AMBAG projections is an examination of future U.S. and California job growth for total jobs and major industry sectors. The U.S. job growth projections are based on the most recent forecast from the U.S. Bureau of Labor Statistics and an extrapolation of growth trends to 2045. California job growth projections are based on an industry-level forecast published by the California Department of Transportation, as well as data from the California Employment Development Department and PRB.

The California industry projections identify the structure of job growth as an input to AMBAG region job projections. The resulting projections of job growth are shown below.

The nation is expected to add 41 million jobs between 2015 and 2045 for an increase of 27 percent. Growth, nationwide, is expected to be fairly constant throughout the forecast period. The state of California is projected to experience job growth that is slightly faster than the nation's job growth in the early years of the forecast and to slow down to a rate more similar to the national growth rate by 2045.

The state is projected to see a 26 percent increase in total jobs between 2015 and 2045. The pattern of California industry job growth is shown below and was used in developing AMBAG region job projections. (See Table 3)

Table 3: California Jobs by Major Industry (000s)

	2010	2015	2020	2045	Avg. Annual Growth Rate 2010-2015	2015-2020	2015-2045
Agriculture	382.8	422.3	426.8	433.1	2.0%	0.2%	0.5%
Mining	24.6	26.4	22.8	23.8	1.4%	-2.9%	-2.1%
Construction	560.0	732.1	892.9	996.2	5.5%	4.1%	6.4%
Manufacturing	1,247.9	1,303.0	1,340.4	1,439.2	0.9%	0.6%	2.0%
Wholesale	629.7	691.0	699.2	789.8	1.9%	0.2%	2.7%
Retail	1,516.5	1,660.1	1,683.3	1,812.5	1.8%	0.3%	1.8%
Transp., Warehousing, Utilities	466.9	557.8	682.2	717.9	3.6%	4.1%	5.2%
Information	428.4	488.6	562.0	714.0	2.7%	2.8%	7.9%
Financial Serv.	758.8	800.8	840.1	1,096.7	1.1%	1.0%	6.5%
Prof. & Business Serv.	1,224.1	1,431.6	1,591.7	1,861.8	3.2%	2.1%	5.4%
Educ. & Health Serv.	2,993.9	3,526.1	3,988.6	4,792.4	3.3%	2.5%	6.3%
Leisure & Hospitality	1,500.8	1,828.3	2,056.8	2,348.2	4.0%	2.4%	5.1%
Other services (excl. gov't)	483.6	543.6	583.3	797.4	2.4%	1.4%	8.0%
Government	2,448.4	2,463.0	2,636.6	2,959.3	0.1%	1.4%	3.7%
Self Employed	1,192.6	1,180.9	1,275.7	1,519.6	-0.2%	1.6%	5.2%
Total Jobs	**15,859.0**	**17,655.6**	**19,282.4**	**22,301.7**	**2.2%**	**1.8%**	**4.8%**

Sources: Data for years 2005, 2010 and 2015 from the Employment Development Department. Forecast years were prepared by PRB with input from California Department of Transportation, California County-Level Economic Forecast 2018-2050, September 2019 and from the California Employment Development Department, California Industry Employment Projections.

The projections show substantial differences in the expected growth rate among industries between 2015 and 2045 and these differences tell a story about where job growth is expected and where job levels will remain flat or decline. These differences directly influenced the AMBAG region job projections described below.

It is important to note that the statewide projections listed above were completed before the start of the coronavirus pandemic. The net result is unknown at this time, and projections will be updated as new information becomes available. AMBAG will begin the next update to the Regional Growth Forecast will begin in 2023.

The AMBAG Region Economy and Job Growth

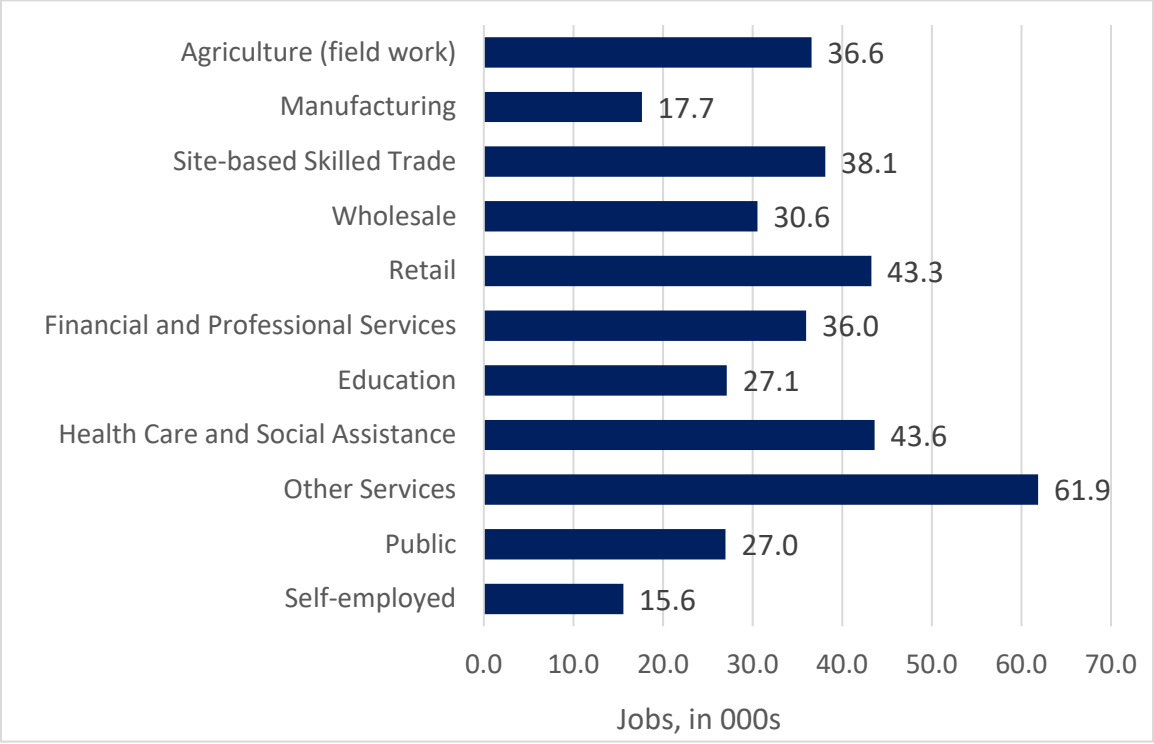
The previous section provided an overview of the current trends in the California economy. As previously noted the AMBAG region's job projections are based on an analysis of the regional economy and its relationship to the growth forecasted for California. The national and state projections provide the **pool of job opportunities** and the AMBAG region forecast reflects judgments about the **share** of national and state job growth that will locate in the AMBAG region. What follows is a description of the current structure of the regional economy as well as the resulting job projections based on the region's share of industries.

The database used for analysis and projections consists of annual industry employment data from 1990 through 2019, from the California Employment Development Department. for each of the three counties in the region and added together to produce an AMBAG region jobs database.

In addition to the historical time-series, AMBAG re-benchmarked the 2015 employment data to more accurately reflect local employment, and grouped the data to eleven categories for modeling purposes. This process is described in more detail in the "Sub-County Employment Database and Re-benchmarking" section, below. Industry definitions are included in Attachment 2.

The largest sectors are Other Services (including hotels, restaurants, and personal services), Health Care and Social Assistance, and Retail. (See Figure 4.)

Figure 4: Jobs by Industry Sector in 2015, AMBAG Region



Sources: Data from the California Employment Development Department, InfoUSA, and AMBAG.

The AMBAG regional economy has an industry structure that is quite different in some ways than the statewide structure or the industry structure in regions like Southern California or the San Francisco Bay Area. One difference is the large share of jobs in Agriculture. Nineteen percent of total jobs in the AMBAG region are in Agriculture compared to just over two percent statewide. Other sectors with above average shares in the region include Public, Other Services, and Self Employed. Conversely, the AMBAG region has a below average share of jobs in the fast-growing, high wage Financial and Professional Services sectors.

AMBAG Region Forecast Job Trends, by Industry

The AMBAG region is expected to have moderate job growth between 2015 and 2040.

Table 4: AMBAG Region Jobs by Major Industry (000s)

								Avg. Annual Growth Rate	
	2015	2020	2025	2030	2035	2040	2045	2015-2020	2015-2045
Agriculture	36,600	40,100	40,100	40,200	40,300	40,500	40,600	1.8%	0.3%
Manufacturing	17,700	19,700	19,800	19,900	20,000	20,100	20,200	2.2%	0.3%
Site-based Skilled Trade	38,100	42,900	43,700	44,900	45,600	46,600	47,700	2.4%	0.6%
Wholesale	30,600	33,300	32,800	33,200	33,500	33,800	34,100	1.7%	0.3%
Retail	43,300	42,100	42,200	42,500	43,000	43,500	44,000	-0.6%	0.0%
Financial and Professional Services	36,000	37,100	37,400	38,500	39,600	40,800	41,900	0.6%	0.4%
Education	27,100	29,900	30,100	30,700	31,400	32,200	33,100	2.0%	0.5%
Healthcare and Social Assistance	43,600	47,400	48,900	50,200	51,500	52,900	54,400	1.7%	0.6%
Other Services	61,900	68,500	69,100	71,200	73,200	75,200	77,300	2.0%	0.6%
Public	27,000	29,700	29,800	30,200	30,700	31,200	31,900	1.9%	0.4%
Self-employed	15,600	15,700	16,200	16,600	16,900	17,300	17,700	0.1%	0.3%
Total	377,300	406,300	410,000	418,100	425,800	434,100	442,800	1.5%	0.4%

Sources: Data for years 2015 from the California Employment Development Department, InfoUSA, and AMBAG. Forecast years were prepared by AMBAG and PRB.

Note: Parts may not sum to total due to independent rounding.

The industry-level trends in the AMBAG Region are as follows:

- Agricultural job growth has been strong for the past 10 years, and while the rate of growth is expected to slow, the region's agricultural industry will still grow faster than state or national projections.
- The region lost Manufacturing jobs during the recession, but recent years have seen a turnaround. Growth is expected to be slow but steady in future years.

- Site-based Skilled Trade (which includes construction) saw steep job losses during the recession and a bounce-back through 2019. Future growth is expected to be moderate.
- The Wholesale and Retail sectors both lost jobs in recession years, and retail has continued to decline. Growth is expected to remain low through the forecast.
- Financial and Professional Services is expected to grow at a moderate rate.
- Education has grown rapidly in recent years, but growth will likely slow as population growth slows.
- Healthcare and Social Assistance has seen steady growth, even in recession years. This is expected to continue as the population ages and demand for health services increases.
- Other Services (including hotels, restaurants, and personal services) lost jobs in the AMBAG region during the recession, but growth rebounded between 2010 and 2015. Growth is expected to be moderate in the future.
- The Public sector, locally, lost jobs between 2008 and 2013 as a result of the recession. Those losses began to reverse in 2014, and the sector is expected to see modest growth in the future.
- Self-employment tends to be counter-cyclical as people who lose their wage-and-salary job during a recession may turn to self-employment. Growth forecasts are based primarily on population growth.

Step 2: Population

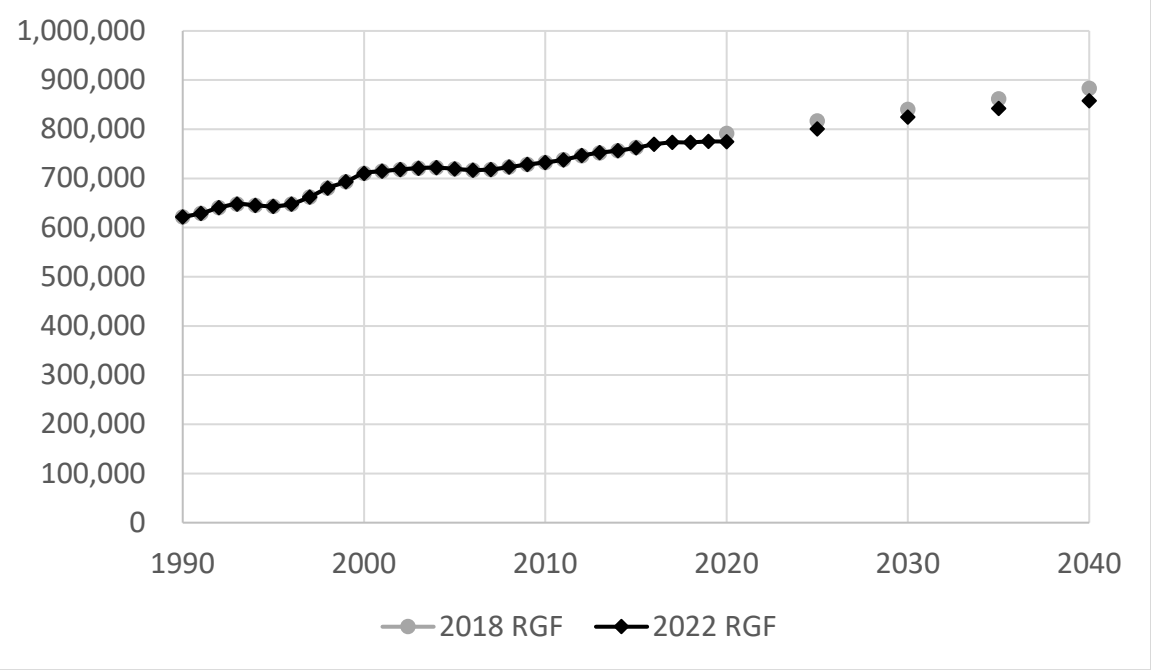
The region is projected to add approximately 107,500 people between 2015 and 2045, for an increase of 14 percent. The 2045 projected regional population of 869,776 is lower than the 883,300 residents projected for year 2040 in the 2018 RGF. (See Table 5 and Figure 6) This lower population forecast reflects slower growth than anticipated since the 2010 Census due to record low birth rates, stalled improvements in life expectancy, and lower migration rates. This slower growth in population is possible, despite faster growth in employment, due to changing unemployment and labor force participation rates.

Table 5: Comparison of Forecasts for Population

Forecast	2010	2015	2020	2025	2030	2035	2040	2045
2018 RGF	732,708	762,676	791,600	816,900	840,100	862,200	883,300	N.A.
% Change		4%	4%	3%	3%	3%	2%	N.A.
2022 RGF	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776
% Change		4%	2%	3%	3%	2%	2%	1%

Sources: Data for years 2010-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Figure 5: AMBAG Region Population Forecast



Sources: Data for years 1990-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Despite the lower population forecast, it is expected that AMBAG will continue to see population and housing growth associated with job growth outside of the region. In particular, job growth in Silicon Valley, combined with high housing prices, is expected to lead to an increase in the number of commuters to Bay Area jobs that live in the AMBAG region.

Method for Producing the Population Forecast

In preparing for this forecast, PRB tested a variety of methods for the population forecast, each of which produced similar results. (Findings are summarized in Attachment 3.) As a result of this review, PRB and AMBAG staff determined that the employment-driven population growth forecast model used in the 2014 RGF was suitable for the 2018 RGF.

Benchmark Population

All population projections are benchmarked to the 2010 Census counts which include people whose primary residence on "Census Day" (April 1, 2010) is within the region, regardless of citizenship status. It is recognized that the AMBAG region is home to a sizeable seasonal population (seasonal workers, who often work in agricultural occupations, and their families). Seasonal worker populations have

historically been found to be "hard to count" (HTC) in official statistics.[1] In an encouraging development, the 2010 Census was more effective than prior decennial census efforts in reaching, and enumerating, HTC areas. Specifically, "Census 2010 coverage of households in the HTC tracts in the San Joaquin Valley and Central Coast counties… was significantly improved from previous decennials," but some undercount remained a problem.[2]

The timing of data collection has also historically been a challenge for counting seasonal workers in the AMBAG region. Migratory workers are counted based on their location on Census Day. If the agricultural work cycle is in a lull in March and April, but ramps up at other times of the year, the worker population may be lower on Census Day than it is at other times of the year. However, it has been observed through informal surveys (i.e., for the AMBAG Regional Agricultural Vanpool Feasibility Study) that the seasonal population in the AMBAG region has been moving towards a trend of year-round residence, particularly with regard to agricultural jobs.

Given these two trends – better enumeration of HTC populations and a trend toward year-round residence – the seasonal population is increasingly likely to be counted in the decennial Census and in California Department of Finance demographic estimates. That said, seasonal workers who were not present on Census Day would not have been counted in the AMBAG region, and undercount remains a problem for seasonal populations, nationwide. Thus, to the extent that seasonal workers are present and counted in official statistics, they are also included in this forecast.

The AMBAG region population projections were benchmarked against prior decennial Census and employment data, and derived by anticipating that the regional population to job ratio will move in line with the statewide trend as it has in the past.

U.S., California and AMBAG Region Demographic and Economic Trends to 2045

The AMBAG region has an above-average share of residents who live in group quarters and are not tied to the regional job market. This trend has continued since 1990 although the mix of group quarters residents has changed. (See Figures 6 and 7.) Changes in group quarters population, such as growth at the region's universities, will play a role in regional growth through 2045.

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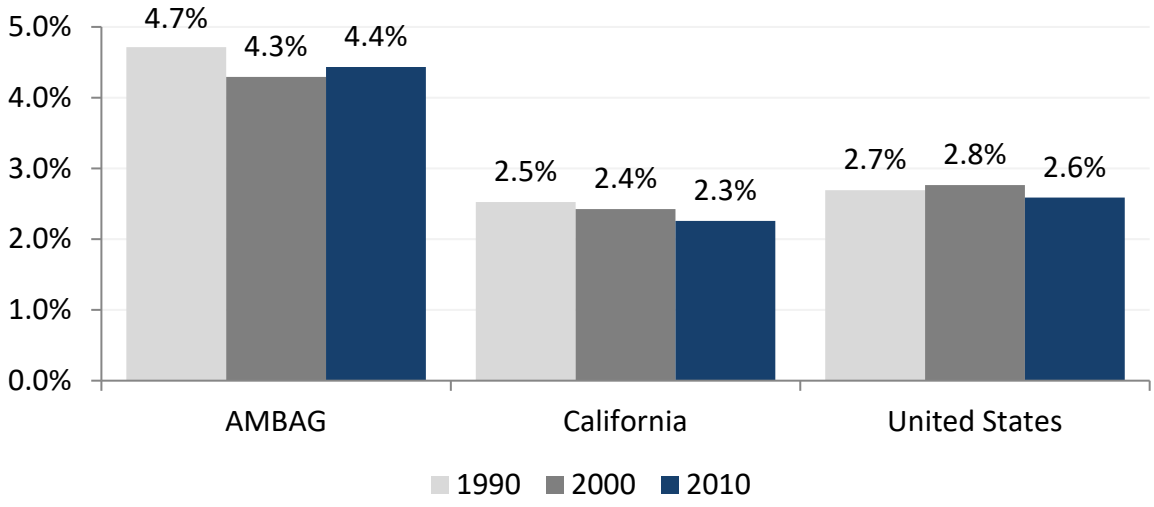
[1] U.S. General Accounting Office. "Key Efforts to Include Hard-to-Count Populations Went Generally as Planned; Improvements Could Make the Efforts More Effective for Next Census" (December 2010), accessed at http://www.gao.gov/new.items/d1145.pdf on October 4, 2016.
[2] California Rural Legal Assistance, Inc. "2010 Census Enumeration of Immigrant Communities in Rural California: Dramatic Improvements but Challenges Remain" (November 2010), accessed at http://www.crla.org/sites/all/files/content/uploads/Census/Census10-JBS-CRLA.pdf on October 4, 2016.

Figure 6: Group Quarters as a Percent of Population

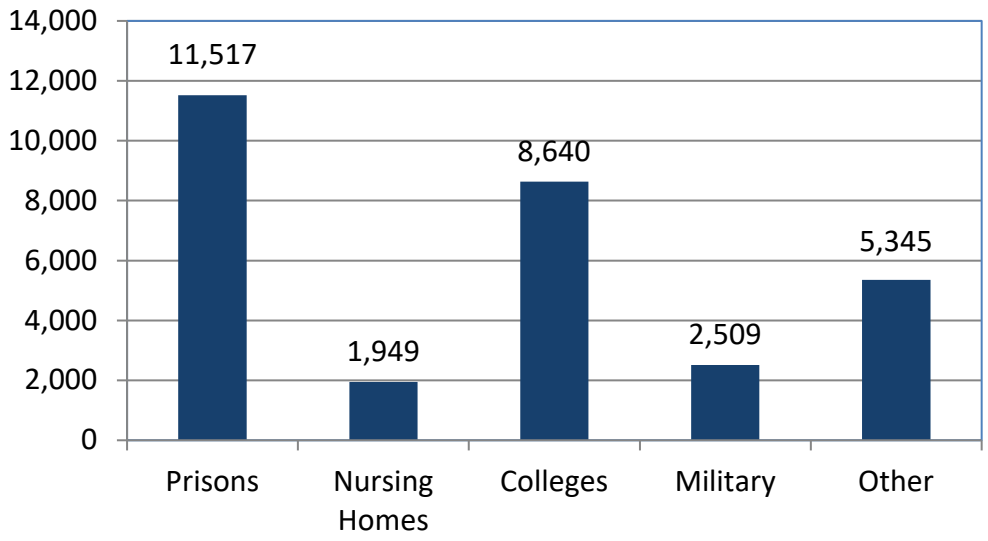


Sources: U.S. Census Bureau, California Department of Finance

In 1990 there was a substantial military group quarters presence around the Fort Ord base. Since then the military population has declined due to the closure of the base, but that group quarters population has been offset by an increase at colleges (primarily UC Santa Cruz and CSU Monterey Bay) and an increase in the state prison population. In future years it will be important to continue watching the development and growth of military institutions in the region. There is still a strong military and naval presence in Monterey County including the Presidio area as well as Fort Hunter Liggett in the southern portion of the County.[3]

[3] While Fort Hunter Liggett has a small permanent population, they are a large training facility and host a substantial amount of trainees every year. Not only will it be important to follow the FHL plans for expansion from a population perspective, but it will also be important to consider the presence of the FHL in transportation planning given the Fort's heavy reliance on Highway 101.

Figure 7: AMBAG Group Quarters Population in 2010

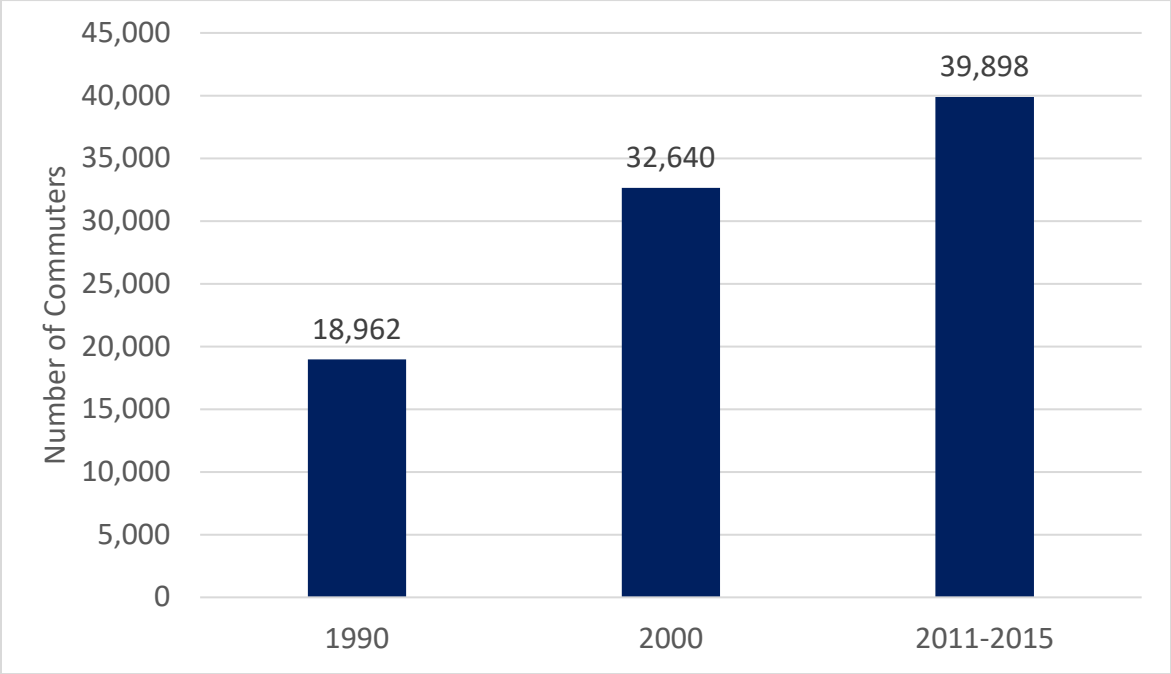


Source: U.S. Census Bureau, Census 2010

The AMBAG region, the state, and the nation all have about 2 residents per job, and that is expected to continue to 2045.

AMBAG residents commute to jobs outside the region, principally to jobs in Santa Clara County. This net out-commuting means there are residents in the region not connected to AMBAG region job growth. Net out-commuting surged between 1990 and 2000 as the “dot.com boom” pushed Silicon Valley (Santa Clara County) job levels higher, and has continued to rise as people to search for cheaper housing in portions of the AMBAG region. (See Figure 8.)

Figure 8: Net Out-Commuting from AMBAG Region



Sources: 1990 & 2000 - Census Journey to Work and 2011-2015 - American Community Survey Special Tabulations for the Census Transportation Planning Package.

AMBAG Region Forecast Population Trends

As described above (see Table 5), the region is projected to add approximately 2,700 residents per year between 2015 and 2045. This is less than the average of just under 8,900 between 1990 and 2000 and above the recession-affected growth of 2,200 between 2000 and 2010. Recent growth from 2015-2020 has averaged 2,500 per year, close to the projected long-term growth rate.

Step 3: Housing and Households

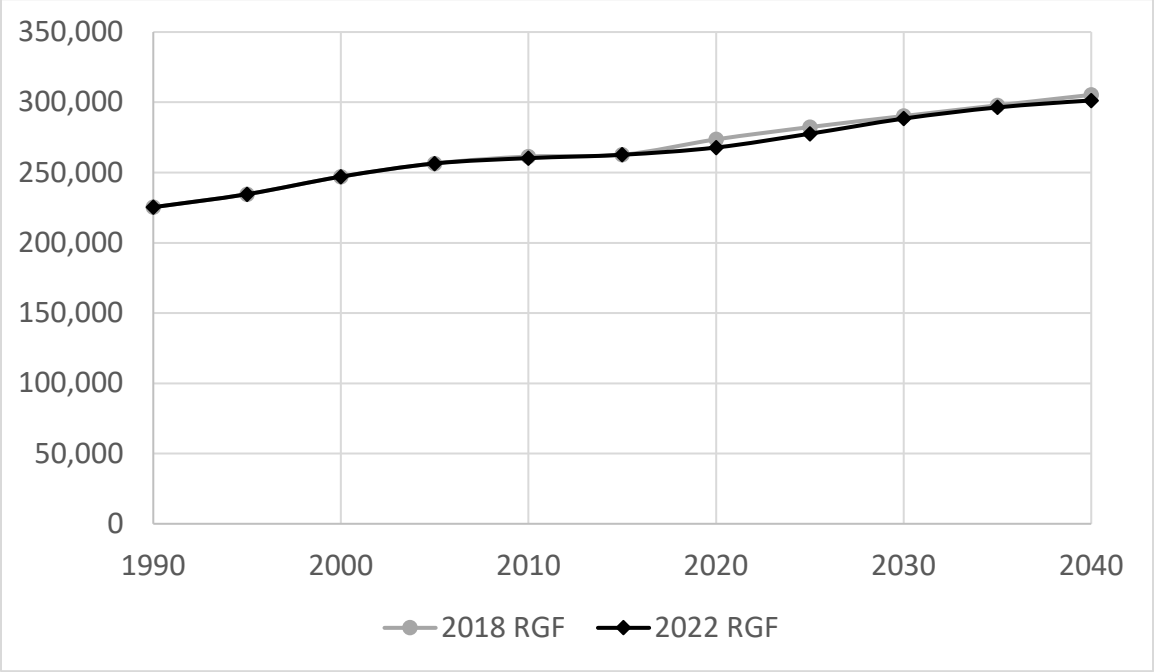
The region is projected to add approximately 42,200 housing units by 2045, for a total of approximately 304,900 for an increase of 16 percent. The 2045 projected regional housing stock of 304,900 is slightly higher than the 305,293 housing units projected for year 2040 in the 2018 RGF, reflecting slower population growth.

Table 6: Comparison of Forecasts for Housing

Forecast	2010	2015	2020	2025	2030	2035	2040	2045
2018 RGF	261,394	262,660	273,606	282,368	290,225	297,851	305,293	N.A.
% Change		0%	4%	3%	3%	3%	2%	N.A.
2022 RGF	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900
% Change		1%	2%	4%	4%	3%	2%	1%

Sources: Data for years 2010-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Figure 9: AMBAG Region Housing Forecast



Sources: Data for 1990-2020 from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Method for Producing the Housing Forecast

The housing forecast begins with a household forecast, and the household forecast is driven by demographic factors such as the size and structure of the population. Demographic factors (e.g., gender, age, and race/ethnicity) and external factors (e.g., major group quarters facilities like colleges and universities, correctional facilities, etc.) influence household population and household formation rates (i.e., the number of people per household). Household formation rates predict future demand for housing. That predicted demand, combined with expected vacancy rates, drives the forecast for housing growth.

AMBAG Region Forecast Housing Trends

As described above (see Table 5), the region is projected to add approximately 2,700 residents per year between 2015 and 2045. Taking average household size and vacancy rates into account, the resulting housing growth is expected to be just over 1,000 per year between 2015 and 2045. This is similar to the recent growth of 1,000 housing units per year between 2000 and 2015.

It is worth noting that several jurisdictions in the AMBAG region have historically had relatively high vacancy rates, reflecting a mix of vacation rentals and second homes, particularly in coastal

communities. In recent years, there is some evidence that more homeowners may be participating in the vacation rental market via platforms such as Airbnb and VRBO. It is unclear whether these new services will result in higher vacancy rates as more housing units become primarily vacation rentals or lower vacancy rates as short-term rental units shift demand away from units that are intended to be available for rental most (or all) of the year. AMBAG will continue to monitor this trend for future forecasts.

Section 3: Development of the Subregional Forecast

Following the preparation of the regional forecast figures, AMBAG staff began the process of disaggregating the figures to the county and city level using historical data. This section summarizes that process and the results.

Summary of the 2022 Subregional Forecast

The 2022 RGF projects that the region will add about 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. Of that growth, 58 percent (approximately 38,200 jobs) is expected to be in Monterey County, 7 percent (approximately 4,500 jobs) is expected to be in San Benito County and 35 percent (approximately 22,800 jobs) is expected to be in Santa Cruz County.

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. Of that growth, 57 percent (approximately 61,100 people) is expected to be in Monterey County, 23 percent (approximately 25,200 people) is expected to be in San Benito County and 20 percent (approximately 21,200 people) is expected to be in Santa Cruz County.

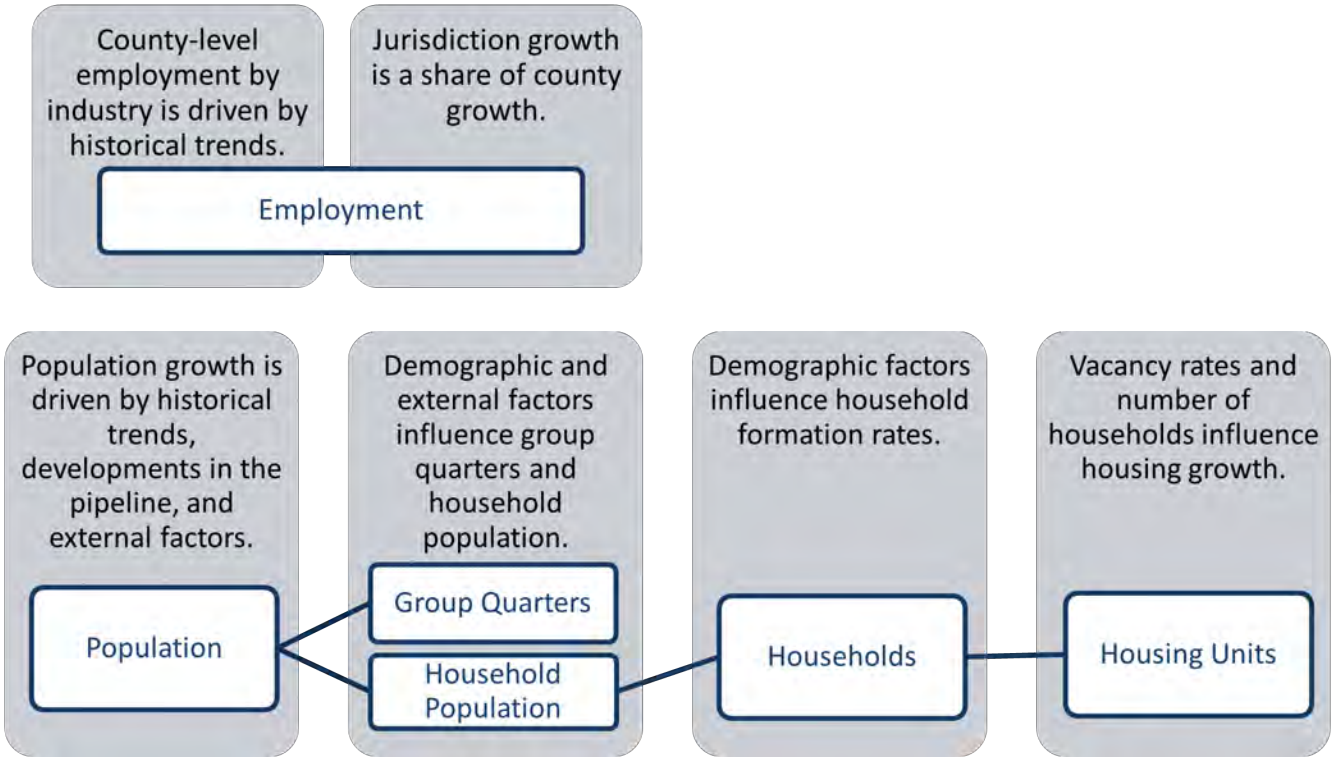
To house the region's expected population growth, this forecast shows an increase of just over 42,200 housing units by 2045, for a total of approximately 304,900 units. Of that growth, 62 percent (approximately 26,200 houses) is expected to be in Monterey County, 18 percent (approximately 7,500 houses) is expected to be in San Benito County and 20 percent (approximately 8,600 houses) is expected to be in Santa Cruz County. Housing growth rates do not exactly parallel population growth rates because of local variations in average household size and vacancy rate, and because some population (e.g., at UCSC and CSUMB) is expected to be housed in group quarters facilities.

Details of the population, housing, and job growth forecasts for each jurisdiction, as well as population and housing forecasts for the two universities, can be found in Attachment 5.

Subregional Allocation Methodology

Unlike the regional forecast, in which employment growth drives population and housing growth, the employment forecast is separate from the population and housing forecast in the subregional allocation. This separation reflects differing economic and demographic forces at the regional and local levels.

Figure 10: Subregional Allocation Process



1. Employment trends: Employment is measured as the number of jobs by place of work.
   For the county-level forecast, employment growth by industry is driven by historical trends (i.e., shift-share model). Total growth across the three counties is constrained by the region-level forecast. For each jurisdiction (cities and unincorporated balance of county), employment growth by industry is a constant share of the jurisdiction's parent county's growth in that industry.
2. Population trends: Population is the total resident population of the region.
   The jurisdiction level forecast is driven by three factors:
   a. Historical trends (i.e., shift-share model)
   b. Anticipated future developments such as housing projects under development that are likely to be occupied within the forecast horizon
   c. External factors (e.g., universities, military, correctional facilities)

Each county's population forecast is a sum of the jurisdiction-level forecasts. All levels (county, city, unincorporated area) are constrained by the region-level forecast.

3. Household Population and Group Quarters: Household population is the population that lives in a housing unit. Group quarters population is the population that lives in a group living arrangement such as a dorm, barracks, correctional institution, or congregate care facility. Demographic factors (e.g., age, race/ethnicity) and external factors (e.g., major group quarters facilities like colleges and universities, correctional facilities, etc.) influence the household population and household formation rates (i.e., the number of people per household).
4. Households/Occupied Housing Units: A household is a person, or group of people, living in a house. Because a household, by definition, occupies a housing unit, households are equivalent to and synonymous with occupied housing units.
   Household projections are driven by household formation rates. Household formation rates are calculated as the ratio of households divided by the household population. Household formation rates are the inverse of average household size.
5. Housing Units: Housing is the total number of housing units, including both occupied and vacant structures. Housing includes primary residences, second homes, accessory dwelling units, vacation rentals, farmworker housing, and any other habitable structure—including unauthorized units. The only type of dwelling excluded from the housing inventory is group quarters (dorms, barracks, congregate care, etc.).
   Housing projections are driven by the household population projection, demographic characteristics of the household population (age, sex, race/ethnicity), household formation rates, and housing vacancy rates. Vacancy rates are calculated as the share of all units (including vacation rentals, unauthorized dwellings, etc.) that are not currently occupied.

Data sources include the California Department of Finance, the California Employment Development Department, InfoUSA, and the U.S. Census Bureau.

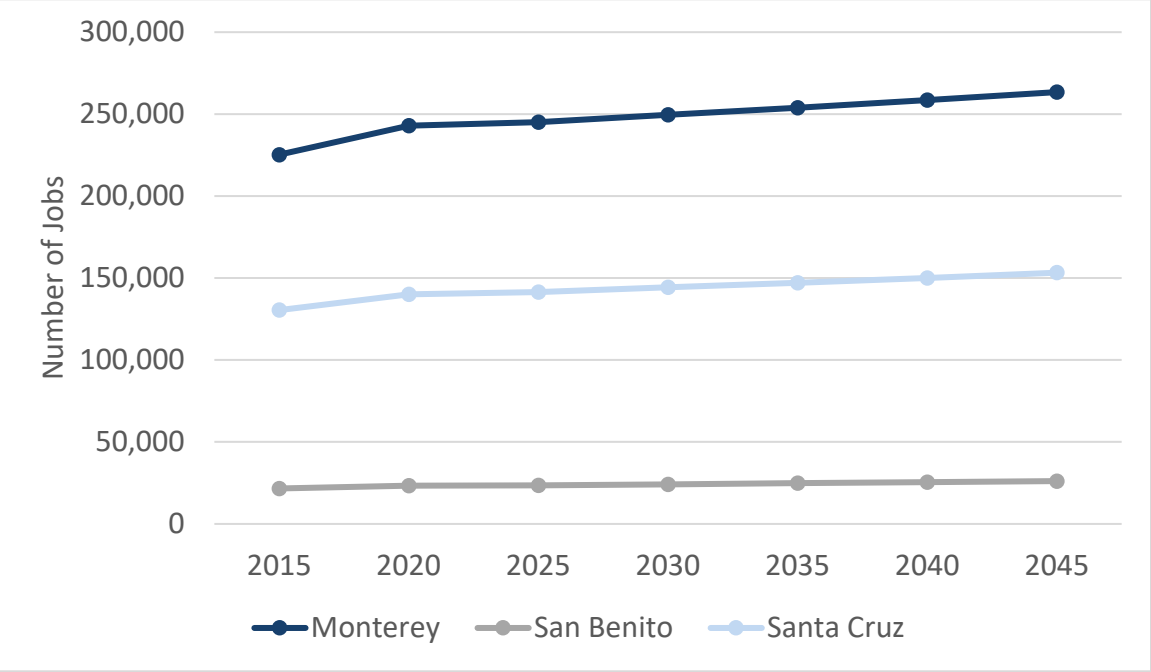
For more information on the definitions of housing and group quarters, see Attachment 4.

This process resulted in draft estimates at the jurisdictional level that were used for discussion purposes with staff at each of the cities and counties within the region. In addition to the cities and counties, staff met with the Local Agency Formation Commissions (LAFCOs) for each county, the Fort Ord Reuse Authority, the University of California, Santa Cruz (UCSC) and California State University, Monterey Bay (CSUMB) to discuss the results. Adjustments were made to the forecast based on these conversations to incorporate growth on the basis of planned developments, specific and General Plan research and economic development plans. The process of revision and meeting with local jurisdictions one-on-one was repeated several times to reach a consensus on the forecast.

Step 1: Employment

The 2022 RGF projects that the region will add about 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. Of that growth, 58 percent (approximately 38,200 jobs) is expected to be in Monterey County, 7 percent (approximately 4,500 jobs) is expected to be in San Benito County and 35 percent (approximately 22,800 jobs) is expected to be in Santa Cruz County.

Figure 11: Employment by County 2015-2045



Sources: California Employment Development Department, InfoUSA, AMBAG, forecast by PRB and AMBAG.

Method for Producing the County and Sub-County Employment Forecast

The subregional employment forecast incorporated a two-step process: a county-level forecast and a jurisdiction-level allocation.

In order to disaggregate the tri-county regional industry employment forecast by county, AMBAG staff selected what is known as a Classical Shift-Share model. The Classical Shift-Share formula is similar to the Implicit Shift-Share formula used to disaggregate the population forecast, except that it is comprised of three mathematical functions rather than two. In this case, they are referred to as the regional share, industry mix and competitive shift functions. The regional share function estimates what employment growth in a certain industry would look like in the local area (i.e., county) if it were to grow at the same rate as the total all-industry employment in the region as a whole. The second industry mix function then adjusts for the difference in the rate of employment growth in a certain industry, compared to all industry employment. The industry mix function is calculated using regional

employment values. The third function, known as the competitive shift, adjusts the estimate to account for faster or slower industry employment growth in the county, compared to the region.

Figure 12: Classical Shift-Share Equation

$$E_i^{t+n} = E_i^t \left[\frac{R_A^{t+n}}{R_A^t} + \left(\frac{R_i^{t+n}}{R_i^t} - \frac{R_A^{t+n}}{R_A^t} \right) + \alpha \left(\frac{E_i^t}{E_i^{t-m}} - \frac{R_i^t}{R_i^{t-m}} \right) \right]$$

E = local Value *R* = Regional Value

i = industry *A* = All industries

Sub-County Employment Database and Re-benchmarking

To produce the subregional employment component of the forecast and to support transportation modeling, AMBAG created an address-level database for all employers in the AMBAG region in 2015. The database combined industry employment data from the California Employment Development Department (EDD) with employer data from InfoUSA. The InfoUSA data are derived from dozens of sources including but not limited to postal records, white pages listings, new business registrations, utility connections, real estate data (deeds & assessments) and industry directories. The database is then verified and supplemented with regular phone surveys. InfoUSA database is used by many other regional Councils of Governments to conduct forecast work and is a reputable source of data.

Staff compared records from EDD with those from InfoUSA. Where both sources matched, one record was retained, unedited. Where records differed, staff conducted extensive research (using AMBAG's land use inventory, web-based investigation, and field research) to determine the proper industry code and employment level for the record and retained the most accurate record (typically the higher reported number). As a result of the editing and reconciliation process, the address-level inventory differs from EDD industry totals.

While there are differences across all industries, edits to agricultural records were extensive. Staff review of address-level records showed that many establishments listed as "agriculture" by EDD are, in the AMBAG region, engaged in food processing (manufacturing), storage (warehousing), or retail (farm stands). Agricultural recategorization is described in more detail in Attachment 2.

It is also important to note that the AMBAG estimate of agricultural jobs differs from estimates of the agricultural workforce (91,433 in 2016) described in "Farmworker Housing Study and Action Plan for Salinas Valley and Pajaro Valley." The reasons for this difference are both temporal and definitional. The industry estimates are annual-average estimates of jobs (a job is a paid position at a company) for 2015. The Farmworker Housing Study figures are 2016 estimates of all workers who were ever employed during the year, including those who worked part-time or part-year. If a company has high turnover or seasonal work, that company's number of workers (all year) would be higher than their average number of jobs. For example, if a company typically has 10 paid positions, but in peak season brings on another 10 for three months, the annual average number of jobs is 12.5 (10 x (9/12months) +

20 x (3/12months) = 12.5/month) but there were 20 unique workers at peak (original 10 plus additional 10).

Thus, in this case, the farmworker study estimates are higher than jobs estimates for three key reasons:

- Agricultural employment grew slightly between 2015 and 2016.
- Worker estimates take peak seasonal employment into account, while EDD industry estimates are annual averages.
- Some companies that identify as agricultural are more accurately classified as food processing (manufacturing), storage (warehousing), or retail (farm stands).

Sub-County Disaggregation Method for Employment

The address-level database, described above, was used to calculate the share of employment for each industry in each jurisdiction in 2015. This percent share was then carried forward to future years in order to calculate the number of jobs located in each jurisdiction by industry. While the County level totals use the Classical Shift-Share method as described above, the sub-county level forecast is a constant share approach. However, because the sub-county level forecasts are based on the County totals by industry the Classical Shift-Share method does influence the sub-county trends.

A preliminary draft forecast was distributed to planning staff at each jurisdiction. AMBAG staff held one-on-one meetings to gather comments and additional information from planning staff at each jurisdiction. (See Attachment 1 for a list of meeting dates, times, locations and attendees.) Staff then used economic studies, entitled development, the establishment of enterprise zones and other information from local planners to supplement the employment assumptions at the jurisdictional level. These comments and additional pieces of information were incorporated into the final forecast.

Table 7: Subregional Employment Forecast

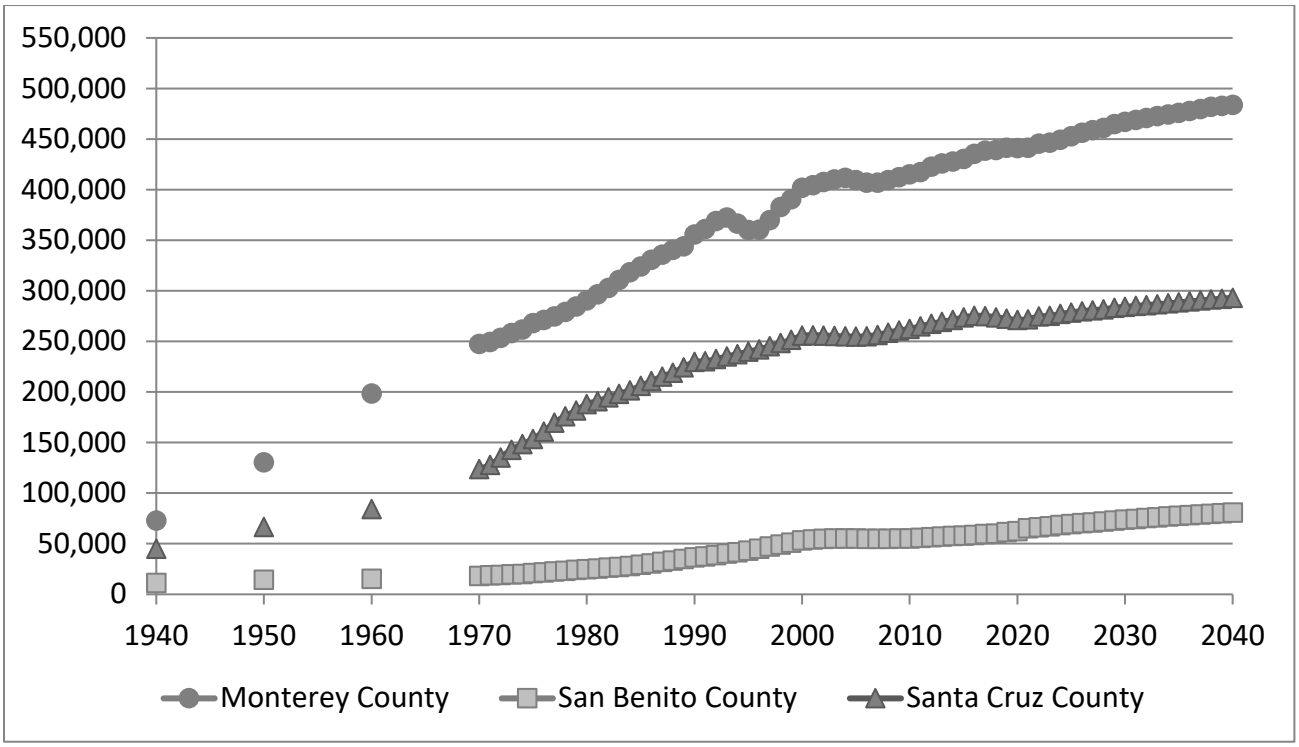
Geography	2015	2020	2025	2030	2035	2040	2045	Change 2015-2045 Numeric	Change 2015-2045 %
AMBAG Region	**377,335**	**406,280**	**410,017**	**418,132**	**425,845**	**434,147**	**442,824**	**65,489**	**17%**
Monterey County	**225,268**	**243,015**	**245,054**	**249,613**	**253,918**	**258,553**	**263,437**	**38,169**	**17%**
Carmel-By-The-Sea	3,353	3,566	3,593	3,674	3,752	3,833	3,915	562	17%
Del Rey Oaks	705	748	753	774	794	815	834	129	18%
Gonzales	5,764	6,326	6,382	6,533	6,660	6,788	6,920	1,156	20%
Greenfield	7,227	7,882	7,948	8,061	8,177	8,298	8,423	1,196	17%
King City	7,573	8,195	8,248	8,371	8,511	8,669	8,832	1,259	17%
Marina	6,107	6,548	6,621	6,765	6,899	7,055	7,217	1,110	18%
Monterey	38,133	40,989	41,527	42,506	43,452	44,465	45,509	7,376	19%
Pacific Grove	7,470	8,016	8,061	8,152	8,244	8,343	8,445	975	13%
Salinas	73,009	78,874	79,577	81,079	82,505	84,044	85,683	12,674	17%
Sand City	1,966	2,092	2,102	2,151	2,188	2,224	2,259	293	15%
Seaside	9,667	10,476	10,589	10,833	11,062	11,290	11,543	1,876	19%
Soledad	8,532	9,010	9,079	9,161	9,235	9,333	9,462	930	11%
Unincorporated	55,762	60,293	60,574	61,553	62,439	63,396	64,395	8,633	15%
San Benito County	**21,631**	**23,263**	**23,572**	**24,203**	**24,802**	**25,475**	**26,126**	**4,495**	**21%**
Hollister	14,428	15,492	15,728	16,207	16,655	17,121	17,613	3,185	22%
San Juan Bautista	515	557	569	580	588	603	612	97	19%
Unincorporated	6,688	7,214	7,275	7,416	7,559	7,751	7,901	1213	18%
Santa Cruz County	**130,436**	**140,002**	**141,391**	**144,316**	**147,125**	**150,119**	**153,261**	**22,825**	**17%**
Capitola	11,666	12,250	12,376	12,633	12,902	13,181	13,454	1,788	15%
Santa Cruz	40,840	43,865	44,317	45,594	46,863	48,203	49,636	8,796	22%
Scotts Valley	9,458	10,109	10,185	10,345	10,489	10,637	10,797	1339	14%
Watsonville	26,403	28,514	28,765	29,156	29,505	29,896	30,303	3,900	15%
Unincorporated	42,069	45,264	45,748	46,588	47,366	48,202	49,071	7,002	17%

Sources: Data for 2015 from InfoUSA and the California Employment Development Department. Forecast years were prepared by AMBAG and PRB.

Step 2: Population

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. Of that growth, 57 percent (approximately 61,100 people) is expected to be in Monterey County, 23 percent (approximately 25,200 people) is expected to be in San Benito County and 20 percent (approximately 21,200 people) is expected to be in Santa Cruz County.

Figure 13: Population in Monterey, San Benito and Santa Cruz Counties 1940-2045



Sources: Data for years 1940-2020 are from the U.S. Census Bureau and California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Table 8: Subregional Population Forecast

Geography	2015	2020	2025	2030	2035	2040	2045		%
AMBAG Region	**762,241**	**774,729**	**800,726**	**824,992**	**842,189**	**857,828**	**869,776**	**107,535**	**14%**
Monterey County	**430,310**	**441,143**	**452,761**	**467,068**	**476,028**	**483,884**	**491,443**		**4%**
Carmel-By-The-Sea	3,854	3,949	3,946	3,954	3,964	3,974	3,984	130	3%
Del Rey Oaks	1,663	1,662	1,693	1,734	1,859	2,330	2,650		9%
Gonzales	8,441	8,506	9,650	13,492	14,630	15,398	15,711	7,270	86%
Greenfield	17,172	18,284	19,342	19,734	19,961	20,202	20,433		9%
King City	13,736	14,797	15,376	16,101	16,689	16,881	17,064	3,328	24%
Marina	21,057	22,321	23,723	25,126	26,713	28,433	30,044		3%
Marina balance	20,037	21,371	22,293	22,841	23,238	23,768	24,237	4,200	21%
CSUMB (portion)	1,020	950	1,430	2,285	3,475	4,665	5,807		9%
Monterey	28,086	28,170	28,044	28,650	29,032	29,342	29,639	1,553	6%
Monterey balance	24,095	24,749	24,623	25,229	25,611	25,921	26,218		9%
DLI & Naval Postgrad	3,991	3,421	3,421	3,421	3,421	3,421	3,421	-570	-14%
Pacific Grove	15,460	15,265	15,290	15,395	15,530	15,676	15,817		2%
Salinas	158,059	162,222	166,226	170,459	173,393	175,358	177,128	19,069	12%
Sand City	361	385	430	516	756	1,012	1,198		2%
Seaside	33,815	33,537	34,497	35,107	35,634	36,582	38,316	4,501	13%
Seaside balance	25,835	26,345	27,285	27,850	28,317	29,205	30,881		0%
Fort Ord (portion)	4,163	3,083	3,083	3,083	3,083	3,083	3,083	-1080	-26%
CSUMB (portion)	3,817	4,109	4,129	4,174	4,234	4,294	4,352		4%
Soledad	24,597	25,301	26,112	26,824	27,697	28,419	29,133	4,536	18%
Soledad balance	16,298	17,190	18,001	18,713	19,586	20,308	21,022		9%
SVSP & CTF	8,299	8,111	8,111	8,111	8,111	8,111	8,111	-188	-2%
Unincorporated	104,009	106,744	108,432	109,976	110,170	110,277	110,326		6%
Unincorp balance	101,468	104,203	105,891	107,435	107,629	107,736	107,785	6,317	6%
CSUMB	2,541	2,541	2,541	2,541	2,541	2,541	2,541		0%
San Benito County	**58,138**	**62,353**	**69,324**	**73,778**	**77,638**	**80,788**	**83,366**	**25,228**	**43%**
Hollister	37,314	40,646	42,604	43,327	44,421	45,345	45,599		2%
San Juan Bautista	1,945	2,112	2,269	2,315	2,374	2,410	2,436	491	25%
Unincorporated	18,879	19,595	24,451	28,136	30,843	33,033	35,331		7%
Santa Cruz County	**273,793**	**271,233**	**278,641**	**284,146**	**288,523**	**293,156**	**294,967**	**21,174**	**8%**
Capitola	10,224	10,108	10,485	10,794	10,957	11,049	11,126		9%
Santa Cruz	64,223	64,424	68,845	72,218	75,257	78,828	79,534	15,311	24%
Santa Cruz balance	46,947	45,324	47,845	49,118	49,957	50,828	51,534		0%
UCSC	17,276	19,100	21,000	23,100	25,300	28,000	28,000	10,724	62%
Scotts Valley	11,946	11,693	11,718	11,837	11,867	11,868	12,010		1%
Watsonville	52,410	51,515	52,918	54,270	55,138	55,786	56,344	3,934	8%
Unincorporated	134,990	133,493	134,675	135,027	135,304	135,625	135,953		1%

Sources: Data for 2015-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Method for Producing the County and Sub-County Population Forecast

In order to disaggregate the tri-county regional population forecast, PRB and AMBAG implemented the Implicit Shift-Share method. This particular technique was chosen because it provides a relatively simple, yet rigorous, method for estimating the future geographic distribution of the regional population based on historic estimates of local and regional population growth.

The Implicit Shift-Share formula is comprised of two distinct mathematical functions. These are sometimes known as the regional share and the local shift. The regional share function calculates what the total population growth in the local area (i.e., a city or county) would be if that area were to grow at the same rate as the region as a whole. The second function then adjusts for historic changes in the local area's share of the total regional population. Combined with an accurate estimate of the size of the base population obtained from the 2010 Decennial Census, the regional share and local shift functions provide a reasonable estimate of the future local area population, taking into account past changes in the percentage share of the regional population. Historical data are from the Department of Finance. The Department of Finance does benchmark their historical estimates to the Decennial Census for 1990, 2000 and 2010.[4]

Figure 14: Implicit Shift-Share Equation

$$E^{t+n} = E^{t}\left(\frac{R^{t+n}}{R^{t}}\right) + \alpha R^{t+n}\left(\frac{E^{t}}{R^{t}} - \frac{E^{t-m}}{R^{t-m}}\right)$$

E = Local Value *R* = Regional Value

To produce jurisdiction-level forecast, AMBAG and PRB compiled a database of historical population by jurisdiction. This database included information on population growth (or decline) as well as details for "special" populations (e.g., college students, military personnel, prisoners). (Special populations are described in more detail in the section "Adjustments for Special Populations," below.)

AMBAG and PRB compiled historical data[5] to track trends in, and relied upon institutional/facility plans to produce the population forecast for the following areas:

- Marina:
    - Fort Ord (portion)

[4] Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000, August 2008; Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2010, September 2011 and Department of Finance, E-1 Population Estimates for Cities, Counties and the State, 2011 and 2012, August 2009.
[5] Sources include the California Department of Finance, U.S. Census Bureau and institutional records.

    - CSUMB (portion)
- Monterey
    - Defense Language Institute and Naval Postgraduate School
- Seaside
    - Fort Ord (portion)
    - CSUMB (portion)
- Soledad
    - SVSP & CTF
- Balance of County
    - CSUMB (portion)
- Santa Cruz
    - UCSC

AMBAG and PRB then applied the implicit shift-share methodology to the balance of population in each jurisdiction to produce a draft of the first forecast increment. The benchmark period for the shift-share model was 2010-2015, and the model was applied to produce the draft forecast.

Forecast years, for this initial draft, presumed that each jurisdiction maintained a constant share of the region's population. This approach, using shift-share for the first increment, and constant-share thereafter, was implemented in the 2014 RGF and 2018 RGF to ensure that jurisdictions that experienced population loss during the benchmark period would not continue to decline. This forecast assumption is reasonable given that any jurisdiction may experience a period of temporary population decline, even when the long-term trend has been stability or growth.

Further initial adjustments were made to reflect population growth associated with housing under construction or in the permit pipeline.

AMBAG staff then met with representatives from each jurisdiction to ground truth the forecast with respect to anticipated future growth and development in the pipeline. (See Attachment 1 for a full list of meetings.)

Step 3: Housing

To house the region's expected population growth, this forecast shows an increase of just over 42,200 housing units by 2045, for a total of approximately 304,900 units. Of that growth, 62 percent (approximately 26,200 houses) is expected to be in Monterey County, 18 percent (approximately 7,500 houses) is expected to be in San Benito County and 20 percent (approximately 8,600 houses) is expected to be in Santa Cruz County. Housing growth rates do not exactly parallel population growth rates because of local variations in average household size and vacancy rate, and because some population (e.g., at UCSC and CSUMB) is expected to be housed in group quarters facilities.

Table 9: Subregional Housing Forecast

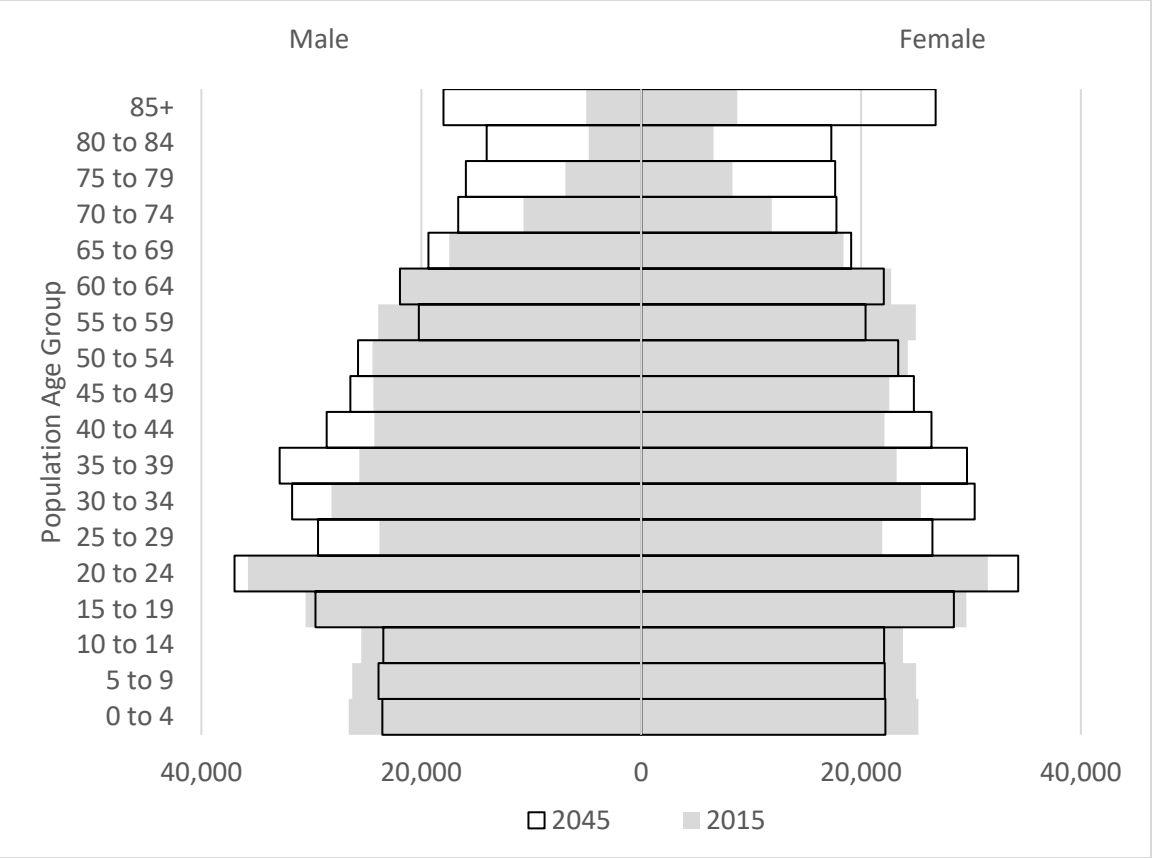
Geography	2015	2020	2025	2030	2035	2040	2045	Change 2015-2045 Numeric	Change 2015-2045 %
AMBAG Region	**262,660**	**267,812**	**277,645**	**288,386**	**296,352**	**301,307**	**304,900**	**42,240**	**16%**
Monterey County	**139,177**	**141,764**	**146,716**	**153,852**	**159,100**	**162,612**	**165,328**	**26,151**	**19%**
Carmel-By-The-Sea	3,417	3,437	3,437	3,442	3,450	3,453	3,459	42	1%
Del Rey Oaks	741	741	762	809	848	1,052	1,195	454	61%
Gonzales	1,987	1,987	2,399	3,630	4,182	4,474	4,626	2,639	133%
Greenfield	3,794	3,981	4,359	4,766	5,047	5,164	5,238	1,444	38%
King City	3,283	3,432	3,672	4,002	4,282	4,356	4,403	1,120	34%
Marina	7,334	7,784	8,277	8,837	9,265	9,521	9,693	2,359	32%
Marina balance	7,334	7,784	8,277	8,832	9,205	9,445	9,617	2,283	31%
CSUMB (portion)	0	0	0	5	60	76	76	76	--
Monterey	13,637	13,705	13,705	13,920	14,209	14,402	14,549	912	7%
Monterey balance	13,205	13,273	13,273	13,488	13,777	13,970	14,117	912	7%
DLI & Naval Postgrad	432	432	432	432	432	432	432	0	0%
Pacific Grove	8,184	8,201	8,214	8,267	8,336	8,400	8,463	279	3%
Salinas	43,001	43,411	45,552	48,673	50,968	52,229	53,150	10,149	24%
Sand City	176	189	198	228	333	446	526	350	199%
Seaside	10,913	10,920	11,437	11,925	12,248	12,604	13,192	2,279	21%
Seaside balance	8,908	8,942	9,429	9,888	10,190	10,531	11,107	2,199	25%
Fort Ord (portion)	1,119	1,119	1,119	1,119	1,119	1,119	1,119	0	0%
CSUMB (portion)	886	859	889	918	939	954	966	80	9%
Soledad	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1,499	38%
Soledad balance	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1,499	38%
SVSP & CTF	0	0	0	0	0	0	0	0	--
Unincorporated	38,783	39,839	40,271	40,620	40,908	41,271	41,408	2,625	7%
Unincorp balance	38,783	39,839	40,238	40,569	40,592	40,616	40,616	1,833	5%
CSUMB	0	0	33	51	316	655	792	792	--
San Benito County	**18,262**	**19,913**	**21,721**	**23,333**	**24,773**	**25,452**	**25,775**	**7,513**	**41%**
Hollister	10,757	11,917	12,501	13,177	13,701	14,054	14,122	3,365	31%
San Juan Bautista	750	819	878	918	951	965	975	225	30%
Unincorporated	6,755	7,177	8,342	9,238	10,121	10,433	10,678	3,923	58%
Santa Cruz County	**105,221**	**106,135**	**109,208**	**111,201**	**112,479**	**113,243**	**113,797**	**8,576**	**8%**
Capitola	5,537	5,554	5,786	5,970	6,009	6,017	6,017	480	9%
Santa Cruz	23,535	23,954	24,988	25,578	25,974	26,295	26,525	2,990	13%
Santa Cruz balance	23,005	23,424	24,422	24,970	25,342	25,663	25,892	2,887	13%
UCSC	530	530	566	608	632	632	633	103	19%
Scotts Valley	4,691	4,739	4,798	4,846	4,869	4,887	4,930	239	5%
Watsonville	14,131	14,226	14,829	15,629	16,108	16,347	16,519	2,388	17%
Unincorporated	57,327	57,662	58,807	59,178	59,519	59,697	59,806	2,479	4%

Sources: Data for 2015-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Method for Producing the County and Sub-County Housing Forecast

In order to convert county level population forecast figures into the forecast of housing units, staff created a set of demographic profiles that describe the age, sex, race, and ethnicity characteristics of the future population. The basis for the demographic profiles is a set of detailed population projections developed by the California Department of Finance in 2019.[6] The profiles were developed by calculating the share of total projected population within each county that may be attributed to each age, sex, race and ethnic category. The population age distribution for the AMBAG Region is shown in Figure 15 below. County-specific demographic patterns from the Department of Finance forecast were applied to AMBAG-projected total population for each county.

Figure 15: Population Size and Age Structure of AMBAG Region in 2015 and 2045



Source: 2015 data from the California Department of Finance, 2045 data from AMBAG and PRB.

[6] In January 2020, DOF published State and County Population Projections. These have not been re-benchmarked to the 2020 Census.

The first step toward translating the county demographic projections into forecasted housing was to subtract the group quarters population from the total population. (For an explanation of Group Quarters, see Attachment 4.) Staff calculated a set of group quarters rates by dividing the group quarters population in each age, sex, race and ethnic category as provided by the 2010 Census[7] by the total 2010 age, sex, race and ethnic population in each county. The team then updated these 2010 rates to reflect 2020 population and group quarters population estimates from the Department of Finance. In order to estimate the group quarters population in each county, staff multiplied the group quarters rates within each category by the total population in each category. This population was then removed from the total population to provide an estimate of the number of people living in households, by demographic subgroup.

Next, to generate estimates of the total number of households in each county, staff calculated a set of head of householder rates. These also are frequently referred to as “headship rates” or “household formation rates.” As with the group quarters rates, these are derived from 2010 Census data.[8] To generate the head of householder rates, staff divided the 2010 estimates of the number of individuals within each age, race and ethnic category who were reported to be the head of a household by the total number of individuals within each age, race, and ethnic population category less the group quarters population.[9] By multiplying the base-year household population estimates for each category by the head of householder rates, staff derived a new set of head of household estimates, which were controlled to published data from the California Department of Finance. Note that for each head of household there is, by definition, one household. Thus, by adding up all of the head of householders, the staff was able to generate estimates of the total number of households within each county.[10]

Finally, vacant units were added to the total number of households in order to obtain an estimate of housing units. Vacancy data was obtained from the U.S. Census Bureau for 1990, 2000 and 2010, and

[7] U.S. Census Bureau, 2010 Decennial Census, Summary File 1, Table QTP-12.
[8] U.S. Census Bureau, 2010 Decennial Census, Summary File 2, Table PCT-12.
[9] The householders data for the "Some other race alone, not Hispanic or Latino" and "Native Hawaiian and Other Pacific Islander alone, not Hispanic or Latino" categories of population in San Benito County was suppressed because there was not a population of greater than 100. For these ethnic categories the regional rate was used instead given the lack of data on this population.
[10] The Census does include "second dwelling units" or accessory units within their counts of households if the unit has its own bathroom and kitchen facilities. However, there are likely illegal "granny units" that are not counted through this process.

from the Department of Finance for intercensal years.[11] To better understand what a normal housing vacancy rate might be, staff reviewed historical data on residential vacancy for the last two decades. Once a vacancy rate was established, this was used to calculate the total number of vacant housing units (the number of occupied units being equal to the number of households). By adding together estimates of the total number of vacant and occupied housing units, staff derived estimates of the total housing stock within each county.

Forecasting Sub-County Population, Households and Housing Units

To derive a city-level forecast of population, household population, households, and housing units, staff used a simplified version of the methodology described above. The MPO is not required to develop detailed demographic characteristics for city-level estimates. As such the household and housing unit conversion was done using aggregate group quarters and household formation rates for each city, as reported in the 2010 Census and with trends through 2020 from the Department of Finance.[12] Vacancy rates were derived from a 30-year average as reported by the Department of Finance.[13] The Department of Finance does benchmark their estimates to the decennial Census.

Some of the jurisdictions within the region show a declining population over the last 10 to 20 years. Because the Implicit Shift-Share method was used for projecting 2025 population and the method reflects the change in population over time, for those jurisdictions that have experienced population decline there would be a continuation of that decline reflected for the year 2025. Instead of showing a decline, the 2025 share of the regional population calculated for these jurisdictions was held constant. This has the effect of showing an increase in population to 2025 even if recent trends were toward population decline. There is too little information to know whether short-term declines will continue, so instead of assuming continual decline, growth was held at a constant. AMBAG will continue to monitor these trends.

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[11] Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000, August 2008; and Department of Finance, E-5 Population and Housing Estimates for Places, 2001-2010, with 2000 Benchmark, September 2011.
[12] U.S. Census Bureau, 2010 Decennial Census, Summary File 1, Tables QTP-12 and PCT-12.
[13] Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000, August 2008; Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2010, September 2011 and Department of Finance, E-5 Population Estimates for Cities, Counties and the State, 2010-2016, July 2016.

Section 4: Demographic History of the AMBAG Region

The AMBAG region grew at a faster rate than California in the 1960s and 1970s and grew at approximately the same rate as the state in the 1980s (24% in AMBAG region, 26% statewide). Both the state and the AMBAG region grew at the same rate in the 1990s (14%). The AMBAG region's growth fell far below the statewide average between 2000 and 2010, increasing by only three percent while the state grew by 10 percent. From 2010 to 2020 both the state and the AMBAG region grew at similar rates (7% and 6%, respectively).

AMBAG Region: 1970 to 1990

Between 1970 and 1990 the AMBAG region population grew by more than 110,000 each decade, increasing by 29 percent from 1970 to 1980 and by 24 percent from 1980 to 1990. Growth slowed in the 1990s. The slowdown can be attributed, in part, to the closure of Fort Ord in 1994, which is described in more detail in the "Adjustments" section, below. These population losses greatly affected the growth rates of the communities of Marina and Seaside prior to 2000. Concurrent civilian job losses affected population growth in the AMBAG region more broadly. The AMBAG region population grew by 88,500 (14%) between 1990 and 2000.

AMBAG Region: 2000 to 2010

In the following decade, population growth slowed considerably. The AMBAG region population grew by only 22,100 (3%) during the decade between 2000 and 2010. This pattern of slowing population growth reflects an aging population and lower net migration into the AMBAG region. Lowered net migration could be due to several factors including but not limited to water resource constraints, the after-effects of the closure of Fort Ord, as well as increasing housing costs followed by a major recession.

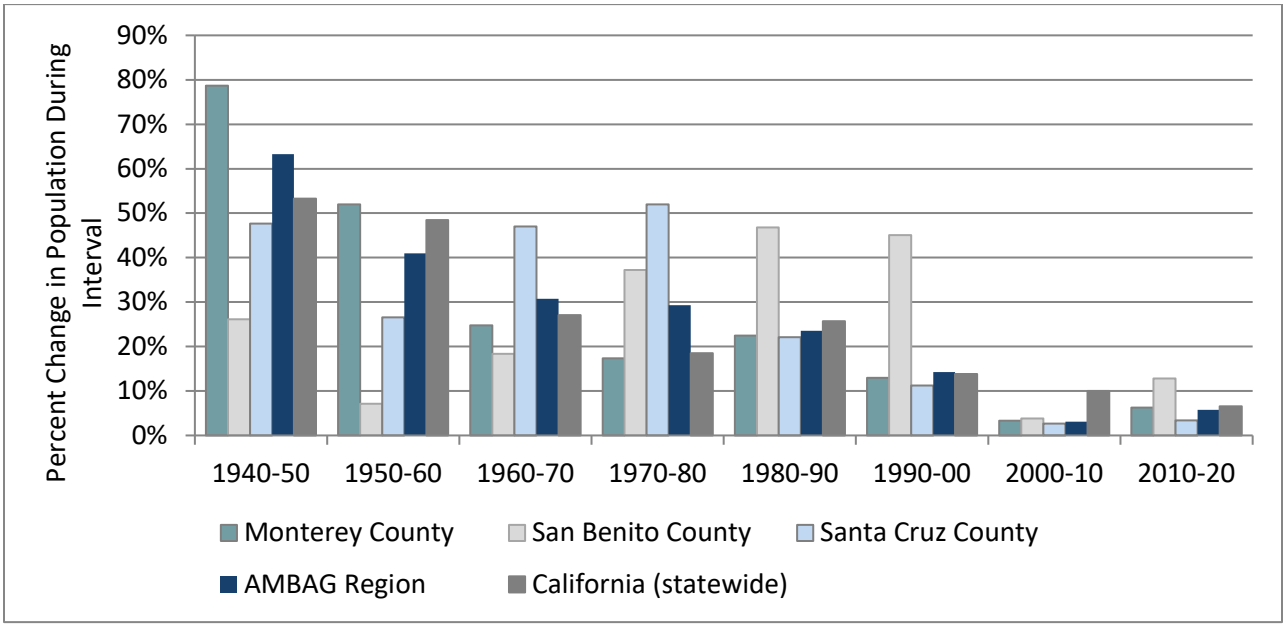
AMBAG Region: 2010 to 2020

In the five years since the decennial census, population growth began to return to historical levels. The AMBAG region population grew by just over 42,000 (6%) during the period between 2010 and 2020. This recovery in population growth reflects post-recession recovery.

Demographic History of AMBAG Counties

Population growth details for all three counties are shown below. County-specific summaries follow the charts.

Figure 16: Population Growth Rates in Monterey County, San Benito County, Santa Cruz County, AMBAG Region and California (statewide) 1940-2020



Source: California Department of Finance

Monterey County

Between 1960 and 2000, Monterey County has grown at a rate slower than the AMBAG region as a whole. From 2000-2010 and 2010-2020 Monterey County grew at the same rate in the region. (See Figure 16, above.)

As a result of the closure of Fort Ord, Monterey County experienced a population decline in the middle of the 1990s, yet population growth rebounded later in the decade. The county registered 13 percent growth (an increase of 46,100) between 1990 and 2000. (See Figures 2 and 3)

The 1990s also saw the opening of two large institutions: California State University, Monterey Bay and Salinas Valley State Prison. Both are described in more detail in the Special Populations section below.

While the County as a whole grew, six of the county's thirteen jurisdictions experienced population loss during the 1990s (Carmel-By-The-Sea, -4%; Del Rey Oaks, -1%, Marina, -29%, Monterey, -7%, Pacific Grove, -4%, Seaside, -15%). Conversely, the population of Salinas grew by nearly 34,000 during the decade. Soledad also grew at a rapid clip (16,000 population) largely as the result of Salinas Valley State Prison opening in 1996.

The following decade saw much slower growth, with an increase of less than 13,300 (3%) between 2000 and 2010. Five jurisdictions lost population (Carmel-By-The-Sea, -9%; Del Rey Oaks, -2%,

Monterey, -6%, Pacific Grove, -3%, unincorporated Monterey County, -1%). The city of Seaside remained virtually unchanged.

From 2010 to 2020, the cities of Greenfield, King City, Marina, and Sand City all had estimated growth of greater than 10 percent. Only the city of Soledad is estimated to have lost population.

San Benito County

While San Benito County grew at a rate much slower than the AMBAG region prior to the 1970s, the county saw rapid population growth in the 1970s, 1980s, and 1990s, a dip in the early 2000s, and a return to rapid growth 2010-2020. (See Figure 16, above.)

San Benito County registered rapid population growth, adding more than 16,500 population (45%) between 1990 and 2000. During this decade the city of Hollister nearly doubled in population (78%) while the population of San Juan Bautista declined (-1%).

San Benito's population growth slowed to four percent (2,000 population) between 2000 and 2010. The trend of the 1990s was reversed. Hollister grew by only one percent while San Juan Bautista increased by 20 percent.

From 2010 to 2020 San Benito County grew faster than the region, with Hollister and San Juan Bautista growing by 16% and 13%, respectively.

Santa Cruz County

Santa Cruz County grew at a rate faster than the AMBAG region in the 1960s and 1970s, but grew more slowly in every other decade from 1940-2020. (See Figure 16, above.)

Santa Cruz County grew by more than 25,800 (11%) between 1990 and 2000. The fastest-growing jurisdiction in Santa Cruz County between 1990 and 2000 was Watsonville (42%) followed by Scotts Valley (31%). Capitola's population fell during the decade (-1%).

The County's growth slowed considerably, adding just under 6,800 population (3%) between 2000 and 2010. The fastest-growing jurisdiction in Santa Cruz County between 2000 and 2010 was Watsonville (16%, including the annexation area, 11% without) followed by Santa Cruz (10%). Scotts Valley, which grew rapidly during the 1990s, showed only two percent population growth during the decade. Capitola's population fell during the decade (-1%).

In recent years, no jurisdiction in Santa Cruz has grown by more than 10 percent. The fastest growing city, Santa Cruz, grew by 7% between 2010 and 2020.

Adjustments for Special Populations

In small area demographic analysis, some populations grow or decline as a result of exogenous factors, rather than in response to demographic or economic conditions. For example, uniformed military populations, college populations, and prison populations may grow or decline as new facilities are added or older facilities are phased out of use. These population changes involve facilities that are outside the authority of local land use agencies and that change based on policy, rather than demographic, factors.

Changes in these facilities can result in population "shocks" that affect the rate of population change within an area, independent of larger demographic and economic trends.

As a result of their unique characteristics, these populations are referred to as "special populations" and are often treated separately in forecasting.

Special populations include people associated with military bases, tourists, prisons, and colleges and universities. The size of a special population may have no connection to the general trends affecting the area. A special population can be stable for long periods of time, balloon quickly, and deflate, or, in the case of military bases, disappear rapidly through a closure program. It is best to develop a detailed understanding of the nature of the special population and set out the projection for it separately.[14]

Over the past two decades, the AMBAG region has been home to several "special populations" including the military resident population at Fort Ord, the Defense Language Institute and Naval Postgraduate School, students at UCSC and CSUMB, and inmates at SVSP.

In the preliminary forecast, AMBAG staff began the shift-share analysis at 1996 to address the population "shocks" resulting from the closure of Fort Ord and the opening of both California State University Monterey Bay and the Salinas Valley State Prison. While this adjustment was effective at addressing some of the special population concerns, it has a key weakness: it does not allow for independent forecasting of special populations.

The following discussion provides a method for addressing that issue.

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[14] Merc, Stuart. "Projections and Demand Analysis." Planning and Urban Design Standards. published by the American Planning Association. Sept 2012. http://books.google.com/books?id=NXpncFYj73QC&pg=PA299&lpg=PA299&dq=%22special+population%22+forecasting&source=bl&ots=L2fSbUMT8R&sig=uV05NN3-rNYcpCr97xU2hTpYt6s&hl=en&sa=X&ei=eEC5UMT8O42tqAGAvIDQCQ&ved=0CG0Q6AEwCQ#v=onepage&q=%22special%20population%22%20forecasting&f=false

History of Special Populations in the AMBAG Region

Fort Ord

Established in 1917, Fort Ord was eliminated during the Base Realignment and Closure Act of 1990, closing in 1994. This resulted in the loss of more than 30,000 residents in Monterey County, primarily in the jurisdictions of Marina and Seaside, as described in the Fort Ord Reuse Plan:

> *Fort Ord has been a significant presence in Monterey County since 1917… maintained a large military population numbering approximately 14,500 military personnel and 17,000 family members of active-duty personnel… the resident population of Fort Ord totaled 31,270 in 1991.*[15]

In addition…

> *The on-post resident population was divided between the two municipalities of Marina and Seaside. Through 1990, 17,139 people (56%) were within the Seaside city limits and 13,321 people (44%) were within the Marina city limits (Harding Lawson Associates, 1991, Workplan remedial investigation/feasibility study, Fort Ord, CA).*[16]

These population losses greatly affected the communities of Marina and Seaside. However, the forecast was developed using the 2000 to 2015 time period as a historical reference. By 2000 abnormalities in growth rates caused by the closure of Fort Ord had self-corrected. The Fort Ord Reuse Authority's mandate for overseeing the area ended in June 2020. Beginning with the 2022 RGF, the area will be projected as any other potential development in the AMBAG region, based on plans and permits.

Defense Language Institute and Naval Postgraduate School

The Army Language School, later renamed the Defense Language Institute, has been a presence in Monterey County since the end of World War II. The number of people living in group quarters at the Institute and Postgraduate School has been stable, at approximately 4,000, in recent years. Because of this stability, the 2018 RGF presumes no change to the population of these two institutions in future years.

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[15] Fort Ord Reuse Plan, Volume 1: Context and Framework. June 1997.
[16] Fort Ord Reuse Plan, Volume 2: Reuse Plan Elements. June 1997.

University of California, Santa Cruz

Founded in 1965, the University of California, Santa Cruz grew to 9,800 students by the 1991-92 academic year, 10,885 students by the 1999-2000 academic year, and 16,300 full-time equivalent students in the 2009-2010 academic year.[17] In meetings with AMBAG staff, UCSC staff indicated that they expect growth of 300-500 students per year, resulting in a 2040 student forecast of 28,000 (the 2022 RGF holds this level constant from 2040-2045).

It is important to note that these projections reflect full-time equivalent students, and actual headcounts will likely be higher.

California State University, Monterey Bay

Founded in 1995, California State University Monterey, Bay grew to 2,265 students during the 1999-2000 school year and 4,000 students by 2010.[18] Although not created by the Fort Ord Reuse Plan, the University is a significant component of the Base Reuse Plan and as it continues to grow will help to stimulate the economic development of the Fort Ord Area. The most recent master plan projects full-time equivalent student enrollment of 12,000 by 2025.[19] In meetings with AMBAG staff, CSUMB staff indicated that they expect growth to 12,700 full-time equivalent students by 2045.

It is important to note that these projections reflect full-time equivalent students, and actual headcounts will likely be higher.

In addition, discussions with CSUMB staff suggested that some group quarters (student) dormitory housing in the "East Campus" unincorporated area would convert to faculty/family housing over time. This transition is reflected through the growth of group quarters population in the Marina area of the CSUMB campus, decline of group quarters in Unincorporated Monterey County—and transition of those formerly group quarters structures into family housing (i.e. increase in households and housing units).

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[17] University of California, Santa Cruz Department of Planning and Budget. http://planning.ucsc.edu/irps/thirdWeek.asp accessed December 2012. Figures based on 3-quarter average measured in the spring quarter of the academic year.
[18] California State University Monterey Bay historical timeline http://about.csumb.edu/node/4287 accessed November 2012.
[19] Recirculated Draft Environmental Impact Report for the California State University Monterey Bay 2007 Master Plan. July 2008.

Salinas Valley State Prison and Soledad Correctional Training Facility

Opened in 1996, Salinas Valley State Prison has a design capacity of 3,888.[20] According to annual reporting by the California Department of Finance, the facility had a resident population of 4,100 at the beginning of the 2000s decade and a population of 3,630 on January 1, 2010.[21] The facility has a maximum capacity of 4,400, according to the 2010 Master Plan Annual Report.[22]

Opened in 1946, Soledad Correctional Training Facility has a design capacity of 3,301. According to annual reporting by the California Department of Corrections and Rehabilitation and counts from the 2000 and 2010 decennial census, the facility had a resident population of between 6,000 and 7,200 during the decade. [23]

Because both facilities currently house group quarters populations in excess of their design capacity, no future population growth is shown at these facilities in the 2018 RGF. Population totals are held constant at their 2015 levels.

Table 10: Historical Special Population Counts

	1990	2000	2010	2015
Fort Ord Military Population	31,270*	0	0	0
Defense Language Institute and Naval Postgraduate School	n/a	n/a	4,227	4,004
University of California, Santa Cruz	9,800**	10,885	16,332	17,276
California State University, Monterey Bay	0	2,265	4,000	6,368
Salinas Valley State Prison	0	4,100	3,630	3,592
Soledad Correctional Training Facility	0	7,120	6,148	4,707

** Estimate.*

***1990 figure for University of California, Santa Cruz reflects data from the 1991-92 academic year, the earliest year reported.*

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[20] California Department of Corrections and Rehabilitation website for Salinas Valley State Prison. Figure reported for fiscal year 2009-2010. http://www.cdcr.ca.gov/Facilities_Locator/SVSP-Institution_Stats.html accessed December 9, 2012.
[21] California Department of Finance. Exclusion and Dorm Report. November 2012.
[22] Master Plan Annual Report: Calendar Year 2010. California Department of Corrections and Rehabilitation. January 2011.
[23] California Department of Corrections and Rehabilitation website for Soledad Correctional Training Facility. Figure reported for fiscal year 2007 http://www.cdcr.ca.gov/Facilities_Locator/CTF-Institution_Stats.html accessed December 9, 2012. Population counts derived from institutionalized group quarters counts from Census 2000 and Census 2010, U.S. Census Bureau.

Adjustments to the Population Projections

Developing Special and Non-Special Population Estimates

Special populations provide a challenge to the population projections because their growth and decline are often not determined by factors that impact the rates of change of the general population. This is particularly true of college students, prison inmates, and military personnel and their dependents. Residents of nursing homes, while also a special population, share many of the characteristics of the general population, and their growth and decline often mirror the demographic changes of the larger community. To deal with the special population issue, a common procedure applied in population projections is to exclude the special populations by using group quarters data and to project the adjusted population separately, i.e., the total population minus the special population. At the end of the projection module, the special population is added back to the projected adjusted population to produce the projected total population. The special population is either held constant or projected separately.[24]

Thus, projections for AMBAG jurisdictions (Marina, Santa Cruz, Seaside, Soledad and unincorporated Monterey County) should be adjusted to account for special populations independent of the non-special population trends.

To accomplish this, special populations should be subtracted from the census year population estimates used in developing the shift-share model population shares. Independent projections of the special populations (e.g., from master plan documents) should then be addressed separately in the population forecast.

Incorporating Special Populations into the Final Projections

As noted above, Fort Ord has closed, and thus major military populations can be assumed to be constant throughout the remainder of the forecast.

For the universities and the prison, master plan documents provide useful information about expected future populations. These population plans can be used to fill in horizon-year projections, which are then kept constant for any remaining years of the AMBAG forecast. Additionally, staff worked closely with UCSC to develop conservative estimates for growth after the horizon year of their long-range development plan.

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[24] Rayer, Stephan. MISER Population Projections for Massachusetts, 2000–2020. July 2003. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CEUQFjAD&url=http%3A%2F%2Fwww.umass.edu%2Fmiser%2Fpopulation%2FDocuments%2FMAProjMethodology.doc&ei=-ke5UNPKDMmdqgH0h4GgDQ&usg=AFQjCNF6tP0wQ9CqtSb8X7-EUtMm9rmMrw&sig2=8pz3atGy03rNWjtvjbdjeg

Translating Population Growth into Housing

Special population adjustments for Fort Ord require no special processing, as the military population on Fort Ord is not expected to change in future years.

However, university populations for UCSC and CSUMB pose a special case. While housing will be provided by the universities, it is likely that many students will live in group quarters (described in more detail in Attachment 4), but at least some students will reside in housing "in town" as part of the resident population of surrounding jurisdictions. For this reason, university population projections and housing projections were completed separately from the jurisdiction population projections.

Population projection adjustments for SVSP and SCTF require no special processing for housing unit projections. These populations will be classified as group quarters, and thus are not considered in housing calculations.

Adjustments for Annexations

The shift-share approach outlined above presumes that most population change is a result of demographic and economic forces that can be represented by the rate of change over time. The shift-share approach is intended for use with jurisdictions that retain consistent geographic boundaries over time. Because the shift-share method presumes constant geographic boundaries, annexations, which by definition change jurisdiction boundaries, pose a unique problem. Adjustment techniques are needed to address these cases. Between 1990 and 2010 there was one heavily populated annexation in the AMBAG region. This case, the Watsonville annexation, is described in more detail below. (In 2008 Salinas also annexed the North of Boronda Future Growth Area, which had a population of approximately 100. This annexation, which affected the overall jurisdiction population by less than 0.1%, was not modeled separately.)

History of Annexations in the AMBAG Region

In 2000 the city of Watsonville annexed a portion of unincorporated Santa Cruz County. Known as the Freedom-Carey annexation, the change was recorded in July 2000, after the 2000 decennial Census.

Historical population estimates for the City of Watsonville, unincorporated Santa Cruz County and Freedom-Carey annexation area are shown in Table 11 below.

The data for 2000 reflect reports published by the Local Agency Formation Commission with respect to the annexation area. Data for 1990 were derived using trend extrapolations based on the rate of growth in associated census tracts (1106 and 1107). Similarly, data for 2010 were derived using trend extrapolations based on the rate of growth in associated census tracts (1105.02, 1106 and 1107).

If the annexation of 2,022 residents were simply attributed to the population growth of Watsonville between 2000 and 2010, it would account for forty percent of the growth in the city's population during that period of time. Conversely, the loss of the annexed population would account for more than half of the decline in unincorporated population between 2000 and 2010.

Since the shift reflects an administrative boundary change, not a demographic one, the shift-share model was adjusted accordingly.

Table 11: Historical Population Estimates for the Watsonville Annexation Area

	1990	2000	2010
City of Watsonville	31,099	44,246	51,199
Excluding Annexation Area	31,099	44,246	49,229
Unincorporated County of Santa Cruz	130,086	135,345	129,739
Excluding Annexation Area	128,426	133,323	129,739
Annexation Area	1,660	2,022	1,970

Sources: Analysis by PRB of data from the U.S. Census Bureau.

Adjusting the Watsonville and Unincorporated Santa Cruz County Projections

In order to ensure that the population shift resulting from annexation does not skew the shift-share results for Watsonville or unincorporated Santa Cruz County, population projections for Watsonville, unincorporated Santa Cruz County, and the annexation area were estimated separately.

To complete this adjustment, the estimated annexation area population was subtracted from the unincorporated Santa Cruz County population totals in 1990 and 2000. Similarly, the projected population from the annexation area population was added to Watsonville in 2010.

Independent shift-share projections were developed for each of the three sub-areas: Watsonville excluding the annexation area, unincorporated Santa Cruz County excluding the annexation area and the annexation area.

To complete the projections, the annexation area projected population growth was added to Watsonville. Unlike the special population projections described above, there are no further adjustments needed to translate the resulting population projections into housing projections.

Attachment 1: List of Meetings & Attendees

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees*	Other Attendees*
City of Gonzales	9/3/2019	1:30 PM	147 Fourth Street, Gonzales, CA	Maura Twomey, Heather Adamson and Paul Hierling	Matthew Sundt
City of Hollister	9/10/2019	1:30 PM	375 Fifth Street, Hollister, CA	Maura Twomey, Heather Adamson and Paul Hierling	Abraham Prado and Jamila Saqqa
City of Marina	8/21/2019	11:00 AM	209 Cypress Avenue, Marina, CA	Maura Twomey, Heather Adamson and Paul Hierling	Fred Aegerter, Christy Hopper and Matt Mogensen
City of Salinas	8/28/2019	1:30 PM	65 West Alisal Street, 2nd Floor, Salinas, CA	Maura Twomey, Heather Adamson and Paul Hierling	Megan Hunter and Adam Garrett
City of Santa Cruz	8/23/2019	1:00 PM	809 Center Street, Room 107, Santa Cruz, CA	Maura Twomey, Heather Adamson and Paul Hierling	Lee Butler
City of Seaside	9/10/2019	11:00 AM	656 Broadway Avenue, Seaside, CA 93955	Heather Adamson and Paul Hierling	Rick Medina
County of Monterey	8/7/2019	4:00 PM	1441 Schilling Pl, 2nd Floor, Salinas, CA	Maura Twomey, Heather Adamson and Paul Hierling	Brandon Swanson and John Dugan
County of Monterey	8/12/2019	3:15 PM	168 West Alisal, 3rd Floor, Salinas, CA	Paul Hierling	Darby Marshall and Anastacia Wyatt
County of San Benito	9/4/2019	1:00 PM	2301 Technology Parkway, Hollister, CA	Maura Twomey, Heather Adamson and Paul Hierling	Harry Mavrogenes, Taven Kinison Brown and Jamila Saqqa
County of Santa Cruz	8/23/2019	3:00 PM	701 Ocean Street, Room 400, Santa Cruz, CA	Maura Twomey, Heather Adamson and Paul Hierling	Kathy Molloy and Stephanie Hansen

*All attendees were at the meeting in person unless otherwise noted.

Agency	Meeting Date	Time	Location	AMBAG Attendees*	Jurisdiction Attendees*
City of Capitola	2/3/2020	9:30 AM	420 Capitola Ave., Capitola, CA	Heather Adamson	Katie Herlihy
City of Carmel-By-The-Sea	2/5/2020	9:30 AM	AMBAG Office	Maura Twomey, Gina Schmidt, Miranda Taylor	Marnie Waffle
City of Del Rey Oaks	2/13/2020	11:00 AM	650 Canyon Del Rey Blvd, Del Rey Oaks, CA	Heather Adamson and Miranda Taylor	Dino Pick and Denise Duffy
City of Gonzales	2/7/2020	2:00 PM	City of Gonzales, 147 Fourth Street, Gonzales, CA	Heather Adamson	Matthew Sundt
City of Greenfield	3/3/2020	9:00 AM	Greenfield City Hall, 599 El Camino Real, Greenfield, CA	Heather Adamson, Maura Twomey and Miranda Taylor	Paul Mugan
City of Hollister	3/10/2020	2:00 PM	City of Hollister, Development Services, 375 Fifth Street, Hollister, CA 95023	Heather Adamson	Abraham Prado, Jamila Saqqa, Eva Kelly and Ambur Cameron
City of King City	3/10/2020	11:00 AM	City of King City Hall, 212 South Vanderhurst Avenue, King City, CA 93930	Heather Adamson, Maura Twomey and Miranda Taylor	Doreen Liberto-Blanck and Maricruz Aguilar-Navarro
City of Marina	2/26/2020	2:30 PM	City of Marina, Community Depevelopment Dept, 209 Cypress Avenue, Marina, CA	Heather Adamson, Maura Twomey and Miranda Taylor	Christy Hopper and Lisa Berkley
City of Monterey	2/4/2020	1:00 PM	City of Monterey, 580 Pacific Street, Monterey, CA 93940	Heather Adamson, Maura Twomey, Miranda Taylor	Kim Cole
City of Pacific Grove	2/5/2020	11:30 AM	City of Pacific Grove, 300 Forest Avenue, 2nd Floor, Pacific Grove, CA 93950	Maura Twomey, Gina Schmidt, Miranda Taylor	Anastazia Aziz and Alyson Hunter
City of Salinas	3/2/2020	10:00 AM	City of Salinas, 65 West Alisal Street, 2nd Floor, Salinas, CA	Heather Adamson and Miranda Taylor	Megan Hunter and Tara Hullingers
City of San Juan Bautista	2/24/2020	9:00 AM	San Juan Bautista City Hall, 311 2nd Street, San Juan Bautista, CA	Heather Adamson	Don Reynolds and Mary Gilbert (SBtCOG)
City of Sand City	2/11/2020	3:00 PM	Sand City, City Hall, 1 Pendergrass Way, Sand City, CA	Heather Adamson, Maura Twomey, Miranda Taylor	Chuck Pooler and Aaron Blair
City of Santa Cruz	3/9/2020	11:00 AM	City of Santa Cruz, 809 Center Street, Room 107, Santa Cruz, CA	Heather Adamson	Lee Butler, Katherine Donovan and Eric Marlatt
City of Scotts Valley	2/3/2020	11:30 AM	1 Civic Center Drive, Scotts Valley, CA	Heather Adamson	Taylor Bateman
City of Seaside	3/3/2020	2:00 PM	656 Broadway Avenue, Seaside, CA 93955	Heather Adamson, Maura Twomey, Paul Hierling and Miranda Taylor	Kurt Overmeyer, Gloria Stearns and Sharon Mikesell
City of Soledad	2/24/2020	1:30 PM	City of Soledad, City Hall, 248 Main Street, Soledad, CA	Heather Adamson and Miranda Taylor	Brent Slama
City of Watsonville	2/21/2020	10:00 AM	Community Development Dept., 250 Main Street, Watsonville, CA 95076	Heather Adamson	Suzi Merriam and Justin Meek
	2/21/2020	10:00 AM	Community Development Dept., 250 Main Street, Watsonville, CA 95076	Heather Adamson	Suzi Merriam and Justin Meek
County of Monterey	3/17/2020	2:30 PM	GoTo Meeting	Heather Adamson and Paul Hierling	Brandon Swanson
County of San Benito	3/4/2020	3:00 PM	San Benito County - RMA, 2301 Technology Parkway, Hollister, CA	Heather Adamson and Maura Twomey	Harry Mavrogenes and Taven Kinison Brown
County of Santa Cruz	3/9/2020	3:00 PM	County of Santa Cruz, 701 Ocean Street, Room 400, Santa Cruz, CA	Heather Adamson	Kathy Molloy, Paia Levine, Barbara Mason, Stephanie Hansen and Anais Schenk
CSU Monterey Bay	2/5/2020	3:00 PM	2061 Intergarrison Road, Suite 84-A, Seaside, CA	Maura Twomey, Gina Schmidt, Miranda Taylor	Anya Spear and Matt McCluney
Monterey County LAFCO	2/11/2020	1:00 PM	LAFCO Monterey Co., 132 W. Gabilan Street, Suite 102, Salinas, CA 93901	Heather Adamson, Maura Twomey, Miranda Taylor	Kate McKenna
Santa Cruz County LAFCO	2/21/2020	1:00 PM	LAFCO, 701 Ocean Street, Room 318-D, Santa Cruz, CA 95060	Heather Adamson	Joe Serrano
UC Santa Cruz	2/25/2020	10:30 AM	UC Santa Cruz, 1156 High St, Barn G, Santa Cruz, CA 95064	Heather Adamson	Jolie Kerns and Oxo Slayer

*All attendees were at the meeting in person unless otherwise noted

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of Capitola	5/19/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Katie Herlihy
City of Carmel-By-The-Sea	5/26/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Marnie Waffle
City of Del Rey Oaks	6/17/2020	4:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Dino Pick and Denise Duffy
City of Gonzales	5/26/2020	3:00 PM	GoTo Meeting	Heather Adamson, Paul Hierling, and Miranda Taylor	Matthew Sundt
City of Greenfield	6/11/2020	11:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, and Miranda Taylor	Paul Mugan
City of Hollister	5/29/2020	10:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Abraham Prado, Jamila Saqqa, Eva Kelly and Ambur Cameron from Hollister; Mary Gilbert from SBtCOG. Additionally, various consulants for the Hollister General Plan attended this meeting.
City of King City	6/2/2020	1:00 PM	GoTo Meeting	Heather Adamson and Miranda Taylor	Doreen Liberto-Blanck and Maricruz Aguilar-Navarro
City of Marina	5/28/2020	10:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Christy Hopper and Fred Aegerter
City of Monterey	5/29/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Kimberly Cole
City of Pacific Grove	5/19/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Anastazia Aziz, Alyson Hunter and Terri Schaeffer
City of Salinas	6/8/2020	2:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Megan Hunter, Tara Hullinger, and Jonathan Moore
City of San Juan Bautista	6/1/2020	1:30 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Don Reynolds and Mary Gilbert from SBtCOG
City of Sand City	6/17/2020	9:00 AM	GoTo Meeting	Heather Adamson, Paul Hierling, and Miranda Taylor	Chuck Pooler and Aaron Blair
City of Santa Cruz	5/18/2020	9:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Lee Butler, Katherine Donovan, Bonnie Lipscomb, Eric Marlatt and Matt Vanhua
City of Scotts Valley	6/3/2020	1:00 PM	GoTo Meeting	Maura Twomey, HPaul Hierling, and Miranda Taylor	Taylor Bateman
City of Seaside	6/11/2020	4:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Kurt Overmeyer and Gloria Stearns

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of Soledad	6/16/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Brent Slama
City of Watsonville	6/2/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Suzi Merriam and Justin Meek
County of Monterey	6/3/2020	9:00 AM	GoTo Meeting	Maura Twomey, Paul Hierling, and Miranda Taylor	Brandon Swanson, John Dugan and Anastacia Wyatt
County of Monterey	6/29/2020	1:00 PM	GoTo Meeting	Maura Twomey, Paul Hierling, Miranda Taylor and Beth Jarosz (consultant)	Brandon Swanson, John Dugan, Craig Spencer and Anastacia Wyatt
County of San Benito	6/1/2020	9:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Harry Mavrogenes, Taven Kinison Brown and Mary Gilbert from SBtCOG
County of Santa Cruz	5/18/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Paia Levine, Barbara Mason, Anais Schenk, Kathy Molloy, Stephanie Hansen
CSU Monterey Bay	6/16/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling,	Anya Spear, Matt McCluney, and Kathleen Ventimiglia
CSU Monterey Bay	7/10/2020	1:00 PM	GoTo Meeting	Heather Adamson and Beth Jarosz (consultant)	Matt McCluney and Kathleen Ventimiglia
UC Santa Cruz	6/15/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling,	Oxo Slayer

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of Del Rey Oaks	8/25/2020	1:00 PM	GoTo Meeting	Heather Adamson	Dino Pick and Denise Duffy (consultant)
City of Greenfield	9/4/2020	2:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Rob Mullane (consultant) and Paul Mugan
City of Hollister	8/20/2020	11:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Abraham Prado, Jamila Saqqa, Bryan Swanson, Eva Kelly, Ambur Cameron, Areli Perez and Marian Mendez from Hollister; Mary Gilbert from SBtCOG
City of Hollister	9/4/2020	3:30 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Carol Lenoir
City of King City	8/24/2020	11:00 AM	GoTo Meeting	Maura Twomey and Heather Adamson	Doreen Liberto-Blanck and Maricruz Aguilar-Navarro
City of Marina	8/7/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Christy Hopper, Fred Aegerter, Layne Long and Lisa Berkeley
City of Monterey			GoTo Meeting		
City of Pacific Grove	8/7/2020	1:30 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Anastazia Aziz and Terri Schaeffer
City of Salinas	9/8/2020	2:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Megan Hunter and Jonathan Moore
County of Monterey	8/13/2020	3:30 PM	GoTo Meeting	Heather Adamson and Beth Jarosz (consultant)	Brandon Swanson and John Dugan
County of San Benito	8/10/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Harry Mavrogenes, Taven Kinison Brown, Jamila Saqqa, Gary Black (Hexagon), Ollie Zhou (Hexagon), Stan Ketchum (contract planner) and Mary Gilbert from SBtCOG

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of San Juan Bautista	10/30/2020	9:00 AM	Go To Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	John Freeman, Don Reynolds, and Mary Gilbert from SBtCOG
County of San Benito	10/29/2020	3:00 PM	Go To Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Anthony Botelho, Mark Medina, Taven Kinison Brown, Benny Young, Stan Stan Ketchums, and Mary Gilbert from SBtCOG
County of San Benito	11/2/2020	2:00 PM	Go To Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Benny Young, Taven Kinison Brown, and Mary Gilbert from SBtCOG

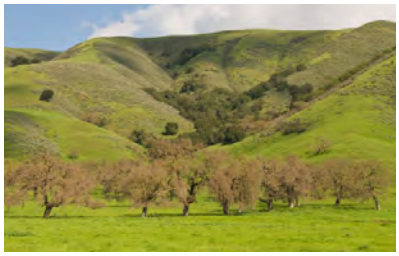
Attachment B




Monterey Bay 2045

Moving Forward

Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.



2045 Metropolitan Transportation Plan / Sustainable Communities Strategy

Final
June 2022

Monterey Bay 2045 Moving Forward
Sustainability. Mobility. Accessibility. Economy. Social Equity.

Moving Forward Monterey Bay 2045

Final

June 2022

24580 Silver Cloud Ct.
Monterey, CA 93940

http://ambag.org/
https://www.facebook.com/MontereyBayAMBAG

development process faster and easier. The State of California offers grants to accelerate the production of housing and approves legislation that allows for more types of homes, like accessory dwelling units to be built statewide. Regionally, government agencies are considering how to better align housing policies with transportation initiatives because both contribute substantially to the region's cost of living.

The SCS land use pattern accommodates the more than 42,000 new households that will be needed over the next 25 years to serve a projected growth of nearly 108,000 additional people.

The SCS land use pattern addresses the needs of all economic segments of the population. Based on the capacity for planned housing development the region will be able to accommodate the projected housing needs for residents of all income levels.

Regional Housing Needs Allocation

California Housing Element law requires that every eight years, AMBAG shall develop a methodology for distributing projected housing need in four income categories – very low, low, moderate and above moderate – to local jurisdictions in Monterey and Santa Cruz Counties and sets forth a process, objectives and factors to use for that methodology. The Council of San Benito County Governments (SBtCOG) performs this function for San Benito County. This process, the Regional Housing Needs Allocation (RHNA), is coordinated by the California Department of Housing and Community Development (HCD). The 2045 MTP/SCS includes an updated RHNA. The 6th Cycle Regional Housing Needs Determination (RHND) from HCD to AMBAG is 33,274 units. SBtCOG's 6th Cycle RHND is 5,005 units.

In the past, the RHNA was conducted separately from the MTP process. SB 375 now links the RHNA and MTP/SCS processes to better integrate housing, land use, and transportation planning. Integrating processes helps ensure that the state's housing goals are met. The RHNA occurs before each housing element cycle, which SB 375 changed from a five-year to an eight-year cycle.

The AMBAG region received its RHNA Determination (for Monterey and Santa Cruz Counties) from HCD for the housing element cycle (2023-2031). The AMBAG RHNA Plan allocates the RHNA Determination by jurisdiction. (For the San Benito RHNA, refer to SBtCOG's RHNA Plan.) Based on the RHNA Plan each jurisdiction will need to

identify adequate sites to address its RHNA allocations in the four income categories when updating its housing element.

Monterey and Santa Cruz Counties have enough housing capacity to accommodate the RHNA allocations. San Benito County also has the housing capacity to accommodate the RHNA as described in the San Benito RHNA Plan. The allocations do not exceed forecasted growth and can be accommodated through infill and redevelopment. The AMBAG and SBtCOG RHNA Plans are under development and are expected to be consistent with the 2045 MTP/SCS. The 2045 MTP/SCS will be adopted within 18 months of the RHNA planning period and 6th Cycle Housing Element deadline as documented by HCD. This schedule follows the required statutory deadlines.

Meeting GHG Targets

In 2018, CARB set updated targets for lowering GHG in the Monterey Bay region. They call for a three percent reduction, in per capita GHG emissions from passenger vehicles by 2020 (compared with 2005); and a six percent per capita reduction by 2035 through land use and transportation planning.

The 2045 MTP/SCS demonstrates that the Monterey Bay region will meet these targets by focusing housing and employment growth in urbanized areas; protecting sensitive habitat and open space; and investing in a transportation system that provides residents, workers and visitors with transportation options that are more effective and diverse.

In addition, the 2045 MTP/SCS includes economic development strategies to encourage job growth in communities that are currently job poor as well as planning for new housing in communities that are currently job rich help to address the jobs/housing imbalance in the region and reduce vehicle miles traveled. The process to develop the MTP/SCS was based upon modeling these forecasted land use patterns and future transportation networks, along with the use of sustainable development principles that have been standard planning practice in the region for some time, and an extensive public outreach process.

California Environmental Quality Act (CEQA) Streamlining

Provisions in SB 375 include opportunities for streamlining the CEQA process, when certain conditions are met, as an incentive for implementing projects that are consistent with this SCS. Generally, there are two types of projects for which CEQA requirements can be streamlined, once the MPO adopts an MTP/SCS that meet the greenhouse gas targets established by CARB:

- Transit priority projects streamlining
- Residential/mixed use projects streamlining

SB 375 includes specific requirements for the CEQA streamlining. The discussion below provides a general outline of the requirements.

Transit Priority Projects

A Transit Priority Project (TPP) is a project within an Opportunity Area and is eligible for CEQA streamlining if it is:

- Consistent with the SCS;

Attachment C

Draft 6th Cycle Regional Housing Needs Allocation Plan 2023-2031

April 2022

Association of Monterey Bay Area Governments

AMBAG Board of Directors

Kristen Brown, City of Capitola, Councilmember
Karen Ferlito, City of Carmel-by-the-Sea, Councilmember
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Executive Summary

In August 2021, the California Department of Housing and Community Development (HCD) issued a Regional Housing Need Determination to the AMBAG region for the 6th Cycle planning period of June 30, 2023 to December 15, 2031 and determined that the region must zone to accommodate a minimum of 33,274 housing units during this period. California housing law (Government Code § 65580 et seq.) requires AMBAG, acting in the capacity of Council of Governments (COG), to develop a Regional Housing Needs Allocation (RHNA) Plan to allocate existing and projected housing needs to local jurisdictions within Monterey and Santa Cruz Counties.

Based on the final RHNA Plan, each city and county must update its housing element to demonstrate how the jurisdiction will meet the expected growth in housing need over this period of time. The table below shows the final regional housing need allocation for each jurisdiction in the AMBAG region, broken into four income categories.

Table 1 – RHNA for the AMBAG Region, June 30, 2023 to December 15, 2031

	Income Group Totals				RHNA
	Very Low	Low	Mod.	Above Mod.	Total
Region	7,868	5,146	6,167	14,093	**33,274**
Monterey County					
Carmel-By-The-Sea	113	74	44	118	**349**
Del Rey Oaks	60	38	24	62	**184**
Gonzales	173	115	321	657	**1,266**
Greenfield	101	66	184	379	**730**
King City	97	63	178	364	**702**
Marina	94	62	173	356	**685**
Monterey	1,177	769	462	1,246	**3,654**
Pacific Grove	362	237	142	384	**1,125**
Salinas	920	600	1,692	3,462	**6,674**
Sand City	59	39	49	113	**260**
Seaside	86	55	156	319	**616**
Soledad	100	65	183	376	**724**
Unincorporated Monterey	1,070	700	420	1,136	**3,326**
Santa Cruz County					
Capitola	430	282	169	455	**1,336**
Santa Cruz	859	562	709	1,606	**3,736**
Scotts Valley	392	257	154	417	**1,220**
Watsonville	283	186	521	1,063	**2,053**
Unincorporated Santa Cruz	1,492	976	586	1,580	**4,634**

Introduction

Since 1969, the State of California has required that all local governments (cities and counties) adequately plan to meet the housing needs of everyone in the community. The California Department of Housing and Community Development (HCD) issued a Regional Housing Need Determination to the AMBAG region for the 6th Cycle planning period of June 30, 2023 to December 15, 2031. HCD determined that the region must zone to accommodate a minimum of 33,274 housing units during this period. HCD calculates the regional determination using information provided by the California Department of Finance and the most recent U.S. Census Bureau data regarding overcrowding, cost burden, and vacancy rate. The regional determination includes an overall housing need number, as well as a breakdown of the number of units required in four income distribution categories.

Once HCD issues their determination, the Regional Housing Needs Allocation (RHNA) Plan establishes the total number of housing units that each city and county must plan for within the eight-year planning period. The allocation is based on factors that address the five statutory RHNA objectives, as described below. The RHNA methodology and RHNA Plan are part of the state-mandated housing element law (Government Code § 65580 et seq.). Based on the adopted RHNA, each city and county must update its housing element to demonstrate how the jurisdiction will meet the expected growth in housing need over this period of time.

This document, the RHNA Plan, officially assigns the allocations to cities and counties for two of the three counties within the Monterey Bay Area, Monterey and Santa Cruz Counties. San Benito County conducts a separate RHNA, as explained below. The RHNA process and describes the adopted RHNA methodology including total unit allocations and allocations by income category. This plan also describes how the allocation meets the five statutory RHNA objectives. The appendix includes documents that were part of the planning process such as official correspondence from HCD regarding the regional determination and methodology review, AMBAG Board agenda items, and results of a statutorily-required jurisdiction survey. The table above shows the result of this planning process—an allocation of housing units by income level that jurisdictions plan to accommodate in their housing elements over the June 30, 2023 to December 15, 2031 timeframe.

Housing Element Law and RHNA Objectives

State housing element law, Government Code § 65584 (d), requires the RHNA to be consistent with five objectives:

1. Increasing the housing supply and the mix of housing types, tenure, and affordability in all cities and counties with the region in an equitable manner, which shall result in all jurisdictions receiving an allocation of units for low- and very low income households.
2. Promoting infill development and socioeconomic equity, the protection of environmental and agricultural resources, the encouragement of efficient development patterns, and the achievement of the region's greenhouse gas reductions targets provided by the State Air Resources Board pursuant to § 65080.
3. Promoting an improved intraregional relationship between jobs and housing, including an improved balance between the number of low-wage jobs and the number of housing units affordable to low-wage workers in each jurisdiction.
4. Allocating a lower proportion of housing need to an income category when a jurisdiction already has a disproportionately high share of households in that income category, as compared to the countywide distribution of households in that category from the most recent American Community Survey.
5. Affirmatively furthering fair housing.

As explained below, AMBAG's Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) and its RHNA are consistent with these objectives.

The Metropolitan Transportation Plan/Sustainable Communities Strategy and RHNA

Senate Bill (SB) 375, passed into state law in 2008, requires the coordination of housing planning with regional transportation planning through the MTP/SCS. This requires consistency in growth forecasts for land use, housing, and transportation purposes. In prior plans, the RHNA and the MTP were prepared independently and had different timelines and planning periods. SB 375 requires that the RHNA and MTP/SCS process be undertaken together in order to integrate housing, land use, and transportation planning to ensure that the state's housing goals are met and to help reduce greenhouse gas emissions (GHG) from cars and light duty trucks. The goal of this integrated planning is to create opportunities for residents of all incomes to have access to jobs, housing, services, and other common needs by a variety of means, including public transit, walking, and bicycling.

Prior to SB 375, RHNA was updated every five years and the MTP was updated every four years. Because SB 375 requires better coordination between transportation planning with land use and housing planning, the RHNA process is now tied to the adoption of every two cycles of the regional MTP/SCS. As a result, the RHNA Plan must be adopted every eight years, aligning with the adoption of the MTP/SCS. This also means that each city and county with a compliant

housing element will update its housing element every eight years instead of every five years, as required before SB 375.

2022 Regional Growth Forecast

As the MPO, AMBAG carries out many planning functions for the tri-county area including development and maintenance of the regional travel demand model (RTDM), long range transportation planning and programming, and acting as a regional forum for dialogue on issues facing the region. Most of AMBAG's projects are carried out in support of these major functions, including but not limited to the regional growth forecast. AMBAG develops the forecast with a horizon year that matches the planning timeline of the MTP/SCS and the model years for the RTDM. In addition to informing MTP/SCS, the regional growth forecast (RGF) is an important reference point in the RHNA process.

The 2045 MTP/SCS includes a planning period through 2045. The years forecasted include 2025, 2030, 2035, 2040, and 2045. The forecast uses a model that predicts employment growth using a shift-share model based on local data as well as state and national trends. Population growth is then driven by employment growth. Household and housing growth are driven by population growth, demographic factors and external factors. This approach was vetted and approved by the AMBAG Board of Directors in 2014 for use in the metropolitan transportation plan, Moving Forward 2035 Monterey Bay. The framework was used again in 2018 for Moving Forward 2040 Monterey Bay, and remains in use in 2022. While the methodology for the 2022 RGF has remained the same through three planning cycles, the models have been updated for the Moving Forward 2045 Monterey Bay Plan to include current data, a revised base year of 2015 and a new horizon year of 2045.

Process for Development of the 2023-2031 Regional Growth Forecast

In consultation with local planning departments, AMBAG prepared an estimated 2045 growth forecast for the region. The Planning Directors Forum was the primary venue for ongoing coordination between local agency planning staff and AMBAG; however, a number of jurisdiction-specific meetings and comment periods also were held, including over 100 one-on-one meetings held by AMBAG staff with each of the jurisdictions, the University of California, Santa Cruz, and the California State University, Monterey Bay. The development of the 2022 Regional Growth Forecast and the methodology is documented in detail as part of the 2045 MTP/SCS. Both of these documents can be found on the AMBAG website.

Geography

The local jurisdictions addressed in the RHNA process for the AMBAG region include the sixteen incorporated cities and two counties as shown in Table 3. University of California Santa Cruz, California State University Monterey Bay, the Salinas Valley State Prison (SVSP), the Correctional Training Facility (CTF) in Soledad, the Defense Language Institute (DLI), the Naval Post Graduate School (NPS) are not allocated any regional housing need since they are not city or county agencies, located on State or federal lands, and considered exempt entities not part of the RHNA process.

The AMBAG RHNA area is predominantly rural, with urban development clustered long the Monterey Bay coastline and in agricultural inland valleys along US 101. Major urban development in the Monterey Bay Area primarily occurs along the Bay coastal plains and foothills of the Monterey Peninsula from the City of Santa Cruz in the north to the City of Carmel-by-the-Sea to the south. The Santa Cruz, Watsonville, Seaside-Monterey, and Salinas urbanized areas are the most densely developed in the region.

Table 3: Cities and Counties Participating in the AMBAG RHNA Process

Carmel-by-the-Sea	Del Rey Oaks	Gonzales	Greenfield
King City	Marina	Monterey	Pacific Grove
Salinas	Sand City	Seaside	Soledad
Capitola	Santa Cruz	Scotts Valley	Watsonville
County of Monterey	County of Santa Cruz		

A substantial portion of the AMBAG area is forested and hence at an elevated risk of fire. Large forests and wooded areas border many cities and are prevalent throughout County unincorporated areas. In 2020, the Santa Cruz County area was affected by one of the top 20 most destructive fires in California history, destroying 1,490 structures including homes, burning over 86,000 acres of rural forested land including multiple unincorporated communities and towns. In 2016, the Soberanes Fire in Monterey County burned over 132,000 acres and dozens of homes, and in 2020, the Dolan Fire in Monterey County burned over 124,000 acres. These risks make developing housing in suburban and rural areas near forested areas particularly difficult.

Many population centers in the Monterey Bay Area are located on the coast and subject to flooding due to continuing sea level rise. During the plan period, the coastal region in AMBAG will be affected by sea level rise according to the National Oceanic and Atmospheric Administration (NOAA). This threatens existing housing, and limits where new housing can be constructed. Jurisdictions affected include Santa Cruz, Capitola, the County of Santa Cruz,

Marina, Seaside, Sand City, Monterey, Pacific Grove, Carmel, and the County of Monterey. Also affected are the unincorporated communities of Aptos, Live Oak, Moss Landing, and Pebble Beach.

Figure 1: Map of AMBAG RHNA Area

Process for Developing RHNA

The State of California, through the Housing and Community Development Department (HCD), issued a Regional Housing Needs Determination to AMBAG for Monterey and Santa Cruz Counties (see Appendix 4 for the letter of determination). HCD calculated the regional determination using information provided by the California Department of Finance. The regional determination includes an overall housing need number, as well as a breakdown of the percentage of units required in four income distribution categories, as further defined below. The region's overall allocation for Monterey and Santa Cruz Counties is 33,274 housing units. San Benito County receives its own Regional Housing Needs Determination (RHND) from HCD and must complete its own RHNA.

San Benito County

The state mandate for distributing the RHNA is tied to the state designation of a Council of Governments (COG). Each COG is expected to distribute the RHNA to their member jurisdictions. AMBAG is the Metropolitan Planning Organization for the Counties of San Benito, Santa Cruz, and Monterey and has prepared a 2045 MTP/SCS for the tri-county region. However, it is the COG for only the Counties of Santa Cruz and Monterey. For this reason HCD makes a separate determination for San Benito County and tasks the San Benito County Council of Governments (SBtCOG) with developing its own RHNA Plan. AMBAG does coordinate with SBtCOG so that its RHNA Plan is consistent with the 2045 MTP/SCS.

AMBAG's Role in RHNA

Based on the regional determination provided by HCD, AMBAG must develop the allocation of units to each jurisdiction, along with the plan document that contains the allocations. It is AMBAG's responsibility to coordinate with HCD prior to its determination of the regional housing need. Once AMBAG receives the regional determination, including the overall need number and the income category distribution, it must adopt a methodology for distributing the regional growth number throughout the region. The methodology is the basis for the final RHNA Plan that AMBAG adopts.

The methodology used for the RHNA distribution is developed in coordination with the local jurisdictions via the Planning Directors Forum and the AMBAG Board of Directors, as well as with input from the public. The state mandated RHNA Plan establishes the total number of housing units that each city and county must plan for within the eight-year planning period broken into four income categories as described above. Based on the adopted RHNA, each city and county must update its housing element by December 2023.

Importance of RHNA for Local Governments

RHNA allows communities to anticipate growth so that the region can grow in ways that enhance quality of life, improve access to jobs, promote transportation mobility, and address fair share housing needs for all members of the community. Local governments were key to the development of the RHNA allocation methodology and will determine how their jurisdiction's allocation will be accommodated through their Housing Elements.

Once it receives its allocation, each local government must update the Housing Element of its General Plan and its zoning to show how it plans to accommodate its RHNA requirements and meet the housing needs in its community. It is in the community's Housing Element that local governments make decisions about where future housing units could be located and the policies and strategies for addressing specific housing needs within a given jurisdiction, such as

addressing homelessness, meeting the needs of specific populations, affirmatively furthering fair housing, or minimizing displacement. Having a sufficient and housing element compliant with HCD requirements is also critical to securing and maintaining state funding for their community.

State funding programs often consider a local jurisdiction's compliance with housing element law. These competitive funds can be used for fixing roads, adding bike lanes, improving transit, or providing much needed affordable housing to communities. In some cases, funding from state/federal housing programs can only be accessed if the jurisdiction has a compliant housing element. In other cases, a compliant housing element allows grant applicants to receive extra points on their application if they do have a compliant housing element, increasing their chances in the competitive application process. Moving forward, more state grant funds may include housing element compliance factors. State funds which tie housing element compliance to eligibility or scoring include the following:

- Community Development Block Grant Program
- Infill Infrastructure Grant Program
- Local Housing Trust Fund Program
- Affordable Housing and Sustainable Communities Program
- Permanent Local Housing Allocation Program
- Caltrans Sustainable Communities Grant Program
- Local Partnership Program
- Transit and Intercity Rail Capital Program
- Active Transportation Program
- Solutions for Congested Corridors Program
- HOME Investment Partnerships Program

The Regional Housing Needs Determination (RHND)

The California Department of Housing and Community Development (HCD) identifies the total number of homes for which each region in California must plan in order to meet the housing needs of people at all income levels. The total number of housing units from HCD is separated into four income categories that cover everything from housing for very low-income households all the way to market rate housing. AMBAG is responsible for developing a methodology to allocate a portion of this housing need to every local government in the region.

The four income categories included in the RHND are:

- Very Low Income: Less than 50% of Area Median Income
- Low Income: 50-80% of Area Median Income
- Moderate Income: 80-120% of Area Median Income
- Above Moderate Income: 120% or more of Area Median Income

In a letter dated August 31, 2021 the California Department of Housing and Community Development (HCD) provided AMBAG with the RHND for use in this cycle of RHNA (See appendix 4).

Table 2: RHND from HCD for AMBAG – June 30, 2023 to December 15, 2031

Income Category	Percent	Housing Unit Need
Very-Low*	23.6%	7,868
Low	15.5%	5,146
Moderate	18.5%	6,167
Above-Moderate	42.4%	14,093
Total	**100.0%**	**33,274**
*Extremely-Low	13.1%	Included in Very-Low Category

Income Distribution: Income categories are prescribed by California Health and Safety Code (§ 50093, et. Seq.). Percentages are derived based on Census/ACS reported household income brackets and county median income.

The RHND is based on a population and household forecast for the region from the California Department of Finance (DOF) and the application of specific adjustments to determine the total amount of housing needs for the region. Certain adjustments are a result of recent legislation that sought to incorporate an estimate of existing housing need, per Government Code 65584.01, shown below.

- The vacancy rates in existing housing stock, and the vacancy rates for healthy housing market functioning and regional mobility, as well as housing replacement needs. For purposes of this subsection, the vacancy rate for a healthy rental housing market shall be considered no less than 5 percent.
- The percentage of households that are overcrowded and the overcrowding rate for a comparable housing market. For purposes of this subparagraph:
    - The term “overcrowded” means more than one resident per room in each room in a dwelling.
    - The term “overcrowded rate for a comparable housing market” means that the overcrowding rate is no more than the average overcrowding rate in comparable regions throughout the nation, as determined by the council of governments.
- The percentage of households that are cost burdened and the rate of housing cost burden for a healthy housing market. For the purposes of this subparagraph:
    - The term “cost burdened” means the share of very low, low-, moderate-, and above moderate-income households that are paying more than 30 percent of household income on housing costs.

- The term “rate of housing cost burden for a healthy housing market” means that the rate of households that are cost burdened is no more than the average rate of households that are cost burdened in comparable regions throughout the nation, as determined by the council of governments.

The RHNA process only considers the needs of the population in households who are housed in the regular housing market, and excludes the population living in group quarters, which are non-household dwellings, such as jails, nursing homes, dorms, and military barracks. HCD uses the age cohorts of the forecasted population from the California Department of Finance to understand the rates at which people are expected to form households. This can vary for people at different stages of life. This results in the estimate of the total number of households that will need a housing unit in 2031, which is the end date of the projection period for AMBAG’s RHNA cycle.

The total number of projected households is then adjusted using the factors related to vacancy rate, overcrowding, and an estimate of the need for replacement housing for units that were demolished or lost. These adjustments result in a forecast of the number of housing units that will be needed to house all households in the region in 2031. The number of expected occupied housing units at the beginning of the RHND period is subtracted from the total number of housing units needed, which results in the number of additional housing units necessary to meet housing demand. The final step is an adjustment related to cost-burdened households, which leads to the total RHND.

Distributing the RHNA and Income Categories

California’s Housing Element Law (Government Code § 65580 et seq.) mandates that AMBAG develop and approve a RHNA methodology and RHNA Plan for Monterey and Santa Cruz Counties and the cities within. Once AMBAG receives the regional determination, including the overall need number and the income category distribution, it must adopt a methodology for distributing those numbers throughout the region. The methodology is the basis for the final RHNA Plan that AMBAG adopts.

The RHNA has two parts as required by state law:

- Overall Allocation: AMBAG receives a total housing unit number for growth during the planning period for Monterey and Santa Cruz Counties. AMBAG is required to distribute this regional housing growth number to the jurisdictions within the region for the period from January 30, 2023 to December 15, 2031.
- Income Category Distributions: HCD also provides a household income distribution of the total regional housing unit number. As defined by state law, four income categories

make up this distribution: very low income (less than 50 percent area median income [AMI]); low income (50 to 80 percent AMI); moderate income (80 to 120 percent AMI); and above moderate income (above 120 percent AMI). The total housing unit growth AMBAG allocates to each jurisdiction must be further allocated into the four household income categories.

Coordination with Jurisdictions

The most critical factor in the RHNA process is the development of the methodology for allocating housing units within the region. The meetings of the regional Planning Directors Forum, comprised of local government planning staff but open to the public, served as the forum for the technical development of the draft methodologies. The Planning Directors Forum met monthly and provided input on approaches to different methodologies. AMBAG staff developed different methodology options for inquiry, review, and input from the planning directors. The AMBAG Board of Directors received regular updates on the development of the RHNA and the methodologies being considered. Of the various methodologies discussed at the Planning Directors Forum and the Board of Directors' meetings, the methodology emphasizes AFFH and a balanced jobs/housing ratio was selected as the preferred method and was recommended to the Board of Directors. The Board of Directors approved this methodology on April 13, 2022.

Coordination with Regional Stakeholders and the Public

The methodology used in this RHNA allocation was discussed multiple times at the Board of Directors and the Planning Directors Forum as well as presented at city council meetings and other stakeholder meetings. In addition, specific recommendations from the public were included in the selected methodology. These groups expressed support for the methodology and indicated that it was a good representation of housing need in the region. Opportunities for public comment were provided at all Board of Directors and Planning Directors Forum meetings.

Timeline

The RHNA Plan is scheduled for adoption by the AMBAG Board of Directors in Fall 2022. Based on state statutory timelines prescribed in Government Code § 65584.04, below are the key milestones dates for the RHNA:

- February 2021 to December 2021 – The Planning Directors Forum, comprised of the planning directors and local government planners for all of the cities and counties in the region, met seven times over eleven months to discuss RHNA and to develop and evaluate draft RHNA methodologies. The AMBAG Board of Directors were informed

regularly on the development of the different draft methodologies. As meetings open to the public, these meetings also served as opportunities for the public and advocacy groups to provide comments on the process.

- June 2021 to January 2022 – The Board of Directors met seven times over eight months to review progress on the RHNA methodologies, take input from the Planning Directors Forum, and provide feedback on the process. As meetings open to the public, these meetings also served as opportunities for the public and advocacy groups to provide comments on the process.
- January 12, 2022 – The AMBAG Board of Directors adopted the draft RHNA methodology.
- April 13, 2022 – Approval of the final RHNA methodology by the AMBAG Board
- April 22, 2022 – Draft RHNA plan released with RHNA allocations by jurisdictions
- April 22 to June 6, 2022 – Local jurisdictions and HCD may appeal RHNA allocation within 45 days of release of the draft RHNA plan/allocations
- May 2022 – AMBAG releases final 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) accommodating RHNA
- June 7 to July 22, 2022 - Local jurisdictions and HCD may comment on appeals within 45 days of the close of the appeal period (if appeal(s) are received)
- June 8, 2022 – Adoption of Final 2045 MTP/SCS by AMBAG Board
- August 10, 2022 - Adoption of Final 2023-31 RHNA Plan with RHNA allocations by AMBAG Board (if no appeal(s) are received)
- August 10, 2022 - AMBAG to hold public hearing on appeals (if appeals are received)
- September 23, 2022 - AMBAG makes final determination that accepts, rejects, modifies appeals and issues final proposed allocation plan
- October 12, 2022 - Adoption of Final 2023-31 RHNA Plan with RHNA allocations by AMBAG Board (if appeal(s) are received)
- December 15, 2023 - Jurisdiction’s 6th Cycle Housing Elements are due to HCD

Housing Elements

Once a local government has received its final RHNA from AMBAG, it must revise the Housing Element of its general plan and update zoning ordinances to accommodate its portion of the region's housing need. For this cycle, that process must be completed by December 2023. Communities are also required to report their progress to HCD annually.

The four income categories, as listed above, must be addressed in a jurisdiction’s housing element. Specifically, accommodations must be made to ensure that the jurisdiction provides

sufficient zoning capacity to accommodate the projected housing need in each income category. For the very low and low income categories, jurisdictions generally are required to identify sites (constructed or vacant) zoned at multifamily residential densities.

It is important to note that each jurisdiction is responsible for providing sufficient zoning capacity for the units allocated to all four economic income categories, but is not responsible for the construction of these units. The intent of the housing element law is to ensure that jurisdictions do not impede the construction of housing in any income category. Other factors, such as market forces, are beyond a jurisdiction's control and have considerable influence over whether or not housing units in each income category are actually constructed. The HCD website contains more information about Housing Element compliance at https://www.hcd.ca.gov/community-development/housing-element/index.shtml.

Adopted RHNA Methodology and Distribution

Once HCD issued the Regional Housing Need Determination of 33,274 housing units for our region, state housing element law required AMBAG to formulate a methodology to assign a share of the RHND to each jurisdiction in the region. The RHNA methodology was approved by the Board of Directors on April 13, 2022. Before asking the Board to approve a methodology AMBAG reviewed all of the HCD approved RHNA methodologies to date for the 6th Cycle from other COGs and presented the results to the Planning Directors Forum and the Board. The list of options was refined and narrowed with recommendations from the Planning Directors Forum before presentation to the Board. The final methodology that was chosen distributes the RHNA based on the RGF, AFFH, jobs/housing balance, jobs, climate resiliency, and transit service. Using this method creates a direct tie to the objectives of the Housing Element law as well as the goals and concepts in the 2045 MTP/SCS.

RHNA Methodology

This section describes the draft methodology that the AMBAG Board of Directors approved on January 12, 2022. Appendix 1 provides the RHNA unit and income allocation estimates based on the approved draft methodology. To satisfy the requirements of Government Code § 65584.04(a) AMBAG, in consultation with HCD staff, elected to pursue a three-step methodology. The first and second steps allocates the total number of units for the AMBAG region. The third step allocates by income category.

First Step in RHNA Methodology: 2022 Regional Growth Forecast Base Allocation

This RHNA methodology allocates a portion of housing units (6,260) based on data for projected housing growth for the four-year RHNA planning period from the 2022 Regional Growth Forecast (RGF). The 2022 RGF was used in the 2045 Metropolitan Transportation Plan/Sustainable

Communities Strategy (MTP/SCS). The use the 2022 RGF data is important to meeting the RHNA plan statutory objectives of protecting environmental and agricultural resources and achieving the region's greenhouse gas reduction targets. (Gov. Code, § 65584(d)(2).) Use of the 2022 RGF ensures that this RHNA methodology is consistent with the 2045 MTP/SCS, which was released for public review and comment in November 2021.

The 2022 RGF is the most accurate growth forecast available for the region, is more granular than any other available projections, included significant quality control, was reviewed and approved by executive planning staff in all jurisdictions for accuracy, and was accepted by the AMBAG Board. This supports the furtherance of a RHNA plan statutory objective, which focuses on promoting infill development and socioeconomic equity, the protection of environmental and agricultural resources, the encouragement of efficient development patterns, and the achievement of the region's greenhouse gas reductions targets. (Gov. Code, § 65584.04(d)(2).)

The 2022 RGF allocation step is just one element in the RHNA methodology; jobs, jobs/housing balance, transit, resiliency, and AFFH are all used to allocate housing units, which go above and beyond existing jurisdictions' general plans. In fact, HCD's 6th Cycle RHND of 33,274 units is higher than the number of units that jurisdictions within the AMBAG region have planned for through 2050, so general plan changes will be necessary and are not precluded by using the 2022 RGF as a part of the allocation.

The data source for this factor is described below:

- 2022 RGF: Housing growth from 4-year RHNA period from the AMBAG 2022 RGF (accepted for planning purposes by the AMBAG Board in November 2020), based on California Department of Finance (2020)
    - The full RGF can be found at the following location: https://ambag.org/sites/default/files/2021-11/PDFAAppendix%20A_2022%20RGF.pdf and https://www.ambag.org/plans/regional-growth-forecast

Second Step in RHNA Methodology: Jobs, Jobs/Housing Balance, Transit, Resiliency, and AFFH Unit Allocation

The second step in the RHNA methodology allocates the remaining units (27,014) for the AMBAG region by the following categories: 15% jobs (4,000 units), 31% jobs/housing (8,449 units), 4% transit (1,038 units), 8% resilience (2,075 units), and 42% of AFFH (11,452 units). The draft methodology presented here is the result of several rounds of methodology revision to include

feedback from the AMBAG Board, Planning Directors forum, and the community. Revisions also accommodated additional feedback from the public and HCD staff, including adding jobs/housing and AFFH factors and reducing the weight of the RGF in the allocation.

Another revision made to reflect suggestions from HCD staff was to include both the California State Treasurer's Tax Credit Allocation Committee (TCAC) and Racially Concentrated Areas of Affluence (RCAA) data to calculate the AFFH allocation factor for incorporated jurisdictions

Data sources used for this second step in the RHNA methodology are described below.

- Employment: AMBAG 2022 RGF, based on InfoUSA and California Employment Development Department (2020)
    - Jobs data reflects the pre-pandemic distribution of employment opportunities throughout the AMBAG region. Future job growth in Monterey and Santa Cruz Counties is expected to be concentrated in the same areas. Since such a large share of the region's jobs are agricultural, allocating based on jobs helps the region address the housing needs of farmworkers. (Gov. Code, § 65584.04(e)(8).)
    - Focusing a significant share of the RHNA allocation on jobs helps to correct existing jobs/housing imbalances.
- Jobs-Housing Ratio: Number of jobs in 2020 divided by number of housing units, both jobs and housing data are from AMBAG 2022 RGF, based on InfoUSA and California Employment Development Department, and California Department of Finance (2020).
- Transit: Existing (2020) transit routes with 15- and 30-minutes headways, based on existing transit routes and stops from transit operators
    - While the AMBAG region does not have the kind of extensive transit system found in larger urban areas, transit access is important for the sustainability of future growth.
    - Focusing future developing in areas with the region's highest quality transit promotes infill development and encourages efficient development patterns. (Gov. Code, § 65584(d)(2).)
- Resiliency: Percent not in high fire risk or 2' sea level rise risk, CALFIRE, California Public Utilities Commission (CPUC), and National Oceanic and Atmospheric Administration (NOAA)
    - The AMBAG region includes areas at great risk due to climate change, including areas at high risk of wildfire and areas at risk of inundation due to sea level rise. These constraints to development must be considered as the region plans for climate change.

    - This factor furthers the objective of promoting infill development, protecting environmental resources, and encourages efficient development patterns. (Gov. Code, § 65584(d)(2).)
- Affirmatively Furthering Fair Housing Unit Allocation: The AFFH factor is the average of a jurisdiction's RCAA and TCAC score for incorporated jurisdictions, both of which are explained below. For unincorporated areas the AFFH factor is the TCAC score alone and does not include RCAA. Given the size of the unincorporated areas, TCAC better reflects the diversity of high- and low-income communities within the unincorporated areas. Jurisdictions qualifying as RCAAs, partial RCAAs, or TCAC Opportunity Areas are shown in Appendix 2.
    - RCAA: Jurisdictions with higher than the regional average for percentage above 200% of the poverty level and percentage white are defined as RCAAs. Jurisdictions that qualify under one category receive a partial allocation. Data was utilized from the U.S. Census Bureau, American Community Survey (2015-2019) and 2020 Census.
    - TCAC: This score reflects the percent of each jurisdiction's households in high/highest opportunity areas. Data was used from the TCAC Opportunity Map Database (2021) and U.S. Census Bureau, American Community Survey (2015-2019).

Third Step in RHNA Methodology: Income Allocation

Addressing the socioeconomic disparities of the AMBAG region's member jurisdictions was a key focus of the income allocation methodology. Though jurisdiction level disparities cannot be completely corrected within a single RHNA cycle, Planning Directors Forum and AMBAG Board members recommended allocating a high weight to this factor.

There are several ways to measure socioeconomic disparities across jurisdictions. After considering alternatives, the AMBAG Board of Directors suggested a measure of Racially Concentrated Areas of Affluence (RCAA), based on data from the U.S. Census Bureau and a framework described by the U.S. Department of Housing and Urban Development. Using the most recent data available from the U.S. Census Bureau, jurisdictions that are both high income (higher than the regional average for percentage above 200% of the poverty level) and racially-concentrated (above the regional average for percent white non-Hispanic) are defined as RCAAs. Jurisdictions that were either higher income or racially-concentrated, but did not meet both criteria, were identified as "partial RCAA." Consensus from the PDF was that the RCAAs analysis better reflected the AMBAG region's areas of opportunity than alternative measures such as the HCD/TCAC Opportunity Map data.

The third step of the methodology shifts Above Moderate units to Very Low and Moderate units to Low in jurisdictions that qualify as RCAAs. This results in RCAA jurisdictions getting a higher share of their RHNA in the lower income categories. In the draft methodology presented here, just over 53% of the RHNA allocation is Very Low or Low income in jurisdictions that are RCAAs. In partial RCAA jurisdictions, approximately 38% of the RHNA allocation is Very Low or Low income. The comparable share for non-RCAA jurisdictions is less than 23%.

The data sources used for this step are described below.

- AFFH Income Allocation: U.S. Census Bureau, American Community Survey (2015-2019) and 2020 Census

RHNA Objectives

The following section summaries how the development of the RHNA allocation methodology and the income group allocation methodology satisfies the five objectives. Development of the RHNA allocation methodology and the income group allocation methodology was focused on satisfying the five RHNA objectives (Govt. Code §65584(d)(1-5). Appendix 1 illustrates the methodology in further detail.

1. *Increase the housing supply and the mix of housing types, tenure, and affordability in all cities and counties within the region in an equitable manner, which shall result in each jurisdiction receiving an allocation of units for low- and very low-income households.*

The 6th Cycle RHNA methodology allocates units to all jurisdictions in the AMBAG region. The proposed RHNA methodology affirmatively furthers fair housing by allocating units based on TCAC/RCAA data and by allocating a larger share of very low and low income housing in jurisdictions that have an above-average share of households in advantaged areas.

To promote a mix of housing types, the methodology adjusts jurisdictions' allocations by income levels, and provides larger shares of very low- and low-income categories to jurisdictions that have historically been racially concentrated areas of affluence (Carmel by the Sea, Del Rey Oaks, Monterey, Pacific Grove, unincorporated Monterey County, Scotts Valley, and unincorporated Santa Cruz). Jurisdictions which already contain a disproportionately high share of very low and low income households are allocated higher proportions of moderate and above-moderate housing allocations. In accordance with State law, each jurisdiction is allocated housing in all four income groups.

2. *Promoting infill development and socioeconomic equity, the protection of environmental and agricultural resources, the encouragement of efficient development patterns, and the achievement of the region's greenhouse gas reductions targets provided by the State Air Resources Board pursuant to Section 65080.*

The methodology directly complements the region's SCS which seeks to reduce greenhouse gases emitted by light-duty vehicles. AMBAG's SCS achieves the required greenhouse gas emissions (GHG) with a critical strategy that addresses the region's jobs-housing imbalance. AMBAG achieves its GHG target of a 6% reduction per capita for 2035. AMBAG's SCS promotes infill development, socioeconomic equity, and the protection of agricultural resources. In excess of 76% of the region's determination is allocated to incorporated cities, thereby advancing this objective by promoting infill development. In addition, the allocation provided to the unincorporated counties could reasonably be assumed to be accommodated within currently developed areas. In its planning survey responses, both Monterey and Santa Cruz Counties noted that substantial proportions of their unincorporated areas are preserved or protected from urban development as conservation land, state parks, federal ownership, via land trusts, or are protected under federal and state species protection regulations or under the Williamson Act. This largely constrains new development in the unincorporated areas. Much of the existing development in the unincorporated counties is indistinguishable to that of the abutting cities; therefore, it is not expected to place demand on transportation inefficient parcels of land.

By allocating 4% of RHNA by transit, the methodology further promotes more housing in jurisdictions with better transit access, which will further reduce GHG emissions and promote efficient development patterns. By allocating 8% of RHNA using a resiliency factor, the methodology promotes protection of coastal and forest areas by shifting allocations away from these sensitive environmental resources.

3. *Promoting an improved intraregional relationship between jobs and housing, including an improved balance between the number of low-wage jobs and the number of housing units affordable to low-wage workers in each jurisdiction.*

By allocating a substantial share of the RHND based on jobs (15%) and jobs/housing balance (31%), AMBAG's methodology directly addresses the imbalance between jobs and housing. The methodology allocates a majority of units to jurisdictions with jobs-to-housing imbalances.

4. *Allocating a lower proportion of housing need to an income category when a jurisdiction already has a disproportionately high share of households in that income category, as compared to the countywide distribution of households in that category from the most recent American Community Survey.*

Addressing the income-equity disparities of the region's jurisdictions was a key focus of the income allocation methodology. Though jurisdiction-level disparities cannot be completely corrected within a single RHNA cycle, PDF members recommended, and the AMBAG Board of Directors assured this was a significant consideration within the RHNA.

Using the RCAA and TCAC adjustments for AFFH, the RHNA places a higher proportion of very low and low income units in more affluent areas which have a shortage of these types of units. This shift necessarily allocated a significant portion of very low and low income units away from jurisdictions which a preponderance of lower income units, placing more moderate and above moderate units in these communities. The AMBAG methodology directs a higher share of total units to TCAC/RCAA jurisdictions, and a higher share of lower income housing to RCAA jurisdictions. In RCAA jurisdictions, more than 53% of the RHNA allocation is Very Low or Low income. In partial RCAA jurisdictions, approximately 38% of the RHNA allocation is Very Low or Low income. The comparable share for non-RCAA jurisdictions is less than 23%.

5. *Affirmatively furthering fair housing.*

The proposed RHNA methodology affirmatively furthers fair housing by allocating units based on TCAC and RCAA data. The proposed RHNA methodology allocates a large portion of the RHNA (42% of the total allocation) based on AFFH. The methodology assigns additional units to jurisdictions that are above the regional average for percentage of population about 200% of the poverty level and/or which have a higher racially concentrated white population than the regional average and/or have areas of high/highest opportunity. The methodology also focuses a larger share of very low and low income housing in jurisdictions that have an above-average share of advantaged households, as described in Objective 4 above.

RHNA Methodology Metrics

AMBAG evaluated the draft methodology to ensure that it performed well in meeting all of the RHNA objectives. Appendix 3 highlights how the draft methodology supports and furthers the RHNA objectives.

RHNA Factors

To the extent that sufficient data is available, the COG must consider 13 factors when developing the methodology that allocates regional housing needs. The following section summaries how the development of the RHNA allocation methodology satisfies the 13 factors.

1. *Each member jurisdiction's existing and projected jobs and housing relationship. This shall include an estimate based on readily available data on the number of low-wage jobs within the jurisdiction and how many housing units within the jurisdiction are affordable to low-wage workers as well as an estimate based on readily available data, of projected job growth and projected household growth by income level within each member jurisdiction during the planning period.*

The final RHNA methodology directly incorporates each jurisdiction's existing and projected jobs-housing relationship in both the baseline allocation and the allocation factors. Forecasts from the

MTP/SCS 2045 inform the baseline allocation. The final RHNA methodology improves jobs-housing balance by using factors related to job proximity to allocate a significant portion of the RHND. These factors direct housing units to those jurisdictions, allocating 31% of units to areas with jobs to housing imbalances (higher jobs/housing ratios). The methodology also allocates 42% of units based on AFFH, placing more units in higher income areas which correspond to areas with lower jobs to housing ratios. The final RHNA methodology helps to create a more balanced relationship between housing and jobs by directing RHNA units to job-rich jurisdictions and jurisdictions with the most imbalanced jobs-housing fit. Additionally, the jurisdictions with the worst jobs-housing fit receive a larger share of their RHNA as affordable housing than other jurisdictions. An equity adjustment is included in the methodology, directing additional lower-income units to jurisdictions with an imbalanced jobs-housing ratio.

2. *The opportunities and constraints to development of additional housing in each member jurisdiction, including all of the following: (A) Lack of capacity for sewer or water service due to federal or state laws, regulations or regulatory actions, or supply and distribution decisions made by a sewer or water service provider other than the local jurisdiction that preclude the jurisdiction from providing necessary infrastructure for additional development during the planning period; (B) The availability of land suitable for urban development or for conversion to residential use, the availability of underutilized land, and opportunities for infill development and increased residential densities. The council of governments may not limit its consideration of suitable housing sites or land suitable for urban development to existing zoning ordinances and land use restrictions of a locality, but shall consider the potential for increased residential development under alternative zoning ordinances and land use restrictions. The determination of available land suitable for urban development may exclude lands where the Federal Emergency Management Agency (FEMA) or the Department of Water Resources has determined that the flood management infrastructure designed to protect that land is not adequate to avoid the risk of flooding; (C) Lands preserved or protected from urban development under existing federal or state programs, or both, designed to protect open space, farmland, environmental habitats, and natural resources on a long-term basis, including land zoned or designated for agricultural protection or preservation that is subject to a local ballot measure that was approved by the voters of that jurisdiction that prohibits or restricts conversion to nonagricultural uses; and (D) County policies to preserve prime agricultural land, as defined pursuant to Section 56064, within an unincorporated area and land within an unincorporated area zoned or designated for agricultural protection or preservation that is subject to a local ballot measure that was approved by the voters of that jurisdiction that prohibits or restricts its conversion to nonagricultural uses.*

The final RHNA allocation assigns 8% of RHNA using a resiliency factor which allocates RHNA units away from forested areas at high risk of fire, and away from coastal areas that may be inundated should sea levels rise by at least two feet. This approach protects open space, environmental habitats, and natural resources, and encourages housing growth away from these sensitive resources.

All other RHNA factors assign housing units towards incorporated population centers by allocating factors such as jobs, jobs/housing ratio, transit, resiliency, and AFFH. This works to direct housing away from farmland, and towards cities which normally have adequate sewer and water service.

3. *The distribution of household growth assumed for purposes of a comparable period of regional transportation plans and opportunities to maximize the use of public transportation and existing transportation infrastructure.*

The final RHNA methodology allocates 4% of the region's RHNA units based on a jurisdiction's transit service. The methodology will encourage higher-density housing in jurisdictions with existing transit infrastructure, which can maximize the use of public transportation in these communities.

4. *Agreements between a county and cities in a county to direct growth toward incorporated areas of the county and land within an unincorporated area zoned or designated for agricultural protection or preservation that is subject to a local ballot measure that was approved by the voters of the jurisdiction that prohibits or restricts conversion to nonagricultural uses.*

The large majority of the RHNA allocation is within incorporated areas. Monterey County has a policy as well as several agreements with cities to direct growth into incorporated areas. AMBAG considered and incorporated these policies and agreements into the development of the 2022 Regional Growth Forecast by directing the majority of growth in the forecast towards incorporated cities. Because the RHNA is based on the 2022 Regional Growth Forecast the distribution inherently directs growth towards incorporated cities. While most of the growth within Monterey County is planned within incorporated cities, and there are policies reinforcing this growth pattern, the County has made plans to accommodate new population within Community Plan Areas. Based on this and the reality of a continued presence of low income minority populations in the unincorporated areas of the County, Monterey County will also have to plan for affordable housing as allocated in this RHNA Plan. Santa Cruz County does not have similar agreements with cities to direct development towards incorporated areas.

5. The loss of units contained in assisted housing developments, as defined in paragraph (9) of subdivision (a) of Section 65583, that changed to non-low-income use through mortgage prepayment, subsidy contract expirations, or termination of use restrictions.

Comprehensive data about the loss of assisted housing units is not available for all jurisdictions in a consistent format. Given the lack of consistent data, this topic was not included as a

specific factor in the final RHNA methodology. Some jurisdictions indicated that there was a small loss of units contained in assisted housing developments. However, the cumulative loss for any given jurisdiction is relatively small and therefore was not considered as a factor adjustment. The loss of assisted housing units for lower income households is an issued that would be best addressed by local jurisdictions when preparing their Housing Elements.

6. The percentage of existing households at each of the income levels listed in subdivision (e) of Section 65584 that are paying more than 30 percent and more than 50 percent of their income in rent.

The final methodology allocates lower-income unit to all jurisdictions, particularly those with the most access to opportunity, allocating 42% of the region's lower-income units based on the jurisdictions' access to opportunity according to the California Tax Credit Allocation Committee (TCAC) Opportunity Maps and Racially Concentrated Areas of Affluence (RCAA). Jurisdictions with the highest housing costs receive a larger percentage or their HRNA as lower-income units than other jurisdictions in the region, and the jurisdictions with the most houses in High or Highest Resource census tracts also receive a larger percentage of their allocations as lower income unites than other jurisdictions. Local governments will have additional opportunities to address jurisdiction specific issues related to cost burdened households when they update their housing elements.

7. The rate of overcrowding.

To address the needs of overcrowding in the region, HCD's RHNA Determination included an overcrowding adjustment which added housing units to the regional housing need to alleviate overcrowding in the region. As a result, overcrowding is considered throughout the region through inclusion in the base allocation from HCD. Since overcrowding tends to be the worst in lower income communities, including an overcrowding metric in the methodology would have placed more housing in lower income communities. This would have been counter to the AFFH metric, which requires more lower income housing be placed in jurisdictions with an existing higher income housing stock. Such an allocation to would have also been counter to guidance provided by HCD during consultation on the methodology process. While the methodology does not have a specific overcrowding metric, the methodology base allocation is based on the RGF which assigns a significant share of housing growth to areas of high demand, which includes jurisdictions with higher overcrowding rates.

8. Housing needs of farmworkers.

The RHNA allocation benefits farmworker housing due to the rural and agricultural nature of the region. Most of the population is within a few miles of farmland, and nearly every population center is no further than 15 miles from an agricultural area. By encouraging housing development throughout the region, the RHNA will benefit the farmworker community.

9. The housing needs generated by the presence of a private university or a campus of the California State University or the University of California within any member jurisdiction.

The region currently has two major universities, the University of California, Santa Cruz (UCSC) and the California State University, Monterey Bay (CSUMB). Both universities place housing demands on their surrounding jurisdictions. The majority of the RHNA allocation is within the commute sheds of these two universities, primarily within the Santa Cruz metropolitan area near UCSC, and within the Monterey and Salinas metropolitan areas near CSUMB. In addition, UCSC has made efforts to meet some of that demand as there is a binding agreement between the University and the City of Santa Cruz. CSUMB is planning for growth which has generated housing pressure on the surrounding jurisdictions. The City of Marina is actively working to meet some of this demand with plans for housing development in areas close to the campus. Not only will housing be in demand in the City of Marina, but Marina is a closer commute than the Salinas Valley is to those coastal cities that have severe restrictions on new development.

10. Housing needs of individuals and families experiencing homelessness.

Comprehensive jurisdiction-level data about individuals and families experiencing homelessness is not available for most AMBAG jurisdictions. As a result, this topic was not included as a specific factor in the final RHNA methodology. However, the methodology does consider the housing needs of individuals and families experiencing homelessness by allocating very low- and low-income units to all jurisdictions throughout the region.

11. The loss of units during a state of emergency that was declared by the Governor pursuant to the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2), during the planning period immediately preceding the relevant revision pursuant to Section 65588 that have yet to be rebuilt or replaced at the time of the analysis.

The RHND included HCD's minimum replacement adjustment of 0.5 percent, which exceeds the region's demolition rate. This adjustment added 1,202 housing units to the RHND. Since the demolition adjustment in the RHND included significantly more units than were lost, it was not necessary to include a specific factor in the final RHNA methodology to address the loss of units.

12. The region's greenhouse gas emissions targets provided by the State Air Resources Board pursuant to Section 65080.

By allocating 15% of RHNA according to jobs and 31% based on jobs/housing ratio, 4% by transit, and 42% by AFFH, the RHNA allocates the vast majority of units in existing urban areas with a strong focus on placing more units where jobs/housing ratios are imbalanced. These factors combine to place more units near jobs centers which, over time, will reduce commuting distances and associated GHG emissions throughout the region.

13. Any other factors adopted by the council of governments, that further the objectives listed in subdivision (d) of Section 65584, provided that the council of governments specifies which of the objectives each additional factor is necessary to further. The council of governments may include additional factors unrelated to furthering the objectives listed in subdivision (d) of Section 65584 so long as the additional factors do not undermine the objectives listed in subdivision (d) of Section 65584 and are applied equally across all household income levels as described in subdivision (f) of Section 65584 and the council of governments makes a finding that the factor is necessary to address significant health and safety conditions.

No other planning factors were adopted by AMBAG for the 6th Cycle RHNA.

Appendix 1: Final AMBAG 6th Cycle RHNA Allocation

AMBAG RHNA Methodology Summary

	Income Group Totals				RHNA
	Very Low	Low	Mod.	Above Mod.	Total
Region	7,868	5,146	6,167	14,093	**33,274**
Monterey County					
Carmel-By-The-Sea	113	74	44	118	**349**
Del Rey Oaks	60	38	24	62	**184**
Gonzales	173	115	321	657	**1,266**
Greenfield	101	66	184	379	**730**
King City	97	63	178	364	**702**
Marina	94	62	173	356	**685**
Monterey	1,177	769	462	1,246	**3,654**
Pacific Grove	362	237	142	384	**1,125**
Salinas	920	600	1,692	3,462	**6,674**
Sand City	59	39	49	113	**260**
Seaside	86	55	156	319	**616**
Soledad	100	65	183	376	**724**
Unincorporated Monterey	1,070	700	420	1,136	**3,326**
Santa Cruz County					
Capitola	430	282	169	455	**1,336**
Santa Cruz	859	562	709	1,606	**3,736**
Scotts Valley	392	257	154	417	**1,220**
Watsonville	283	186	521	1,063	**2,053**

AMBAG RHNA Methodology

April 13, 2022

RHNA Total 33,274	Housing	Jobs 15%			Jobs/Housing Ratio 31%				Transit 4%			Resiliency (Wildfire & Sea Level Rise) 8%				AFFH 42%						RHNA
	4-year Unit Change	Jobs 2020	% Reg.	Units	J/H	Jobs 2020	% Reg.	Units	Transit Score	% Reg.	Units	% Area Not in High Risk Zone	Normalize (% Area x Unit Chg)	% Reg.	Units	RCAA	TCAC	Avg.	Normalize (Avg. x 2020 HHs)	% Reg.	Units	Total
Region	6,260			4,000				8,449			1,038				2,075						11,452	33,274
Monterey County																						
Carmel	5	3,566	0.9%	37	1.0	0	0.0%	0	0	0%	0	64%	3	0.1%	1	100%	100%	100%	2,129	2.7%	306	349
Del Rey Oaks	34	748	0.2%	8	1.0	0	0.0%	0	1	8%	87	44%	15	0.3%	6	100%	0%	50%	342	0.4%	49	184
Gonzales	713	6,326	1.7%	66	3.2	6,326	2.5%	215	0	0%	0	100%	713	13.1%	272	0%	0%	0%	0	0.0%	0	1,266
Greenfield	275	7,882	2.1%	82	2.0	7,882	3.2%	268	0	0%	0	100%	275	5.1%	105	0%	0%	0%	0	0.0%	0	730
King City	244	8,195	2.1%	86	2.4	8,195	3.3%	279	0	0%	0	100%	244	4.5%	93	0%	0%	0%	0	0.0%	0	702
Marina	395	6,548	1.7%	68	0.8	0	0.0%	0	1	8%	87	89%	353	6.5%	135	0%	0%	0%	0	0.0%	0	685
Monterey	202	40,989	10.7%	428	3.0	40,989	16.5%	1,396	1	8%	87	63%	126	2.3%	48	100%	73%	87%	10,386	13.0%	1,493	3,654
Pacific Grove	49	8,016	2.1%	84	1.0	0	0.0%	0	0	0%	0	95%	46	0.9%	18	100%	100%	100%	6,779	8.5%	974	1,125
Salinas	2,166	78,874	20.6%	824	1.8	78,874	31.8%	2,687	2	17%	168	100%	2,166	39.9%	829	0%	0%	0%	0	0.0%	0	6,674
Sand City	54	2,092	0.5%	22	11.1	2,092	0.8%	71	1	8%	87	100%	54	1.0%	21	50%	0%	25%	36	0.0%	5	260
Seaside	324	10,476	2.7%	109	1.0	0	0.0%	0	1	8%	87	77%	251	4.6%	96	0%	0%	0%	0	0.0%	0	616
Soledad	236	9,010	2.4%	94	2.2	9,010	3.6%	307	0	0%	0	96%	227	4.2%	87	0%	0%	0%	0	0.0%	0	724
Unincorporated Monterey	255	60,293	15.7%	629	1.5	0	0.0%	0	1	8%	87	19%	48	0.9%	18	n/a	48%	48%	16,268	20.4%	2,337	3,326
Santa Cruz County																						
Capitola	89	12,250	3.2%	128	2.2	12,250	4.9%	417	0	0%	0	83%	74	1.4%	28	100%	97%	98%	4,691	5.9%	674	1,336
Santa Cruz	394	43,865	11.5%	458	1.8	43,865	17.7%	1,494	1	8%	87	75%	296	5.5%	113	50%	23%	37%	8,279	10.4%	1,190	3,736
Scotts Valley	28	10,109	2.6%	106	2.1	10,109	4.1%	344	1	8%	87	50%	14	0.3%	5	100%	100%	100%	4,522	5.7%	650	1,220
Watsonville	512	28,514	7.4%	298	2.0	28,514	11.5%	971	1	8%	87	95%	485	8.9%	185	0%	0%	0%	0	0.0%	0	2,053
Unincorporated Santa Cruz	285	45,264	11.8%	473	0.8	0	0.0%	0	1	8%	87	13%	38	0.7%	15	n/a	50%	50%	26,259	33.0%	3,774	4,634

Calculations are performed on unrounded numbers. Numbers shown here are rounded to the nearest whole number.

Jobs/housing ratio is the 2020 number of jobs divided by the 2020 number of housing units. A higher number reflects a larger imbalance between jobs and housing.

Transit Score: 1 = has transit service with 30-minute headways. 2 = has transit service with both 15- and 30-minute headways.

RCAA = Racially Concentrated Areas of Affluence.

TCAC = California Tax Credit Allocation Committee

AMBAG RHNA Methodology

April 13, 2022

Income Shift: Shifts 40% Units Between Above Moderate and Very Low and Between Moderate and Low

	Baseline Income Allocation				RCAA			Raw RCAA Adjustments				Rebalance to Income Group Totals				RHNA
	V.L.	Low	Mod.	A.M.	RCAA	40% Shift V.L.	40% Shift Low	Very Low	Low	Mod.	Above Mod.	Very Low	Low	Mod.	Above Mod.	Total
Region	7,868	5,146	6,167	14,093				8,092	5,296	6,017	13,869	7,868	5,146	6,167	14,093	**33,274**
Monterey County																
Carmel-By-The-Sea	83	54	65	148	100%	33	22	116	76	43	114	113	74	44	118	**349**
Del Rey Oaks	44	28	34	78	100%	18	11	62	39	23	60	60	38	24	62	**184**
Gonzales	299	196	235	536	0%	-120	-78	179	118	313	656	173	115	321	657	**1,266**
Greenfield	173	113	135	309	0%	-69	-45	104	68	180	378	101	66	184	379	**730**
King City	166	109	130	297	0%	-66	-44	100	65	174	363	97	63	178	364	**702**
Marina	162	106	127	290	0%	-65	-42	97	64	169	355	94	62	173	356	**685**
Monterey	864	565	677	1,548	100%	346	226	1,210	791	451	1,202	1,177	769	462	1,246	**3,654**
Pacific Grove	266	174	209	476	100%	106	70	372	244	139	370	362	237	142	384	**1,125**
Salinas	1,579	1,031	1,237	2,826	0%	-632	-412	947	619	1,649	3,459	920	600	1,692	3,462	**6,674**
Sand City	61	40	48	110	50%	0	0	61	40	48	111	59	39	49	113	**260**
Seaside	146	95	114	261	0%	-58	-38	88	57	152	319	86	55	156	319	**616**
Soledad	171	112	134	307	0%	-68	-45	103	67	179	375	100	65	183	376	**724**
Unincorporated Monterey	786	514	616	1,409	100%	314	206	1,100	720	410	1,096	1,070	700	420	1,136	**3,326**
Santa Cruz County																
Capitola	316	207	248	566	100%	126	83	442	290	165	439	430	282	169	455	**1,336**
Santa Cruz	883	578	692	1,582	50%	0	0	883	578	692	1,583	859	562	709	1,606	**3,736**
Scotts Valley	288	189	226	517	100%	115	76	403	265	150	402	392	257	154	417	**1,220**
Watsonville	485	318	381	870	0%	-194	-127	291	191	508	1,063	283	186	521	1,063	**2,053**
Unincorporated Santa Cruz	1,096	717	859	1,963	100%	438	287	1,534	1,004	572	1,524	1,492	976	586	1,580	**4,634**

Calculations are performed on unrounded numbers. Numbers shown here are rounded to the nearest whole number.

RCAA = Racially Concentrated Areas of Affluence.

Attachment D

CALIFORNIA AMERICAN WATER

MONTEREY DISTRICT

CUSTOMERS & CONSUMPTION BY POLITICAL JURISDICTION

1000 Gallons

Oct 2018 to Sep 2019

CITY CODE	JURISDICTION	RESIDENTIAL		MULTI-RES		COMM/ IND		GOLF COURSE		PUB AUTHORITY		OTHER		NON REVENUE		TOTAL	TOTAL	TOTAL
		CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	(1000 GAL)	(AF)
	CITY																	
1	Monterey	7,918	266,136.80	566	215,865.04	1,533	310,347.83	0	0.00	289	120,095.24	21	3,816.22	0	0.00	10,327	916,261.13	2,811.90
2	Pacific Grove	5,846	198,431.41	388	64,946.75	511	65,085.19	1	3,329.57	72	15,794.74	13	372.85	0	0.00	6,830	347,960.51	1,067.85
3	Carmel	2,818	110,552.71	153	9,960.04	370	62,518.26	0	0.00	49	3,580.14	3	1,189.41	0	0.00	3,393	187,800.55	576.34
4	Seaside	5,562	212,609.56	286	62,734.48	588	76,044.00	0	0.00	69	15,898.78	8	42.18	1	48.17	6,514	367,377.17	1,127.44
5	Del Rey Oaks	726	23,999.15	4	269.32	64	6,652.31	0	0.00	7	64.93	1	0.00	0	0.00	803	30,985.71	95.09
7	Sand City	102	3,234.69	7	2,664.56	236	17,300.02	0	0.00	3	179.28	4	802.32	0	0.00	352	24,180.87	74.21
CITY TOTAL		22,973	814,964.31	1,403	356,440.20	3,303	537,947.61	1	3,329.57	489	155,613.10	50	6,222.97	1	48.17	28,219	1,874,565.92	5,752.83
	COUNTY																	
6	Mtry Co. CV	1,359	70,401.40	100	16,327.40	127	22,573.78	0	0.00	5	11,552.07	4	51.42	3	456.20	1,598	121,362.27	372.45
8	In Crml San. Dist	2,652	124,302.30	80	21,895.50	186	31,849.18	0	0.00	16	11,113.04	5	1,015.53	0	0.00	2,940	190,175.55	583.63
9	Out Crml San. Dist	1,885	97,970.75	100	21,042.81	195	58,612.69	0	0.00	22	6,199.25	5	9.35	0	0.00	2,207	183,834.85	564.17
A	Mtry Co. Monterey	277	14,512.62	10	1,291.49	4	320.59	1	31,716.76	6	7,183.74	0	0.00	0	0.00	297	55,025.20	168.87
C	MPCC DMF	2,032	94,314.56	10	694.62	55	22,353.16	1	48.17	4	266.70	0	0.00	1	1.12	2,104	117,678.32	361.14
D	Mtry Co. PB	736	79,206.68	14	2,469.01	55	28,886.94	1	11.60	2	159.66	4	5,908.85	0	0.00	812	116,642.74	357.96
G	Rancho Fiesta	23	1,769.88	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	23	1,769.88	5.43
H	Rancho Del Monte	416	25,637.73	15	1,313.46	3	240.54	0	0.00	0	0.00	0	0.00	0	0.00	434	27,191.73	83.45
J	PB - LCP	19	2,248.75	0	0.00	1	26.40	0	0.00	0	0.00	0	0.00	0	0.00	20	2,275.15	6.98
COUNTY TOTAL		9,399	510,364.68	330	65,034.28	625	164,863.28	3	31,776.53	55	36,474.46	19	6,985.15	4	457.32	10,434	815,955.69	2,504.08
	OTHER																	
F	Well Irrigation CV	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	5.38	1	13.30	3	18.68	0.06
OTHER TOTAL		0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	5.38	1	13.30	3	18.68	0.06
CV-SS-SCD TOTAL		**32,371**	**1,325,328.99**	**1,734**	**421,474.48**	**3,928**	**702,810.89**	**4**	**35,106.10**	**543**	**192,087.56**	**71**	**13,213.51**	**6**	**518.78**	**38,656**	**2,690,540.30**	8,256.96
E	Ryan Ranch	1	8.37	0	0.00	192	15,936.33	0	0.00	5	209.34	2	0.00	0	0.00	200	16,154.05	49.57
I	Hidden Hills	447	28,993.78	0	0.00	9	128.55	0	0.00	0	0.00	1	70.98	0	0.00	456	29,193.31	89.59
L	Bishop	340	25,595.07	0	0.00	60	10,503.09	0	0.00	0	0.00	13	51.75	0	0.00	413	36,149.91	110.94
RR-HH-Bishop Total		**788**	**54,597.23**	**0**	**0.00**	**260**	**26,567.97**	**0**	**0.00**	**5**	**209.34**	**16**	**122.73**	**0**	**0.00**	**1,069**	**81,497.27**	250.11
The number of Connections includes Fire Services														**All Jurisdictions =**		**39,725**	**2,772,037.57**	8,507.07

CALIFORNIA AMERICAN WATER

MONTEREY DISTRICT

CUSTOMERS & CONSUMPTION BY POLITICAL JURISDICTION

1000 Gallons

Oct 2017 to Sep 2018

CITY CODE	JURISDICTION	RESIDENTIAL			MULTI-RES			COMM/ IND /GOLF			GOLF COURSE		PUB AUTHORITY			OTHER			NON REVENUE			TOTAL	TOTAL	TOTAL
		CONNECTIONS	USE	AF	CONNECTIONS	USE	AF	CONNECTIONS	USE	AF	CONNECTIONS	USE	CONNECTIONS	USE	AF	CONNECTIONS	USE	AF	CONNECTIONS	USE	AF	CONNECTIONS	(1000 GAL)	(AF)
	CITY																							
1	Monterey	7,901	277,778.90	852.47	560	215,758.25	662.14	1,570	325,177.38	997.93	0	0.00	258	121,289.57	372.22	31	3,429.49	10.52	0	0.00	0.00	10,320	943,433.59	2,895.29
2	Pacific Grove	5,852	205,144.30	629.56	386	67,629.32	207.55	551	78,588.60	241.18			72	16,956.91	52.04	16	656.05	2.01	0	0.00	0.00	6,877	368,975.19	1,132.34
3	Carmel	2,815	117,195.57	359.66	152	10,401.30	31.92	402	62,228.22	190.97	0	0.00	49	3,771.35	11.57	2	484.10	1.49	0	0.00	0.00	3,420	194,080.53	595.61
4	Seaside	5,542	237,863.49	729.98	285	65,745.97	201.77	585	85,517.27	262.44	0	0.00	63	16,958.29	52.04	8	66.13	0.20	1	47.20	0.14	6,484	406,198.34	1,246.58
5	Del Rey Oaks	726	27,755.78	85.18	4	254.44	0.78	74	6,347.26	19.48	0	0.00	6	68.94	0.21	1	0.00	0.00	0	0.00	0.00	812	34,426.41	105.65
7	Sand City	102	3,698.36	11.35	7	2,912.30	8.94	246	19,463.83	59.73	0	0.00	3	158.33	0.49	6	635.94	1.95	0	0.00	0.00	363	26,868.77	82.46
CITY TOTAL		22,938	869,436.40	**2,668.20**	1,394	362,701.58	**111.31**	3,427	577,322.55	**1,771.74**	0	0.00	451	159,203.39	**488.58**	63	5,271.70	**16.18**	1	47.20	**0.14**	28,275	1,973,982.82	6,057.93
	COUNTY																							
6	Mtry Co. CV	1,354	76,135.75	233.65	101	14,904.60	45.74	135	22,925.85	70.36	0	0.00	5	14,717.95	45.17	6	1,499.38	4.60	3	390.82	1.20	1,604	130,574.35	400.72
8	In Crml San. Dist	2,681	137,482.72	421.92	81	23,140.59	71.02	202	32,958.04	101.14	0	0.00	16	14,584.71	44.76	3	902.95	2.77	0	0.00	0.00	2,983	209,069.01	641.61
9	Out Crml San. Dist	1,882	106,410.06	326.56	99	22,153.20	67.99	213	58,289.92	178.89	0	0.00	22	16,055.58	49.27	6	42.11	0.13	0	0.00	0.00	2,222	202,950.87	622.83
A	Mtry Co. Monterey	253	13,161.75	40.39	10	1,096.99	3.37	4	27,654.90	84.87	1	0.00	5	7,446.85	22.85	0	0.00	0.00	0	0.00	0.00	272	49,360.49	151.48
C	MPCC DMF	2,010	100,222.20	307.57	10	773.73	2.37	61	23,882.21	73.29	1	0.00	4	258.35	0.79	0	0.00	0.00	1	0.00	0.00	2,087	125,136.49	384.03
D	Mtry Co. PB	733	90,136.76	276.62	15	2,841.27	8.72	63	28,024.60	86.00	1	0.00	2	204.49	0.63	5	1,897.75	5.82	0	0.00	0.00	819	123,104.87	377.79
G	Rancho Fiesta	23	2,012.07	6.17	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	23	2,012.07	6.17
H	Rancho Del Monte	415	26,988.79	82.83	15	1,470.65	4.51	4	330.52	1.01	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	434	28,789.96	88.35
J	PB - LCP	19	2,734.00	8.39	0	0.00	0.00	1	109.19	0.34	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	20	2,843.19	8.73
COUNTY TOTAL		9,370	555,284.10	**1,704.10**	331	66,381.03	**203.72**	682	194,175.22	**595.90**	3	0.00	54	53,267.93	**163.47**	20	4,342.19	13.33	4	390.82	**1.20**	10,463	873,841.29	2,681.72
	OTHER																							
F	Well Irrigation CV	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0.00	0.00	2	0.90	0.00	1	10.55	0.03	3	11.44	0.04
OTHER TOTAL		0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0.00	0.00	2	0.90	0.00	1	10.55	0.03	3	11.44	0.04
CV-SS-SCD TOTAL		**32,308**	**1,424,720.50**	**0.00**	**1,725**	**429,082.61**	**1,316.81**	**4,109**	**771,497.77**	**2,367.64**	**3**	**0.00**	**505**	**212,471.32**	**652.05**	**85**	**9,614.79**	**0.01**	**6**	**448.57**	1.38	**38,740**	**2,847,835.55**	**8,739.69**
E	Ryan Ranch	1	3.21	0.01	0	0.00	0.00	204	14,100.67	43.27	0	0.00	5	290.43	0.89	3	0.00	0.00	0	0.00	0.00	212	14,394.31	44.17
I	Hidden Hills	444	31,442.85	96.49	0	0.00	0.00	10	624.10	1.92	0	0.00	0	0.00	0.00	1	75.16	0.23	0	0.00	0.00	454	32,142.12	98.64
L	Bishop	318	25,750.64	79.03	0	0.00	0.00	55	9,459.29	29.03	0	0.00	0	0.00	0.00	12	30.89	0.09	0	0.00	0.00	385	35,240.82	108.15
RR-HH-Bishop Total		**762**	**57,196.70**	**175.53**	**0**	**0.00**	**0.00**	**269**	**24,184.06**	**74.22**	**0**	**0.00**	**5**	**290.43**	**0.89**	**16**	**106.05**	**0.33**	**0**	**0.00**	0.00	**1,051**	**81,777.25**	250.97
																			All Jurisdictions =			**39,791**	**2,929,612.80**	8,990.65

CALIFORNIA AMERICAN WATER

MONTEREY DISTRICT

CUSTOMERS & CONSUMPTION BY POLITICAL JURISDICTION

1000 Gallons

Oct 2016 to Sep 2017

CITY CODE	JURISDICTION	RESIDENTIAL		MULTI-RES		COMM/ IND		GOLF COURSE		PUB AUTHORITY		OTHER		NON REVENUE		TOTAL	TOTAL	TOTAL
		CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	USE	CONNECTIONS	(1000 GAL)	(AF)
	CITY																	
1	Monterey	7,942	277,579.23	565	225,080.62	1,519	319,939.68	0	0.00	290	112,545.80	22	1,763.62	0	0.00	10,338	936,908.95	2,875.27
2	Pacific Grove	5,833	198,475.25	386	66,975.09	508	69,155.12	1	24,219.76	72	17,896.24	12	637.29	0	0.00	6,813	377,358.75	1,158.07
3	Carmel	2,810	106,452.87	152	10,343.02	374	60,795.57	0	0.00	49	3,459.68	2	200.25	0	0.00	3,386	181,251.39	556.24
4	Seaside	5,542	244,682.86	289	72,288.53	580	85,322.28	0	0.00	68	16,459.85	8	100.82	1	4.85	6,488	418,859.19	1,285.43
5	Del Rey Oaks	727	28,243.27	4	317.00	64	6,174.92	0	0.00	7	62.30	1	0.00	0	0.00	803	34,797.49	106.79
7	Sand City	98	3,453.49	7	2,391.33	243	18,807.64	0	0.00	3	126.49	4	607.28	0	0.00	355	25,386.23	77.91
CITY TOTAL		22,951	858,886.96	1,403	377,395.58	3,288	560,195.21	1	24,219.76	490	150,550.36	49	3,309.27	1	4.85	28,183	1,974,561.99	6,059.71
	COUNTY																	
6	Mtry Co. CV	1,355	74,461.10	100	15,492.06	125	18,059.67	0	0.00	5	12,434.11	5	493.60	3	377.57	1,593	121,318.10	372.31
8	In Crml San. Dist	2,681	135,774.49	82	22,783.26	182	31,085.23	0	0.00	16	10,552.69	2	1,180.34	0	0.00	2,963	201,376.00	618.00
9	Out Crml San. Dist	1,883	100,926.42	98	23,996.27	199	54,996.19	0	0.00	22	10,185.27	5	39.79	0	0.00	2,207	190,143.94	583.53
A	Mtry Co. Monterey	275	13,672.91	11	1,284.42	4	303.83	1	30,644.07	5	6,588.50	0	0.00	0	0.00	296	52,493.72	161.10
C	MPCC DMF	2,004	92,776.59	10	605.68	57	24,700.04	1	52.88	4	254.10	0	0.00	1	0.00	2,077	118,389.28	363.32
D	Mtry Co. PB	722	74,266.70	15	2,706.19	57	25,318.30	1	6.96	2	194.01	4	826.24	0	0.00	801	103,318.39	317.07
G	Rancho Fiesta	23	1,422.88	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	23	1,422.88	4.37
H	Rancho Del Monte	417	27,270.26	14	1,299.21	4	238.96	0	0.00	0	0.00	0	0.00	0	0.00	435	28,808.43	88.41
J	PB - LCP	20	2,763.32	0	0.00	1	63.06	0	0.00	0	0.00	0	0.00	0	0.00	21	2,826.38	8.67
COUNTY TOTAL		9,380	523,334.67	329	68,167.09	629	154,765.26	3	30,703.90	55	40,208.68	16	2,539.96	4	377.57	10,416	820,097.12	2,516.79
	OTHER																	
F	Well Irrigation CV	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	3.22	1	89.68	3	92.90	0.29
OTHER TOTAL		0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	3.22	1	89.68	3	92.90	0.29
CV-SS-SCD TOTAL		**32,332**	**1,382,221.64**	**1,732**	**445,562.67**	**3,918**	**714,960.47**	**4**	**54,923.66**	**544**	**190,759.04**	**67**	**5,852.44**	**6**	**472.11**	**38,602**	**2,794,752.00**	8,576.78
E	Ryan Ranch	0	0.00	0	0.00	179	16,265.54	0	0.00	5	283.93	2	0.00	0	0.00	185	16,549.47	50.79
I	Hidden Hills	442	31,168.23	0	0.00	8	53.85	0	0.00	0	0.00	1	71.66	0	0.00	451	31,293.73	96.04
L	Bishop	321	29,116.99	0	0.00	54	10,048.52	1	0.00	0	0.00	11	61.71	0	0.00	387	39,227.21	120.38
RR-HH-Bishop Total		**763**	**60,285.21**	**0**	**0.00**	**241**	**26,367.91**	**1**	**0.00**	**5**	**283.93**	**14**	**133.37**	**0**	**0.00**	**1,023**	**87,070.42**	267.21
														All Jurisdictions =		**39,625**	**2,881,822.42**	8,843.99

Consumption by Political Jurisdiction
1000 Gallons
Water Years 2017, 2018, 2019 Combined

	Monterey	Pacific Grove	Carmel-by-the-Sea	Seaside	Del Rey Oaks	Sand City	County	TOTAL
Total	2,843,701.50	1,094,294.45	563,132.47	1,192,434.70	100,209.61	76,435.87	2,713,264.22	8,583,472.82
Percent of Total								
Residential	1,478,210.42	801,602.12	364,905.51	895,924.89	80,838.96	18,354.73	1,960,633.41	5,600,470.04
Percent of Total	17.2%	9.3%	4.3%	10.4%	0.9%	0.2%	22.8%	
Non-Residential	1,365,491.08	292,692.33	198,226.96	296,509.81	19,370.65	58,081.14	752,630.81	2,983,002.78
Percent of Total	15.9%	3.4%	2.3%	3.5%	0.2%	0.7%	8.8%	

Notes:

1) Source: Cal-Am Customers & Consumption by Political Jurisdiction annual reports
2) Residential includes "Residential" and "Multi-Res" categories
3) Non-Residential is Total minus Residential
4) Monterey includes Ryan Ranch
5) County includes Hidden Hills and Bishop

Allocation of Production
Based on 5-Year Average (2017-2021)
Water Years 2017, 2018, 2019 Combined

	Monterey	Pacific Grove	Carmel-by-the-Sea	Seaside	Del Rey Oaks	Sand City	County	TOTAL
Residential	1,674.80	908.21	413.43	1,015.08	91.59	20.80	2,221.38	6,345.28
Non-Residential	1,547.09	331.62	224.59	335.94	21.95	65.81	852.72	3,379.72

Notes: Based on 5-year average production of: 9,725 AF

Water Required to Meet
AMBAG Regional Growth Forecast

Water Required for Population Growth

	Monterey	Pacific Grove	Carmel-by-the-Sea	Seaside	Del Rey Oaks	Sand City	County	TOTAL
Population in 2020	28,170	15,265	3,949	33,537	1,662	385	8,916	91,884
Population in 2045	29,639	15,817	3,984	38,316	2,650	1,198	9,916	101,520
Increase	5.2%	3.6%	0.9%	14.2%	59.4%	211.2%	11.2%	10.5%
Acre-Feet in 2020	1,675	908	413	1,015	92	21	2,221	6,345
Acre-Feet by 2045	1,762	941	417	1,160	146	65	2,471	6,961
AF Served by Others	9	-	-	72	11	-	75	167
Net AF in 2045	1,753	941	417	1,087	135	65	2,396	6,795

Water Required for Employment Growth

	Monterey	Pacific Grove	Carmel-by-the-Sea	Seaside	Del Rey Oaks	Sand City	County	TOTAL
Jobs in 2020	40,989	8,016	3,566	10,476	748	2,092	4,300	70,187
Jobs in 2045	45,509	8,445	3,915	11,543	834	2,259	4,721	77,226
Increase	11.0%	5.4%	9.8%	10.2%	11.5%	8.0%	9.8%	10.0%
Non-Residential AF in 2020	1,547	332	225	336	22	66	853	3,380
Non-Residential AF in 2045	1,718	349	247	370	24	71	936	3,716
Increase	171	18	22	34	3	5	83	336

Attachment E

REGIONAL HOUSING NEEDS ALLOCATION

Association of Bay Area Governments

Frequently Asked Questions about RHNA

Topics:

- Regional Housing Needs Allocation (RHNA) Overview
- Regional Housing Needs Determination (RHND) from HCD
- RHNA Methodology
- ABAG Housing Methodology Committee
- Connections between RHNA and Plan Bay Area 2050
- RHNA Subregions
- RHNA and Local Jurisdictions

Regional Housing Needs Allocation (RHNA) Overview

What is RHNA?

Local housing is enshrined in state law as a matter of "vital statewide importance" and, since 1969, the State of California has required that all local governments (cities, towns and counties, also known as local jurisdictions) adequately plan to meet the housing needs of everyone in our communities. To meet this requirement, each city or county must develop a Housing Element as part of its General Plan (the local government's long-range blueprint for growth) that shows how it will meet its community's housing needs. There are many laws that govern this process, and collectively they are known as Housing Element Law.

The Regional Housing Need Allocation (RHNA) process is the part of Housing Element Law used to determine how many new homes, and the affordability of those homes, each local government must plan for in its Housing Element. This process is repeated every eight years, and for this cycle the Bay Area is planning for the period from 2023 to 2031.

How does RHNA assist in addressing the Bay Area's housing crisis?

The Bay Area's housing affordability crisis is decades in the making. State law is designed to match housing supply with demand—particularly for affordable homes. Each new RHNA cycle presents new requirements to address dynamic housing markets, which in recent years have seen demand dramatically outstrip supply across all affordability levels.

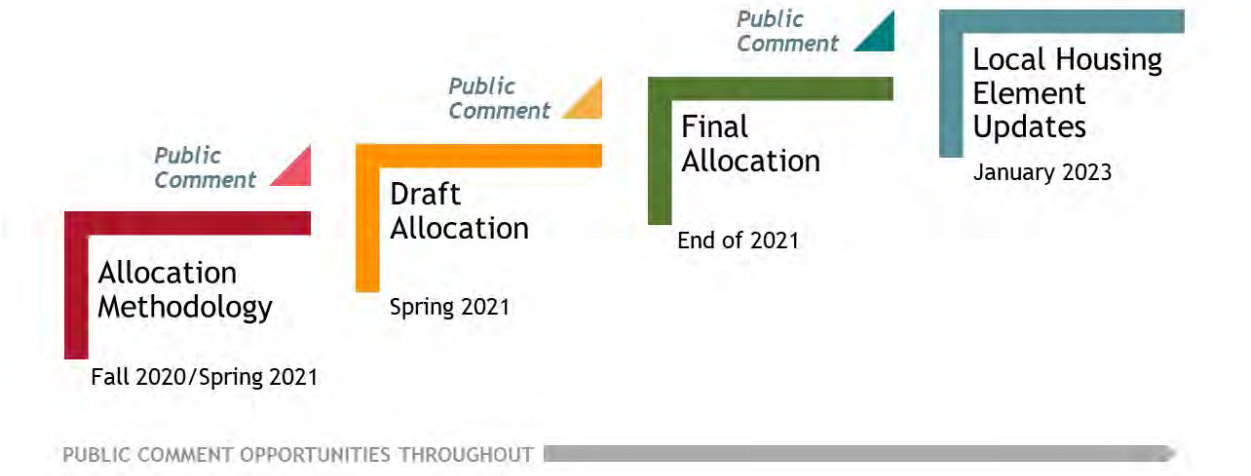
RHNA provides a local government with a minimum number of new homes across all income levels for which it must plan in its Housing Element. The Housing Element must include sites zoned for enough capacity to meet the RHNA goals as well as policies and strategies to expand housing choices and increase housing affordability.

Who is responsible for RHNA?

Responsibility for completing RHNA is shared among state, regional, and local governments:

- The **role of the State** is to identify the total number of homes for which each region in California must plan in order to meet the housing needs of people across the full spectrum of income levels, from housing for very low-income households all the way to market rate housing. This is developed by the California Department of Housing and Community Development (HCD) and is known as the Regional Housing Need Determination (RHND).
- The **role of the region** is to allocate a share of the RHND to each local government in the region. As the Council of Governments (COG) for the nine-county Bay Area, the Association of Bay Area Governments (ABAG) is responsible for developing the methodology for sharing the RHND among all cities, towns, and counties in the region. ABAG does this in conjunction with a committee of elected officials, city and county staff, and stakeholders called the Housing Methodology Committee (HMC).
- The **role of local governments** is to participate in the development of the allocation methodology and to update their Housing Elements and local zoning to show how they will accommodate their share of the RHND, following the adoption of the RHNA methodology.

What are the steps in the RHNA process?



Conceptually, RHNA starts with the Regional Housing Needs Determination provided by HCD, which is the total number of housing units the Bay Area needs, by income group. The heart of ABAG's work on RHNA is developing the methodology to allocate a portion of housing needs to each city, town, and county in the region. ABAG has convened a Housing Methodology Committee made up of local elected officials and staff and stakeholders to advise staff on the proposed methodology that ABAG will release for public comment in fall 2020. Following that milestone, ABAG will then develop a draft methodology to send to HCD for its review in early 2021.

After ABAG adopts the final methodology in spring 2021, it is used to develop a draft allocation for every local government in the Bay Area. A local government or HCD can appeal any local government's allocation. After ABAG takes action on the appeals, it will issue the final allocation by the end of 2021. Local governments must update Housing Elements by January 2023, including identifying sites that are zoned with enough capacity to meet the RHNA allocation. ABAG's role in the RHNA process ends once it has allocated a share of the Regional Housing Needs Determination (RHND) to each local government in the Bay Area; HCD reviews and approves local Housing Elements.

What's the timeline for completing RHNA?

The RHNA process is currently underway and will be complete by the end of 2021. Local governments will then have until January 2023 to update their Housing Elements. The proposed timing for the key milestones in the RHNA process is shown below:

ABAG 2023-2031 RHNA and Plan Bay Area 2050 Key Milestones	Proposed Deadline
Housing Methodology Committee kick-off	October 2019
Subregions form	February 2020
HCD Regional Housing Needs Determination	Summer 2020
Proposed RHNA methodology, draft subregion shares	Fall 2020
Final subregion shares	December 2020
Draft RHNA methodology to HCD for review	Winter 2021
Final RHNA methodology, draft allocation	Spring 2021
RHNA appeals	Summer 2021
Final RHNA allocation	End of 2021
Housing Element due date	January 2023

This is the 6th cycle for RHNA. What's different this time?

Recent legislation will result in the following key changes for this RHNA cycle:

- It is expected there will be a higher total regional housing need. HCD's identification of the region's total housing needs has changed to account for unmet existing need, rather than only projected housing need. HCD now must consider overcrowded households, cost burdened households (those paying more than 30% of their income for housing), and a target vacancy rate for a healthy housing market (with a minimum of 5%).

- RHNA and local Housing Elements must affirmatively further fair housing. According to HCD, achieving this objective includes preventing segregation and poverty concentration as well as increasing access to areas of opportunity. HCD has mapped Opportunity Areas and has developed guidance for jurisdictions about how to address affirmatively furthering fair housing in Housing Elements. As required by Housing Element Law, ABAG has surveyed local governments to understand fair housing issues, strategies, and actions across the region.
- There will be greater HCD oversight of RHNA. ABAG and subregions must now submit the draft allocation methodology to HCD for review and comment. HCD can also appeal a jurisdiction's draft allocation.
- Identifying Housing Element sites for affordable units will be more challenging. There are new limits on the extent to which jurisdictions can reuse sites included in previous Housing Elements and increased scrutiny of small, large, and non-vacant sites when these sites are proposed to accommodate units for very low- and low-income households.

How can I be more involved in the RHNA process?

Public participation is encouraged throughout the RHNA process especially at public meetings and during official public comment periods following the release of discussion documents and board decisions. Visit the ABAG website to:

- Learn about the Housing Methodology Committee
- View upcoming meetings
- Sign up for the RHNA mailing list

Is ABAG's prior RHNA available to review?

Yes, you can find more information about the 2015-2023 RHNA on the ABAG website. You can also view documents from the 2007-2014 RHNA and 1999-2006 RHNA.

Regional Housing Needs Determination (RHND) from HCD

What is the Regional Housing Needs Determination?

The California Department of Housing and Community Development (HCD) identifies the total number of homes for which each region in California must plan in order to meet the housing needs of people at all income levels. The total number of housing units from HCD is separated into four income categories that cover everything from housing for very low-income households all the way to market rate housing. ABAG is responsible for developing a methodology to allocate a portion of this housing need to every local government in the Bay Area.

The four income categories included in the RHND are:

- Very Low Income: 0-50% of Area Median Income
- Low Income: 50-80% of Area Median Income
- Moderate Income: 80-120% of Area Median Income
- Above Moderate Income: 120% or more of Area Median Income

What will the actual RHND and RHNA numbers look like this cycle?

Although we expect the RHND will be significantly higher than prior cycles, we do not have this information at this time. We will receive the RHND from HCD in summer 2020; the methodology which will determine each local government's share of housing needs is currently being developed and is slated for release in fall 2020.

As a point of reference for how much the RHND might increase, for the current (6th) cycle, the Sacramento region received a RHND approximately 1.3 times higher than the previous cycle, while the Los Angeles region received a RHND approximately 3 times higher than the previous cycle. For the 5th RHNA cycle, the Bay Area's RHND was 187,990.

How does HCD develop the RHND?

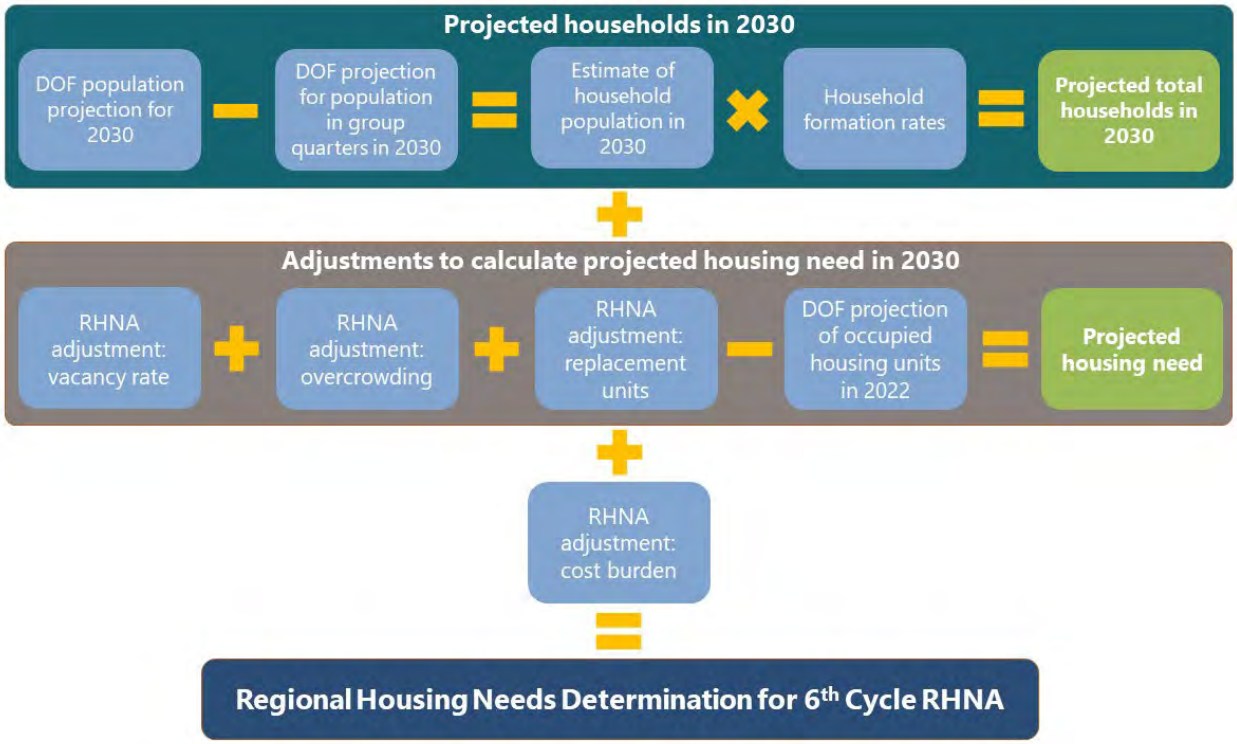
HCD is responsible for determining the number of housing units for which each region must plan, known as the Regional Housing Needs Determination (RHND). The RHND is based on a population forecast for the region from the California Department of Finance (DOF) and the application of specific adjustments to determine the total amount of housing needs for the region.

The adjustments are a result of recent legislation that sought to incorporate an estimate of existing housing need by applying factors related to:

- A target vacancy rate for a healthy housing market (defined as no less than 5 percent),
- The rate of overcrowding, which is defined as having more than one person per room in each room in a dwelling.
- The share of cost burdened households, which is defined as households paying more than 30% of household income on housing costs.

The RHNA process only considers the needs of the population in households who are housed in the regular housing market, and excludes the population living in group quarters, which are non-household dwellings, such as jails, nursing homes, dorms, and military barracks. HCD uses the age cohorts of the forecasted population to understand the rates at which people are expected to form households, which can vary for people at different stages of life. This results in the estimate of the total number of households that will need a housing unit in 2030 (which is the end date of the projection period for the Bay Area's RHNA cycle).

HCD Process for Identifying Regional Housing Needs Determination (RHND)



The total number of projected households is then adjusted using the factors related to vacancy rate, overcrowding, and an estimate of the need for replacement housing for units that were demolished or lost. This results in a forecast of the number of housing units that will be needed to house all households in the region in 2031. The number of existing occupied housing units is subtracted from the total number of housing units needed, which results in the number of additional housing units necessary to meet the housing need. The final step is an adjustment related to cost-burdened households, which results in the RHND for the region.

RHNA Methodology

What is the RHNA methodology?

At its core, RHNA is about connecting regional housing needs with the local planning process and ensuring local Housing Elements work together to address regional housing challenges. Working with the Housing Methodology Committee, ABAG develops a methodology, or formula, that shares responsibility for accommodating the Bay Area's Regional Housing Needs Determination (RHND) by quantifying the number of housing units, separated into four income categories, that will be assigned to each city, town, and county to incorporate into its Housing Element.

The four income categories included in the RHND are:

- Very Low Income: 0-50% of Area Median Income
- Low Income: 50-80% of Area Median Income

- Moderate Income: 80-120% of Area Median Income
- Above Moderate Income: 120% or more of Area Median Income

The allocation formula is made up of factors that use data for each jurisdiction in the region to determine each jurisdiction's share of the total housing need. The allocation formula assigns units based on relative relationships between jurisdictions within the region. For example, if there is a factor to allocate units based on access to jobs, then a jurisdiction with many jobs will be allocated more units and a jurisdiction with fewer jobs will be allocated fewer units.

What are the objectives and factors that must be considered in the RHNA methodology?
The RHNA objectives provide the guiding framework for how ABAG must develop the methodology. ABAG is required to demonstrate how its methodology furthers each of the objectives. The RHNA factors include a longer list of considerations that must be incorporated into the methodology to the extent that sufficient data is available.

Summary of RHNA objectives [from Government Code §65584(d)]:

1. Increase housing supply and mix of housing types, with the goal of improving housing affordability and equity in all cities and counties within the region.
2. Promote infill development and socioeconomic equity; protect environmental and agricultural resources; encourage efficient development patterns; and achieve greenhouse gas reduction targets.
3. Improve intra-regional jobs-to-housing relationship, including the balance between low-wage jobs and affordable housing units for low-wage workers in each jurisdiction.
4. Balance disproportionate household income distributions (more high-income allocation to lower-income areas, and vice-versa)
5. Affirmatively further fair housing

Summary of RHNA factors [from Government Code §65584.04(d)]:

1. Existing and projected jobs and housing relationship, particularly low-wage jobs and affordable housing
2. Lack of capacity for sewer or water service due to decisions outside a jurisdiction's control
3. The availability of land suitable for urban development
4. Lands protected from urban development under existing federal or state programs
5. County policies to preserve prime agricultural land

6. The distribution of household growth assumed for regional transportation plans and opportunities to maximize use of public transportation and existing transportation infrastructure
7. Agreements between a county and cities in a county to direct growth toward incorporated areas of the county
8. The loss of units in assisted housing developments as a result of expiring affordability contracts.
9. The percentage of existing households paying more than 30 percent and more than 50 percent of their income in rent
10. The rate of overcrowding
11. The housing needs of farmworkers
12. The housing needs generated by the presence of a university within the jurisdiction
13. The housing needs of individuals and families experiencing homelessness
14. The loss of units during a state of emergency that have yet to be rebuilt or replaced at the time of the analysis
15. The region's greenhouse gas emissions targets provided by the State Air Resources Board

What does it mean to "affirmatively further fair housing"?

For the 2023-2031 RHNA, recent legislation added a new objective that requires the RHNA plan to "affirmatively further fair housing." According to Government Code Section 65584(e), this means:

> "Taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics. Specifically, affirmatively furthering fair housing means taking meaningful actions that, taken together, address significant disparities in housing needs and in access to opportunity, replacing segregated living patterns with truly integrated and balanced living patterns, transforming racially and ethnically concentrated areas of poverty into areas of opportunity, and fostering and maintaining compliance with civil rights and fair housing laws."

In addition to this requirement for promoting fair housing as an outcome for RHNA, statutes required ABAG to collect information about fair housing issues, strategies, and actions in its survey of local jurisdictions about data to inform the development of the RHNA allocation methodology.

Lastly, a local jurisdiction's Housing Element must also affirmatively further fair housing and include a program that establishes goals and actions to do so. HCD has developed guidance for jurisdictions about how to address affirmatively furthering fair housing in Housing Elements.

Does RHNA dictate how local governments meet their communities' housing needs or where new housing goes within a given city or town?

It is important to note the primary role of the RHNA methodology is to encourage a pattern of housing growth for the Bay Area. The final result of the RHNA process is the allocation of housing units by income category to each jurisdiction. It is in the local Housing Element that decisions about where future housing units could be located and the policies and strategies for addressing a community's specific housing needs are made. Local governments will include strategies related to issues such as addressing homelessness, meeting the needs of specific populations, affirmatively furthering fair housing, or minimizing displacement when they develop their Housing Elements. Although the RHNA methodology may include factors that conceptually assign housing to a particular geography, such as near a transit stop or in proximity to jobs, the resulting allocation from ABAG goes to the jurisdiction as a whole. It is up to local governments to use their Housing Elements to select the specific sites that will be zoned for housing.

The following table distinguishes between the narrow scope of RHNA and the broader requirements for jurisdictions' Housing Elements:

RHNA	LOCAL HOUSING ELEMENTS
Determines how many new homes each local jurisdiction must plan for in its Housing Element.	Includes goals, policies, quantified objectives, financial resources, and constraints for the preservation, improvement, and development of housing for all income levels.
Housing allocation is for an entire jurisdiction – housing is not allocated to specific sites or geographies within a jurisdiction.	Identifies sites for housing and provides an inventory of land suitable and available for residential development, including vacant sites and sites having potential for redevelopment.
A jurisdiction's housing allocation is divided across four income groups: very low-, low-, moderate-, and above moderate-income.	Analyzes special housing needs, such as those of the elderly; persons with disabilities, including a developmental disability; large families; farmworkers; families with female heads of households; and families and persons in need of emergency shelter.
Beyond allocation of housing units by income group, does not address housing needs of specific population groups nor include policy recommendations for addressing those needs.	Must demonstrate local efforts to remove governmental and nongovernmental constraints that hinder locality from meeting the need for housing for persons with disabilities, supportive housing, transitional housing, and emergency shelters.
	Analyzes existing affordable units at risk of converting to market-rate due to expiring subsidies or affordability contracts.
	Assesses existing fair housing issues and strategies for affirmatively furthering fair housing.

ABAG Housing Methodology Committee

What is the Housing Methodology Committee?
For the past several RHNA cycles, ABAG has convened an ad-hoc Housing Methodology Committee (HMC) to advise ABAG staff on the RHNA allocation methodology. The HMC for the 6th Cycle was convened in October 2019. The HMC is comprised of local elected officials and staff from every county in the Bay Area as well as stakeholder representatives selected by ABAG staff from a diverse applicant pool:

- 9 local government elected officials (one from each Bay Area county)
- 12 local government housing or planning staff (at least one from every county)
- 16 regional stakeholders representing diverse perspectives, from equity and open space to public health and public transit
- 1 partner from state government

View the HMC roster at https://abag.ca.gov/sites/default/files/hmc_roster_january_2020.pdf.

Why is the Housing Methodology Committee important?
ABAG's Housing Methodology Committee approach stands out compared to most other large Councils of Governments, going beyond the legal requirements by convening a forum where local elected officials, local government staff, stakeholder representatives, and the public can talk about the process together to inform the housing methodology.

The Housing Methodology Committee and its large stakeholder network is a key part of ABAG's approach to creating the RHNA allocation methodology. Through the HMC, ABAG staff seek to facilitate dialogue and information-sharing among local government representatives and stakeholders from across the Bay Area with crucial expertise to enable coordinated action to address the Bay Area's housing crisis. As ABAG strives to advance equity and affirmatively further fair housing, the agency seeks to ensure that a breadth of voices is included in the methodology process.

Connections between RHNA and Plan Bay Area 2050

How are RHNA and Plan Bay Area 2050 related?
Plan Bay Area 2050 is the Bay Area's next long-range regional plan for transportation, housing, the economy, and the environment, focused on resilient and equitable strategies for the next 30 years. Anticipated to be adopted in fall 2021, Plan Bay Area 2050 will establish a blueprint for future growth and infrastructure. Plan Bay Area 2050 must meet or exceed a wide range of federal and state requirements, including a per-capita greenhouse gas reduction target of 19 percent by 2035. Upon adoption by MTC and ABAG, it will serve as the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the San Francisco Bay Area.

By law, the RHNA Plan is required to be consistent with the development pattern from Plan Bay Area 2050. These two planning processes seek to address the Bay Area's housing needs over different time horizons: Plan Bay Area 2050 has a planning horizon of 2050, while the 6th cycle of RHNA addresses the need to address short-term housing needs, from 2023 to 2031. To achieve the required consistency, both the overall housing growth for the region, as well as housing growth for each jurisdiction, must be greater in the long-range plan than over the eight-year RHNA cycle.

Is Plan Bay Area 2050 used as part of the RHNA process?
In past RHNA cycles, ABAG used its long-range housing, population, and job forecast as an input into the RHNA methodology. However, this approach is not required by Housing Element Law. For the 6th cycle of RHNA, the Housing Methodology Committee (HMC) is still considering whether or not to incorporate data from the Plan Bay Area 2050 Blueprint into the RHNA methodology. Some of the options the HMC has discussed are:

1. Using the forecasted development pattern from the Blueprint as a baseline input into the RHNA methodology
2. Using a hybrid approach that uses the forecasted development pattern from the Blueprint along with additional factors to represent policy goals that are underrepresented in the Blueprint to direct RHNA allocations
3. Not using forecasted data from the Blueprint, but include factors that align with the policies and strategies in the Blueprint to direct RHNA allocations.

HMC members expressed interest and some concerns in considering use of the Plan in the methodology. While the strategies integrated into the Draft Blueprint were adopted in February 2020, the HMC is awaiting further details on the outputs of the Draft Blueprint modeling, which are anticipated in summer 2020. At that time, they will make a determination on if and how to integrate the Plan Bay Area 2050 Blueprint into the RHNA methodology. If not, they may need to adjust factors and weights to achieve consistency under Option 3 above.

RHNA Subregions

What is a subregion?
Housing Element Law allows two or more jurisdictions to form a "subregion" to conduct a parallel RHNA process to allocate the subregion's housing need among its members. The subregion process allows for greater collaboration among jurisdictions, potentially enabling RHNA allocations that are more tailored to the local context as well as greater coordination of local housing policy implementation. A subregion is responsible for conducting its own RHNA process that meets all of the statutory requirements related to process and outcomes, including developing its own RHNA methodology, allocating a share of need to each member jurisdiction,

and conducting its own appeals process. The subregion's final allocation must meet the same requirements as the regional allocation: it must further the statutory objectives, have considered the statutory factors, and be consistent with the development pattern of the SCS.

What subregions have formed for the 6th Cycle of RHNA in the Bay Area?
ABAG has received notification of formation of two subregions:

1. ***Napa County***: includes City of American Canyon, City of Napa, Town of Yountville, and the County of Napa *(does not include City of Calistoga or City of St. Helena)*
2. ***Solano County***: includes City of Benicia, City of Dixon, City of Fairfield, City of Rio Vista, City of Suisun City, City of Vacaville, City of Vallejo, and County of Solano

Can a jurisdiction withdraw from a subregion?
Consistent with ABAG's approach for previous RHNA cycles, a jurisdiction may withdraw from a subregion without causing the dissolution of the entire subregion. If a jurisdiction withdraws from the subregion, the subregion's share of housing needs will be reduced by the number of units the withdrawing jurisdiction would receive from the most current version of ABAG's methodology available at the time when the jurisdiction decides to withdraw. The withdrawing member will then become part of the region's RHNA process, and it would receive its allocation based on the methodology adopted by ABAG.

RHNA AND LOCAL JURISDICTIONS

How are local jurisdictions involved in RHNA? Do they help create the housing methodology?
Elected officials and staff from each county are on the Housing Methodology Committee (HMC) to represent the jurisdictions in that county. The HMC will make recommendations about the allocation methodology to the ABAG Regional Planning Committee (RPC), and the RPC will make recommendations to the ABAG Executive Board, which will take action at key points in the RHNA process. Local governments will have the opportunity to comment on the proposed and draft methodology, both in written comments and at public meetings. There will also be an opportunity for local governments to file appeals on the draft allocations.

How does RHNA impact local jurisdictions' general plans? What is a Housing Element?
California's Housing Element Law states that "designating and maintaining a supply of land and adequate sites suitable, feasible, and available for the development of housing sufficient to meet the locality's housing need for all income levels is essential to achieving the state's housing goals." Once a city, town or county receives its RHNA allocation, it must then update the Housing Element of its general plan and zoning to demonstrate how it will accommodate all of the units assigned for each income category. General plans serve as a local government's blueprint for how the city, town or county will grow and develop. There are seven elements that

all jurisdictions are required to include in the General Plan: land use, transportation, conservation, noise, open space, safety, and housing.

What agency is responsible for the certification of Housing Elements?
ABAG's role in the RHNA process ends once it has allocated a share of the Regional Housing Needs Determination (RHND) to each local government in the Bay Area. The California Department of Housing and Community Development (HCD) reviews and approves Housing Elements and is responsible for all other aspects of enforcing Housing Element Law.

Is there any funding and technical assistance available to assist local jurisdictions in creating their Housing Elements?
In the 2019-20 Budget Act, Governor Gavin Newsom allocated $250 million for all regions, cities, and counties to do their part by prioritizing planning activities that accelerate housing production to meet identified needs of every community. With this allocation, HCD established the Local Early Action Planning Grant Program (LEAP) with approximately $25.6 million expected to come to cities and counties in the Bay Area and the Regional Early Action Planning Grant Program (REAP) with $23.9 million expected to come to ABAG. The LEAP program augments HCD's SB2 Planning Grants which have provided approximately $24 million in funding to localities in the Bay Area. ABAG is currently designing its REAP program to provide in-depth technical assistance to localities.

Some individuals in the Bay Area view their jurisdictions as "built out." How might communities with little to no vacant land meet their respective housing allocations?
Large and small communities throughout the Bay Area have successfully identified under-utilized, infill sites for housing development. In past RHNA cycles, numerous Bay Area communities were able to meet their housing allocation exclusively through the identification of infill sites to provide for future housing needs. Encouraging the development of Accessory Dwelling Units (ADUs) is another strategy many Bay Area communities have used to add more housing choices for residents.

Will my jurisdiction be penalized if we do not plan for enough housing?
State Housing Element Law requires that jurisdictions plan for all types of housing based on the allocations they receive from the RHNA process. The state requires this planning, in the form of having a compliant housing element, and submitting housing element annual progress reports, as a threshold or points-related requirement for certain funding programs (SB 1 Sustainable Community Planning Grants, SB 2 Planning Grants and Permanent Local Housing Allocation, etc.). Late submittal of a housing element can result in a jurisdiction being required to submit a four-year update to their housing element.

HCD may refer jurisdictions to the Attorney General if they do not have a compliant housing element, fail to comply with their HCD-approved housing element, or violate housing element

law, the housing accountability act, density bonus law, no net loss law, or land use discrimination law. The consequences of those cases brought by the Attorney General are up to the courts, but can include financial penalties.

In addition, as the housing element is one of the required components of the general plan, a jurisdiction without a compliant housing element, may risk legal challenges to their general plan from interested parties outside of HCD.

Local governments must also implement their commitments from the housing element, and the statute has several consequences for the lack of implementation. For example, failure to rezone in a timely manner may impact a local government's land use authority and result in a carryover of RHNA to the next cycle. Failure to implement programs can also influence future housing element updates and requirements, such as program timing. HCD may investigate any action or lack of action in the housing element.

Will my jurisdiction be penalized if we do not build enough housing?
For jurisdictions that did not issue permits for enough housing to keep pace consistent with RHNA building goals, a developer can elect to use a ministerial process to get project approval for residential projects that meet certain conditions. This, in effect, makes it easier to build housing in places that are not on target to meet their building goals.

GLOSSARY OF ACRONYMS

ABAG - Association of Bay Area Governments
AMI – Area Median Income
DOF - California Department of Finance
HCD - California Department of Housing and Community Development
HMC - Housing Methodology Committee
MTC - Metropolitan Transportation Commission
RHNA - Regional Housing Need Allocation
RHND - Regional Housing Need Determination
RTP/SCS - Regional Transportation Plan/Sustainable Communities Strategy
TCAC - California Tax Credit Allocation Committee

Santa Monica: Regional Housing Needs Allocation

What is the RHNA?

The State of California, as part of the State Housing Law, sets a targeted number of housing units that each regional council of governments in California must plan for. This targeted housing number known as the Regional Housing Needs Allocation, or RHNA, is updated every 8 years and is further divided amongst individual cities and counties by the regional council of governments.

How will the RHNA impact Santa Monica?

The Southern California Association of Governments (SCAG) serves as the regional council of governments for Southern California and is responsible for allocating the RHNA numbers between six counties and 191 cities, including the City of Santa Monica. This year, the regional allocation for Southern California is significantly larger than it has been in past years, in recognition of the severity of the State's housing crisis. SCAG developed a methodology for splitting up the regional allocation, which is based on numerous factors such as the past, present, and future demand for housing, access to jobs, quality of transit, among other factors. To read more about the methodology, visit SCAG's website.

It is important to recognize that the RHNA is a targeted housing number - Cities and counties do not have to build this number of units, but rather they are required by the state to plan for them and demonstrate that under the current land use and development standards, there is capacity to accommodate for this number of housing units. However, if a jurisdiction fails to demonstrate that they can accommodate their RHNA, it can result in the loss of local control and important funding resources.

For the RHNA cycle planning period of October 2021 through October 2029, the Southern California region received an allocation of 1.3 million units. That means that the State is requiring cities within Southern California to demonstrate that they can plan for and have the capacity to build up to 1.3 million new housing units over the next 8 years. For this 6th Cycle of the RHNA, Santa Monica has received an allocation of 8,874 new housing units, of which about 70% must be for lower income households.

THE CITY OF LAFAYETTE'S HOUSING ELEMENT
FREQUENTLY ASKED QUESTIONS

What is the Housing Element?

The Housing Element is a chapter of Lafayette's General Plan. Every City in California must have a Housing Element, and this is the only part of the General Plan that must be regularly reviewed and approved by the State. Housing Elements are usually updated every five to eight years. Lafayette's current Housing Element covers the period from 2007 to 2014, and the updated Element will cover the period from 2014 to 2022.

What does it contain?

The Housing Element contains information on the housing needs of the community, including the needs of lower-income households and people with special needs, such as homeless persons, seniors, and people with disabilities. Some of these needs are determined by the state-mandated Regional Housing Needs Allocation (see below). In addition, the Element provides a detailed explanation of how the jurisdiction addresses the needs of the community based on existing and future housing needs. Lastly, it contains an inventory of sites within the community that could accommodate the RHNA allocation of affordable housing if they were developed.

What is the Regional Housing Needs Allocation (RHNA)?

The RHNA (pronounced REE-NAH) is an allocation of the State's projected housing needs to accommodate various income categories over the 8-year cycle of the Housing Element. The Association of Bay Area Governments (ABAG) receives a bulk allocation for the region from the State, and ABAG then assigns a portion of this regional allocation to each jurisdiction in the nine-county Bay Area, based on a complex model of job and population growth. The essential requirement of RHNA is that all jurisdictions need to demonstrate that its planning documents have enough land zoned at appropriate densities to allow the development of the housing needed to meet their allocation.

What is the City of Lafayette's RHNA allocation?

Lafayette's total RHNA allocation for the current period (2007-2014) is 361 units, and for the next period (2014-2022) is 400 units. The 2014-2022 allocation was reduced as a result of a successful protest by Lafayette of their initial figures. The following illustrates the 2014-2022 allocation, broken down along various income categories. ABAG adopted a policy that allocated a greater share of affordable housing to those communities, including Lafayette, that have a less than average share of affordable housing currently, and a smaller share of affordable housing to those communities that currently accommodate much affordable housing.

Total Projected Need	Very Low	Low	Mod	Above Mod	Average Yearly Need
400	138	78	85	99	57
	34.5%	19.5%	21.3%	24.8%	

Is the City required to make sure these units are built?

No, the RHNA allocation is not a prescription to build any units. And, the City itself does not build units; private developers do. The City is only required to show that there is enough land zoned at appropriate densities to accommodate this need, should a developer want to build these units. In addition, the City must demonstrate that its codes and requirements do not unduly constrain the building of housing (for example, it needs to show that housing can be built "as-of-right" in some zones, without requiring a land use permit).

Does the inventory of sites mean these sites can only be used for housing?

No. The City is only required to show sites that could be used for housing, but the actual use of the sites is always a decision made by the owners. However, if a site in the inventory is developed with a completely non-housing use during the eight-year cycle of the Housing Element, the City is required to replace that site with another to ensure that the inventory's capacity is maintained.

Does the City have enough land in the inventory to meet its RHNA allocation?

Yes, the City has prepared a draft inventory of sites which shows there is enough land to meet its RHNA allocation. While the inventory may change as a result of the public process, the City is required is to ensure that it will meet its RHNA allocation during the eight-year cycle of the Housing Element.

Is there a minimum zoning density that the City must allow? What determines the minimum?
The State sets standards to ensure that densities are high enough to allow affordable housing to be built. As a suburban community, the State has set this default density at 20 units per acre. Although Lafayette can, and does, have lower densities, the State requires zoning for multifamily housing to be at least 20 units per acre. When a city's population reaches 25,000 people then the minimum default density increases to 30 units per acre. Lafayette's 2010 census population was just under 24,000. Lafayette's General Plan establishes the housing density at 35 units per acre in the downtown and in multifamily zoning districts. The City may consider lowering the housing densities, which will be a topic of discussion during the community meetings.

What is a Density Bonus?
A density bonus is a provision of State law and allows a developer to ask for and receive additional housing density (beyond what is allowed by the City's current zoning) in prescribed amounts, in return for providing affordable housing or senior housing within their developments. Even if the City does not adopt its own Density Bonus ordinance, it is still required to comply with the provisions of the State's Density Bonus law, which includes:

- → Granting a sliding scale of market-rate density bonus percentages (20%-35%) based on the amount percentage of proposed affordable units;
- → Providing up to three development concessions or incentives, depending on the percentage of affordable units provided;
- → Granting a density bonus if a developer donates land for very low income housing; and
- → Requiring jurisdictions to implement Density Bonus law through local codes.

Why is the City considering a Density Bonus ordinance?
Several years ago, the City decided not to adopt a Density Bonus ordinance but rather issued guidelines for compliance with the State's Density Bonus law. However, the State is now offering to do a streamlined review of the city's Housing Element, if a Density Bonus ordinance is adopted before the City submits its draft Housing Element to the State. It is expected that the streamlined review will result in a significantly shorter review period by the State, since it will only review those parts of the Element that have changed since the last Element was certified.

What happens if the City elects to resign its membership from ABAG?
In terms of the Housing Element, nothing would change. The City would still receive a RHNA allocation and be required by State law to complete the Housing Element, and have it certified by the State, regardless of its participation in ABAG. Further, continuing to participate in ABAG means that the City can have meaningful input on the RHNA allocation process and other programs conducted by ABAG.

Does having a Priority Development Area (PDA) affect the RHNA allocation?
A City's PDA status alone does not have does not have a direct relationship to the allocation of Regional Housing Needs by ABAG. A determining factor on where growth will occur is based on where there are transit nodes; in the case of Lafayette, the RHNA allocation is partially tied to the existence of the BART station. In addition, one of the criteria for becoming a PDA is proximity to transit nodes, so the BART station was a significant reason the PDA was approved for Lafayette.

What happens if the City does not complete the Housing Element, or fails to receive certification from the State?
Successful certification of the Housing Element is directly tied to whether or not a jurisdiction is eligible to receive certain kinds of funding, including some transportation funds. Additionally, not having a certified Element puts a jurisdiction at risk of lawsuits from developers. Courts have required cities without approved Housing Elements to allow housing "as-of-right", without any discretionary review by the City until the Housing Element is certified, including in single-family zones.

What is the City doing to garner public comment and input on the Housing Element?
The City is holding three community meetings at which residents can ask questions and provide input as the Housing Element is being developed. In addition, there will be opportunities for community input before the Planning Commission and the City Council, both during the draft review of the Housing Element (prior to initial comments from the State), as well as during the final review before the Housing Element is adopted. The following is a tentative schedule for these meetings:

1. Wednesday, April 30th – Introduction to the Housing Element
2. Tuesday, May 13th – Housing Sites Inventory, Density Bonus Ordinance, and Density Adjustments
3. Wednesday, May 28th – Policies and Programs

When does the Housing Element have to be submitted to the State?
The Housing Element must be adopted by the City prior to submission of the final document in January 2015. As noted above, the City expects to adopt the Element in December 2014.

How can I find out more about this?
The City has more information on its website at www.lovelafayette.org/HE or you can contact planning staff:

Niroop K. Srivatsa at (925) 299-3206 ● Lindy Chan at (925) 299-3202 ● Greg Wolff at (925) 299-3204

Lafayette California: Overview

Since 1969, the State of California has required that all local governments adequately plan to meet the housing needs of everyone in our communities. To meet this requirement, each city or county must develop a Housing Element as part of its General Plan (the local government's long-range blueprint for growth) that shows how it will meet its community's housing needs. There are many laws that govern this process, and collectively they are known as Housing Element Law.

The Regional Housing Need Allocation (RHNA) process is the part of Housing Element Law used to determine how many new homes, and the affordability of those homes, each local government must plan for in its Housing Element. This process is repeated every eight years, and for this cycle the Bay Area is planning for the period from 2023 to 2031.

Working with the State Department of Finance, the CA Department of Housing and Community Development (HCD) assigns future housing and population growth projections in eight-year cycles to every Council of Government in the State (in our case, the Association of Bay Area Governments, or ABAG). ABAG then assigns a number of units to each member jurisdiction, like Lafayette, San Francisco, Hayward, etc., which must ensure that there is enough land zoned at appropriate densities to accommodate the assigned RHNA. The RHNA number includes a distribution of units to be provided across the four income categories discussed above.

Some key takeaways about RHNA

We are *planning* for housing, not building it.

The free market will determine if and when the required units are actually developed. Lafayette does not develop housing and no one will be forced to sell their property or build housing.

If we are planning for housing, how should we plan for it and where should it be located? The allocation has been provided by the state and regional governments, while there is an appeal process, we don't know the outcome of the appeal. To be prepared, we must develop a compliant plan for how we want to handle our allocation. The Housing Element update process is your opportunity to decide where the housing should go.

June 2, 2022

Heather Adamson, AICP
AMBAG Director of Planning
24580 Silver Cloud Court
Monterey, CA 93940

sent USPS standard, certified mail, email

RE: Draft 6th Cycle RHNA Plan and Sand City Allotment

Dear Ms. Adamson:

This correspondence is in response to the Draft 6th Cycle (2023-2031) RHNA Plan and the allotment of 260 units in this cycle of the RHNA allocation to the City of Sand City. According to the Department of Finance, the City has a 2022 estimated population of 372 persons. There are approximately 184 dwelling units within the City (8 of which are currently under construction). Requiring a RHNA allocation of 260 that is approximately 141% of the existing number of all existing residential units in the City is patently unreasonable. The allocation to Sand City fails to meet the requirement of Cal. Gov. Code section 65584(d)(1) that the RHNA plan allocates in a manner that is equitable within the region. By comparison, if applied to the City of Monterey, the allocation to Sand City would be equivalent to allocating approximately 42,600 units to the City of Monterey based on its population of approximately 30,218 residents. Instead, your allocation in the draft plan allocates 3,654 units to the City of Monterey.

In addition, the allocation to Sand City ignores additional factors that the methodology requires be observed. For example, you are required to consider "the availability of land suitable for urban development or for conversion to residential use, the availability of underutilized land, and opportunities for infill development and increased residential densities..." and "land preserved or protected from urban development under federal or state programs, or both, designed to protect open space... environmental habitats..." (AMBAG Draft 6th Cycle RHNA Plan, April 2022, page 20); Cal Gov. code section 65584(d)(2). Sand City is small in land area (approximately 347 acres), landlocked between other jurisdictions and the Monterey Bay, with development within constrained by the presence of environmentally sensitive species and habitat protected and regulated by both the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. About half of the City is located west of the Highway 1 freeway

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1 Pendergrass Way
Sand City, CA
93955

Administration
(831) 394-3054

Planning
(831) 394-6700

FAX
(831) 394-2472

Police
(831) 394-1451

FAX
(831) 394-1038

Incorporated
May 31, 1960

corridor within an appealable Coastal Zone overlay regulated by the City's Local Coastal Plan (LCP); yet subject to appeal to the California Coastal Commission (CCC). The CCC has previously imposed strict limits on coastal development in Sand City due to the Coastal Act's prioritization of public access, coastal recreation, and the preservation of sensitive coastal habitat over that of residential land use.

In addition, a majority of the City has already been re-zoned to either High Density Residential (R-3) or Planned Mixed Use, both enabling high density and multifamily residential development, consistent with Government Code Section 65584(d)(2) for infill and equitable housing opportunities and Government Code Section 65584(d)(3) for an improved relationship between jobs and housing. There are almost no other practical opportunities for re-zoning to accommodate additional residences without impacting the City's primary revenue source, its regional shopping centers.

The City understands the State-wide need for affordable housing and job/housing balance. However, in light of the above constraints and efforts already implemented by the City, it is inconceivable how the City could meet the goals of the current RHNA allocation. The City of Sand City requests AMBAG lower Sand City's allotment to a number that is actually achievable in light of its small size and noted constraints.

Sincerely,

Vibeke Norgaard
City Manager

cc: Mary Ann Carbone, Mayor
Sand City Council Members
Adam Lindgren, City Attorney
Charles Pooler, City Planner

NEWS > HOUSING

Pacific Grove to hold housing element update workshop

Pacific Grove City Hall. (James Herrera/Monterey Herald)

By TESS KENNY | tkenny@montereyherald.com | Monterey Herald
PUBLISHED: July 22, 2022 at 2:43 p.m. | UPDATED: July 22, 2022 at 2:44 p.m.

PACIFIC GROVE — Amid lofty state goals to expand housing over the next decade

The workshop, set for Monday from 6-8 p.m. at the Pacific Grove Community Center, will provide an update on the city's housing element, a state-required blueprint for how a locality's current and projected lodging needs can be satisfied. Housing elements are adjusted every eight years, as goals are realigned with present-day demands through a periodic process called the Regional Housing Needs Assessment, or RHNA.

Districts throughout the state are currently working through the latest housing element update. Local jurisdictions as part of the Association of Monterey Bay Area Governments will need to submit their revamped plans by December 2023. Though the process doesn't obligate local governments to build or approve new housing, it does mandate that they demonstrate appropriate zoning, development regulations and policies to support homebuilding goals.

In Pacific Grove, expectations are ambitious. Per the Regional Needs Allocation for 2023 to 2031, the city has been tasked with planning for a 14% jump in housing, an addition of 1,125 units that will necessitate not only rezoning but also changes to a general plan not touched since 1994.

"When I first saw (the allocation), like everyone, I thought it was a lot of units to plan for," said Anastacia Wyatt, Pacific Grove community development director. "I think we can feasibly plan for it, and we will do our best."

Wyatt said that with the scope and scale of rezoning that will be necessary to achieve a certified housing element, community engagement and input is particularly important. Hearing what residents need, she continued, will allow the city to reconcile citizen concerns and wants with whatever zoning and general plan changes are to come. Doing so will also help the city take an equitable approach to future homebuilding.

"I think equity is really critical. … This is an opportunity to look at our community and think about what we want for the future," said Wyatt.

Pacific Grove Councilwoman Jenny McAdams reiterated Wyatt's optimism under a new housing element, even if she doesn't think the city will actually see the 14% increase in units by 2031.

"Do I think Pacific Grove will really build all (1,125 units)? No, but we're putting a policy in place that is supportive of additional housing," said Adams. "Our staff's job is to show that the city in good faith is implementing policing, zoning or incentives to

For more information about Pacific Grove's Housing Element Update Workshop on Monday, go to https://www.cityofpacificgrove.org/our_city/departments/community_development/housing/index.php.

Tags: **Newsletter**

Tess Kenny

Tess Kenny covers education and events across Monterey County. She recently graduated from UC Santa Barbara with a bachelor's in communication and political science.

tkenny@montereyherald.com

Follow Tess Kenny @TessKenny12

Join the Conversation

We invite you to use our commenting platform to engage in insightful conversations about issues in our community. We reserve the right at all times to remove any information or materials that are unlawful, threatening, abusive, libelous, defamatory, obscene, vulgar,

government request. We might permanently block any user who abuses these conditions.

Attachment F

Evaluation of Water Supply Available versus Water Demand
Cal-Am Main Service Area

	Supply Available								Demand		Supply vs Demand	
Year	Pure Water (Base)	Pure Water Expansion	Carmel River	Seaside Basin	ASR	Sand City Desal	Malpaso	Total Available Supply	Base Case Water Demand	Base Case Demand Plus Forecast Error = 25%	Supply over Base Case Demand	Supply over Base Case Demand + 25% Error
2025	3,500	2,250	3,376	774	1,300	210	58	11,468	9,882	9,882	1,586	1,586
2026	3,500	2,250	3,376	774	1,300	210	58	11,468	9,913	9,921	1,555	1,547
2027	3,500	2,250	3,376	774	1,300	210	58	11,468	9,945	9,961	1,523	1,507
2028	3,500	2,250	3,376	774	1,300	210	58	11,468	9,976	10,000	1,492	1,468
2029	3,500	2,250	3,376	774	1,300	210	58	11,468	10,008	10,039	1,460	1,429
2030	3,500	2,250	3,376	774	1,300	210	58	11,468	10,039	10,079	1,429	1,390
2031	3,500	2,250	3,376	774	1,300	210	58	11,468	10,071	10,118	1,397	1,350
2032	3,500	2,250	3,376	774	1,300	210	58	11,468	10,102	10,157	1,366	1,311
2033	3,500	2,250	3,376	774	1,300	210	58	11,468	10,134	10,196	1,334	1,272
2034	3,500	2,250	3,376	774	1,300	210	58	11,468	10,165	10,236	1,303	1,232
2035	3,500	2,250	3,376	774	1,300	210	58	11,468	10,196	10,275	1,272	1,193
2036	3,500	2,250	3,376	774	1,300	210	58	11,468	10,228	10,314	1,240	1,154
2037	3,500	2,250	3,376	774	1,300	210	58	11,468	10,259	10,354	1,209	1,114
2038	3,500	2,250	3,376	774	1,300	210	58	11,468	10,291	10,393	1,177	1,075
2039	3,500	2,250	3,376	774	1,300	210	58	11,468	10,322	10,432	1,146	1,036
2040	3,500	2,250	3,376	774	1,300	210	58	11,468	10,354	10,472	1,114	997
2041	3,500	2,250	3,376	774	1,300	210	58	11,468	10,385	10,511	1,083	957
2042	3,500	2,250	3,376	774	1,300	210	58	11,468	10,416	10,550	1,052	918
2043	3,500	2,250	3,376	774	1,300	210	58	11,468	10,448	10,589	1,020	879
2044	3,500	2,250	3,376	774	1,300	210	58	11,468	10,479	10,629	989	839
2045	3,500	2,250	3,376	774	1,300	210	58	11,468	10,511	10,668	957	800
2046	3,500	2,250	3,376	774	1,300	210	58	11,468	10,542	10,707	926	761
2047	3,500	2,250	3,376	774	1,300	210	58	11,468	10,574	10,747	894	721
2048	3,500	2,250	3,376	774	1,300	210	58	11,468	10,605	10,786	863	682
2049	3,500	2,250	3,376	774	1,300	210	58	11,468	10,637	10,825	831	643
2050	3,500	2,250	3,376	774	1,300	210	58	11,468	10,668	10,865	800	604
2051	3,500	2,250	3,376	1,474	1,300	210	58	12,168	10,699	10,904	1,469	1,264
2052	3,500	2,250	3,376	1,474	1,300	210	58	12,168	10,731	10,943	1,437	1,225
2053	3,500	2,250	3,376	1,474	1,300	210	58	12,168	10,762	10,982	1,406	1,186
2054	3,500	2,250	3,376	1,474	1,300	210	58	12,168	10,794	11,022	1,374	1,146
2055	3,500	2,250	3,376	1,474	1,300	210	58	12,168	10,825	11,061	1,343	1,107
											38,046	34,392

Notes:

Projected annual water demand growth in AFY is estimated at:	31.44
Projected annual water demand growth in AFY plus 25% error:	39.30

MONTEREY PENINSULA

WATER SUPPLY PROJECT

California American Water

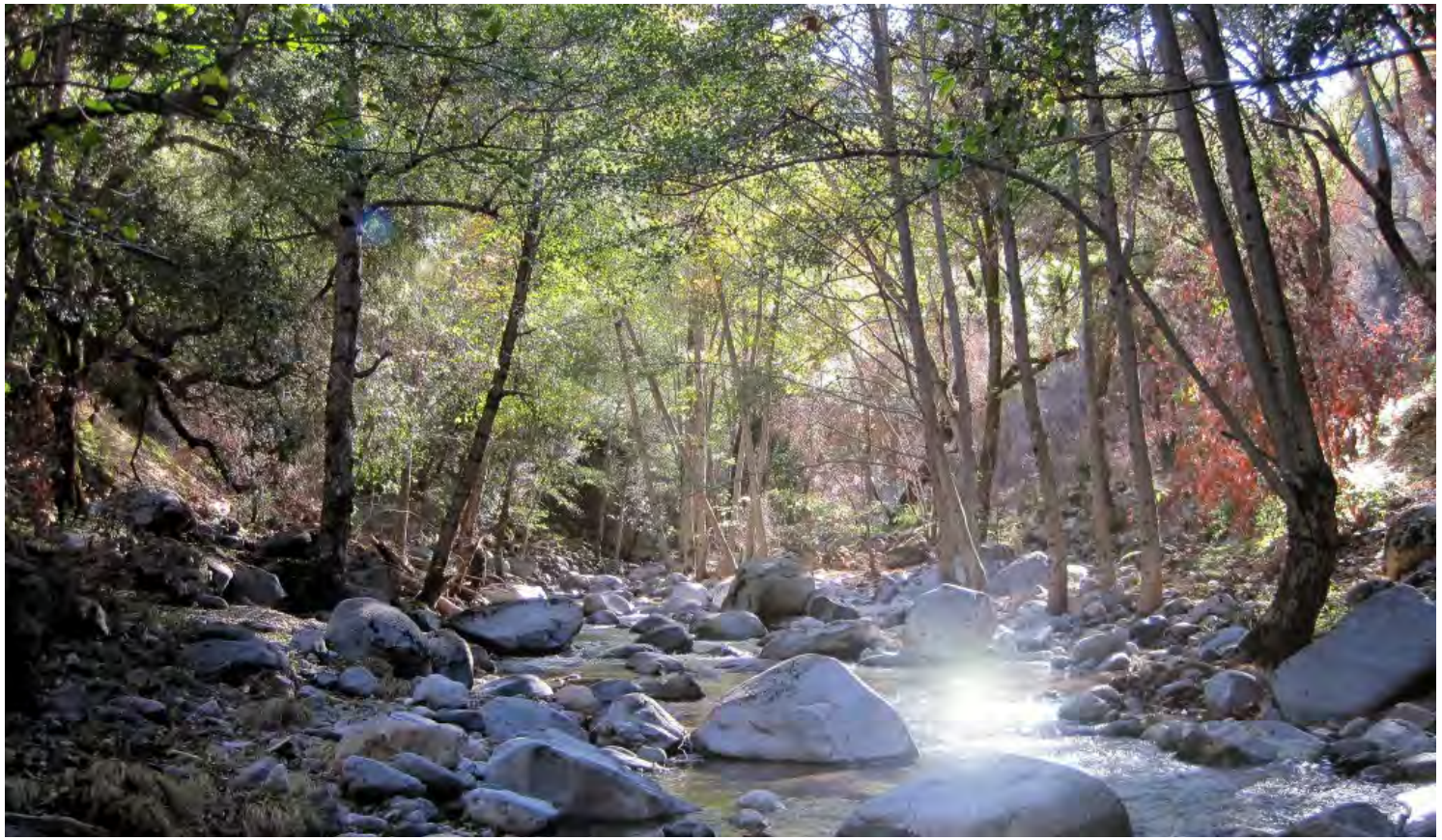
Coastal Commission Hearing 11.17.22

Agenda Items Th7a & 8a

These materials have been provided to Coastal Commission staff

DEVELOPMENTS SINCE 2020

- Included Pure Water Monterey Expansion (add'l recycled water) in supply portfolio
  - Seeking CPUC approval of Water Purchase Agreement
  - Not a drought proof water supply
- Confirmed desalination still needed to meet demand forecasts
  - Necessary to provide reliability and fill drought shortfalls
  - Necessary to lift moratorium to provide water for affordable housing to meet RHNA goals
- Conducted additional outreach to understand community needs
  - Community identified public access, ESHA, groundwater, rates and project sizing concerns
- Modified Project to provide reduced first phase
  - 4.8 mgd project proposal reduces potential impacts in all areas of community concern
- Coastal Commission staff recommended project approval



Community Engagement & Resulting Project Changes

- Six-year CPUC environmental review process
- Significant additional Tribal and community outreach in summer/fall 2022, including over a dozen community workshops
- In response to feedback, Cal-Am proposed to phase the Project, fund and implement coastal access improvements and enhanced groundwater monitoring programs
- In response to ratepayer concerns, Cal-Am proposed to increase its low-income ratepayer programs to minimize burdens on customers eligible for Cal-Am's Customer Assistance Program

NATIVE AMERICAN TRIBAL GOVERNMENT ENGAGEMENT

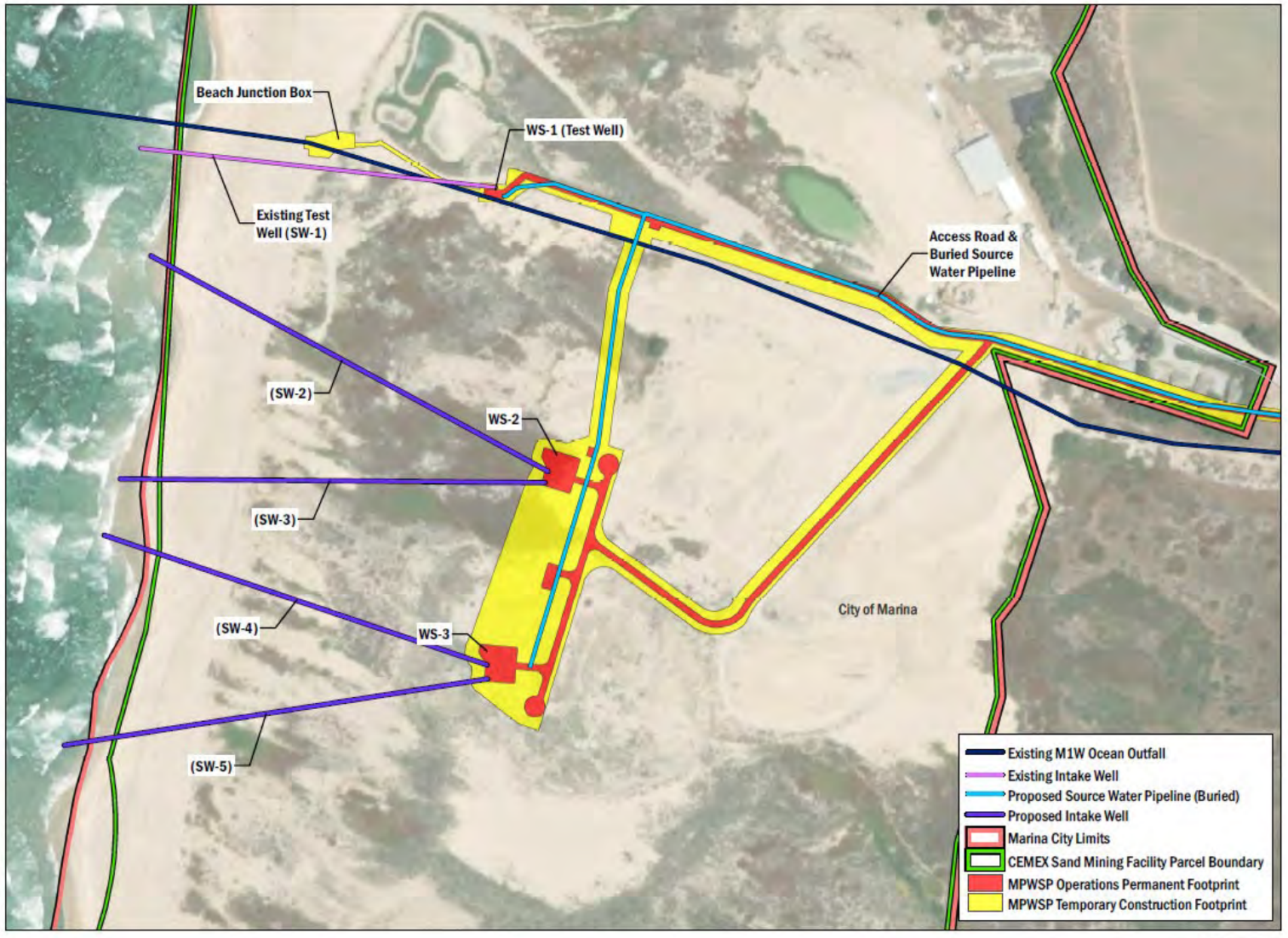
- Significant consultation as part of Project's environmental review
  - CPUC and MBNMS consulted with NAHC-identified Tribal governments
  - Coastal Commission staff conducted tribal outreach in 2020
- Cal-Am conducted extensive tribal outreach in 2022
  - In July 2022, Cal-Am contacted over two dozen Tribal representatives and members potentially affected by Project
    - Cal-Am hosted Tribal representatives and members at a meeting in Sand City
  - Support letters from Sand City Mayor Mary Ann Carbone (Chumash Community) and Patrick Orozco (Chair of Pajaro Valley Ohlone Indian Council)
- Staff report does not reflect complete details about 2020 incident with outside contractor
  - Cal-Am's President sent clarification letter to Commissioners and staff
  - Cal-Am is fully committed to ensuring that all persons in our workplace and job sites are treated with dignity and respect

CAL-AM SOLICITED COMMUNITY FEEDBACK

- Substantial engagement and outreach during prior CPUC, Marina and Coastal Commission processes
  - Cal-Am met with Marina officials multiple times in 2020 and 2021 to discuss potential compromises, project benefits, and possible partnerships - including for water for Marina; ***all proposals were rejected***
- Conducted further outreach to local communities and organizations in summer/fall 2022
  - ***13 community workshops*** (6 in Marina, 3 in Seaside/Sand City, 2 in Salinas, 2 in Castroville) with Spanish translation available
  - Table at the Marina Farmer's Market
  - Outreach to dozens of community organizations – focusing in particular on organizations in Marina
- Public notice of workshops via ads in the three largest local newspapers; bilingual radio ads, flyers, social media, and email blasts
- Bilingual ratepayer outreach to publicize affordability and conservation programs
- Creation of public ***Community Input and Responses*** document in English, Spanish, Vietnamese and Korean

CAL-AM CHANGED PROJECT TO RESPOND TO COMMUNITY INPUT

- Proposed ***phased Project***
  - Initial 4.8 mgd capacity
  - Ability to increase capacity to 6.4 mgd in future
- Reduces CEMEX footprint
  - New well pads reduced from four to two
  - New slant wells reduced from six to four
- ***Reduces potential ESHA impact by 9.96 acres***
  - ***Almost 1/3*** of potential ESHA impact area
  - Includes pipeline route modifications



CAL-AM CHANGED PROJECT TO RESPOND TO COMMUNITY INPUT

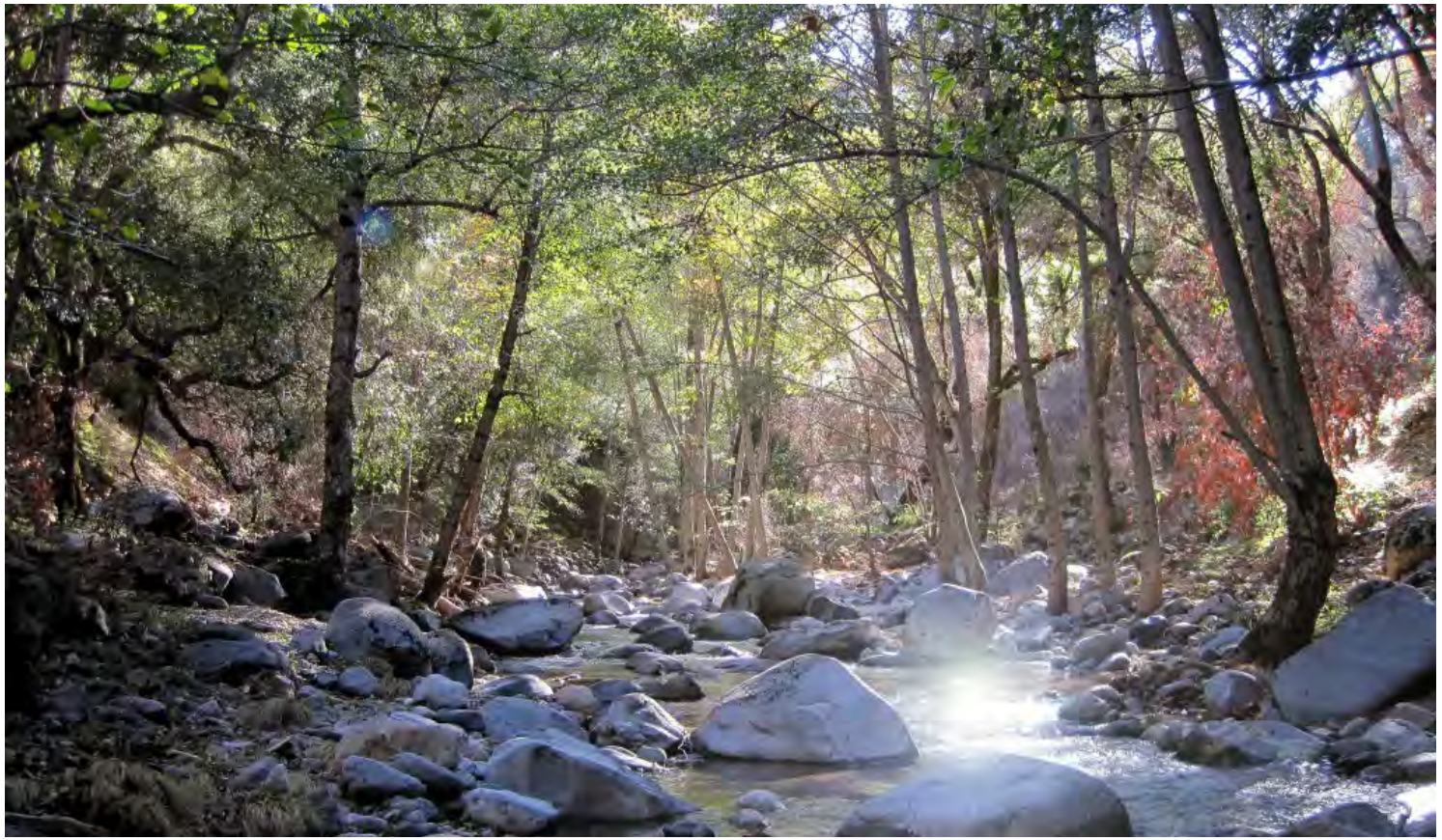
- ***Coastal Access Improvements***
  - Dedicate ***$1 million for public improvements*** in Marina
    - Determination of how funds will be spent will be based on further community input and engagement (**Special Condition 17**)
    - One example: Monterey Regional Parks District needs additional funding for restoration of Marina Dunes Preserve
  - ***Public Access Plan*** for improvements within Cal-Am's easement area and already disturbed areas of CEMEX site
- ***Enhanced Groundwater Monitoring***
  - Cal-Am proposed expansion of Monterey County Water Resources Agency's existing regional groundwater program
  - Proposed ongoing public meetings to provide monitoring results
  - Enhanced monitoring required in Special Condition 12

WATER AFFORDABILITY

- Cal-Am understands that affordability remains a concern for ratepayers
- CPUC has exclusive jurisdiction to ensure reasonable rates
- Existing Monterey Customer Assistance Program has 3,700 enrollees
  - About 10% of Cal-Am's Monterey Service District enrolled
  - Enrollment has almost doubled since 2020
- Cal-Am proposed seven programs to benefit low-income customers who qualify for Customer Assistance Program
  - Ultimate goal to ensure that such customers do not experience any rate increases attributable to Project construction and operation
  - CPUC approval is required for most programs
  - Cal-Am proposed unprecedented cost cap so these customers ***do not experience a monthly rate increase from desalination that exceeds $10 for at least five years***

PROPOSED RATE RELIEF PROGRAMS

- Increased contribution of ***$500,000 to United Way Monterey Hardship Program***
- Free installation of low-flow fixtures for all Customer Assistance Program enrollees
- Additional low-income customer proposals to CPUC:
  - Expansion of Customer Assistance Program discount – from 30% to 50%
  - Discounts for multi-family housing residents
  - Expansion of low-income joint water and energy install program to include multi-family buildings
  - Elimination of certain CPUC-approved surcharges
  - Medical Baseline Program that would provide assistance to individuals with qualifying medical conditions
  - Percentage of income payment plan pilot program
  - Bill credit that would offset any remaining cost impacts from desalination

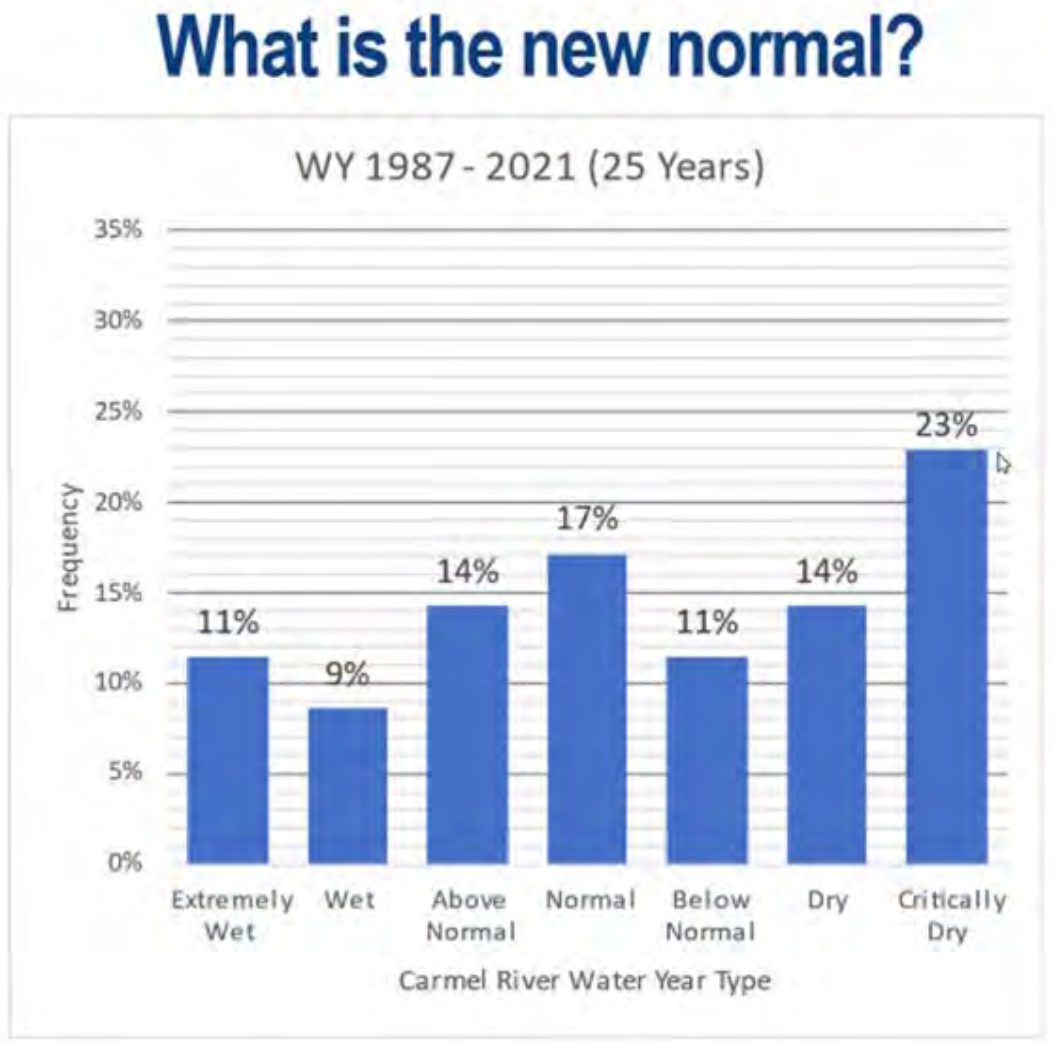


MONTEREY PENINSULA SUPPLY AND DEMAND

- Drought conditions are the new normal
- Even with PWM Expansion, a significant water supply deficit exists under drought conditions
- MCWRA independently determined that the PWM and PWM Expansion are less reliable than projected - meaning there could be even greater supply deficits in the future without the MPWSP
- PWM shortfalls are adversely impacting the Salinas Valley Groundwater Basin and Castroville Seawater Intrusion Project

DROUGHT CONDITIONS ARE THE NEW NORMAL

- Data shows dry and critically dry years now occur more frequently
- State Water Board confirmed ***California has experienced its driest three-year period on record***
- Governor Newsom declared Monterey County in drought in 2021, and conditions persist
- Through conservation efforts, Cal-Am's residential water use over past five years is approx. ***47 gpcd***, ***one of the lowest in state***



Seaside Basin Watermaster Board Presentation, October 5, 2022

Cal-Am's Updated Water Supply and Demand Projections

Demand Estimate Year 2050	14,590 AFY	
Supply	w/ ePWM	
	Normal Year	Drought[1]
Carmel River Aquifer	3,376	3,376
Seaside Groundwater Basin	774	774
Sand City Desalination	94	94
ASR[2,3]	470	0
Pure Water Monterey	3,500	3,500
Pure Water Monterey Expansion[4]	2,001 to 2,234	0 to 1,100
Pure Water Monterey Reserves[5]	n/a	0 to 775
Total Water Supply	10,215 - 10,448	7,744 - 9,619
Total Firm Supply @ 90% operating capacity (or 10% Supply Buffer/Contingency)[6]	**9,194 - 9,403**	**6,970 - 8,657**
Deficit / Surplus using Firm Supply	numbers below are rounded to nearest tenth	
Supply Deficit / Surplus	-5,190 to -5,400	-5,930 to -7,620
MPWSP Desalination Supply[7]	6,250	6,250
Total Firm Supplies with MPWSP Desalination	15,444 to 15,650	13,220 to 14,910
Supply Deficit/Surplus with MPWSP Desalination	854 to 1,060	-1,370 to 320

- **2050 demand = 14,590 AFY** (same demand as in 2008)
- By 2050, Cal-Am projects a **5,190 to 5,400 AFY deficit** under normal water year conditions without desal
- By 2030, in a single drought year without desal, Peninsula will have a **3,800 AF deficit**
- MPWSP is **necessary** to meet demand during drought by 2030

PURE WATER MONTEREY EXPANSION ALONE IS NOT SUFFICIENT

- ***MCWRA independently determined that PWM Expansion will produce substantially less water than projected***
  - Only about 1,367 AFY instead of 2,250 AFY
- ***State Water Board confirmed desalination needed in addition to PWM Expansion***
  - "The Pure Water Monterey expansion project may constitute an important component of a permanent replacement water supply, if it is developed and demonstrated to be a reliable, drought-resilient water source."
  - "[B]ased on regional housing needs, source reliability, and the effects of aridification on California's water supplies, the State Water Board believes it is prudent for Cal-Am to pursue additional sources of water that are sustainable and ***urges the Coastal Commission to consider the desalination facility as a potentially vital municipal water supply***…"

SUPPLIES CANNOT MEET DEMAND WITHOUT MPWSP

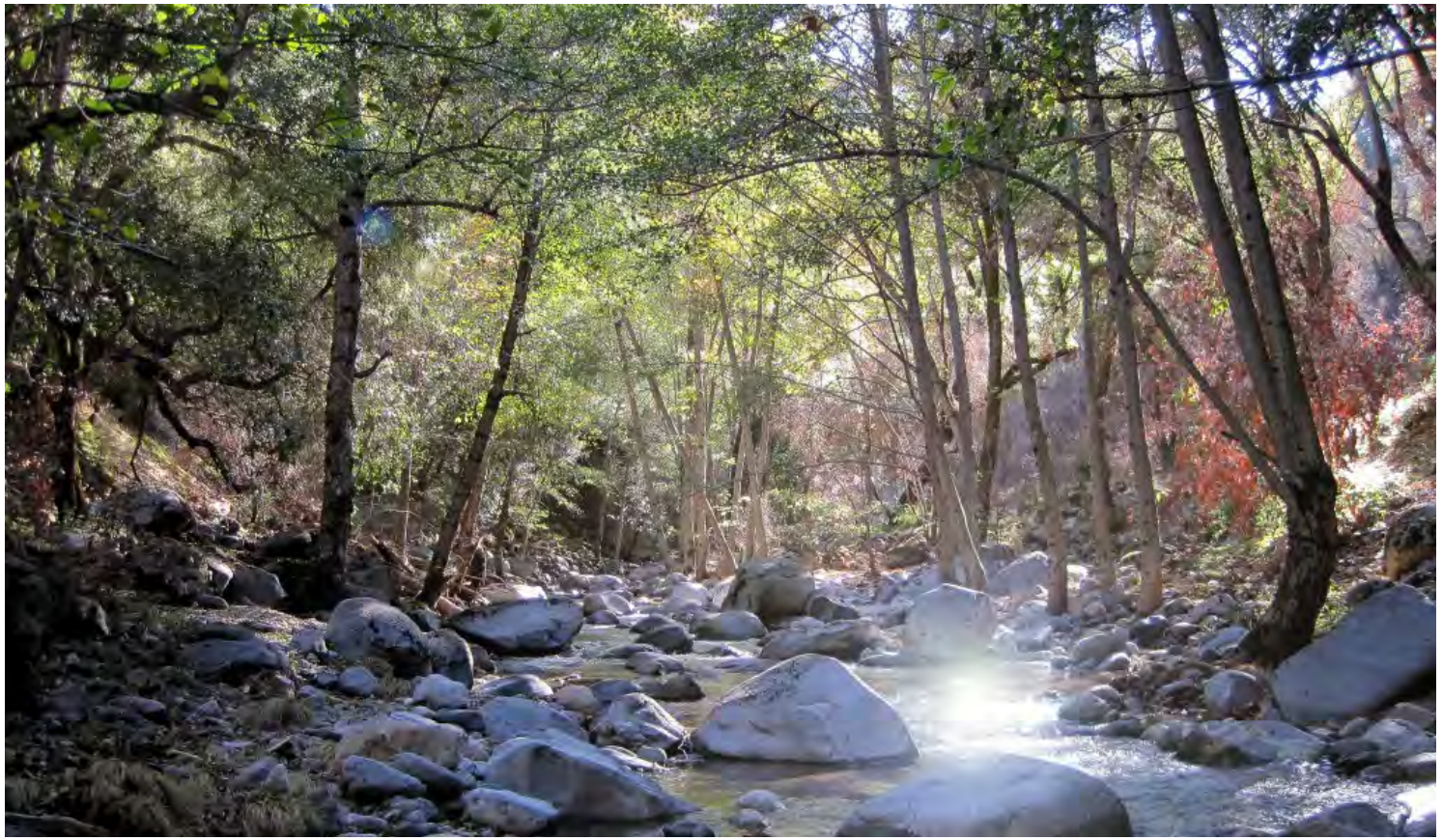
- Based on MCWRA's independent analysis of PWM and PWM Expansion, PWM will provide less water than promised
  - Only 4,867 AFY instead of 5,750 AFY
  - With only this amount, total Peninsula supplies are 9,581 AF, ***less than current 9,658 AFY demand***
- By 2030, the deficit in a normal year will grow
  - ***~ 2,319 AF deficit in normal year without desal***
- By 2030 in drought conditions, the deficit grows even further
  - ***~ 3,800 AF deficit in a single-year drought, and 4,914 AF deficit in two-year drought without desal***
- ***Phase 1 of the MPWSP would alleviate near-term demand and any uncertainty***
  - Phase 1 will consistently produce approximately 4,700 AFY
  - This amount includes a reasonable 10% contingency buffer (needed for system interruptions, increased demand, potential Seaside Basin replenishment)

MPWSP IS NEEDED TO LIFT MORATORIUM ON NEW SERVICE CONNECTIONS

- Moratorium on new service connection has ***significantly suppressed Peninsula water demand***
  - Prevents development of housing, including affordable housing. Examples of delayed projects include:
    - Ascent Project – 106-unit mixed-use project with at least 14 affordable housing units in Seaside
    - Garden Road Project – 405-unit apartment project with at least 81 affordable housing units in Monterey
  - Residents and businesses cannot upgrade existing buildings, develop legal lots purchased for homes
  - New businesses cannot use more water than a space historically used (e.g., a juice shop cannot add an ice maker or sink)
  - Local businesses have been forced to implement extreme conservation measures (e.g., hotels send laundry out of the area, costing local jobs and money)
  - Many employees cannot live on the Peninsula due to high housing costs and lack of housing

MPWSP IS NECESSARY TO PROTECT THE SEASIDE GROUNDWATER BASIN

- Per Seaside Basin Watermaster, ***between 2,200 AFY and 4,700 AFY of replenishment water is needed to maintain protective groundwater elevations in Seaside Basin to avoid seawater intrusion.***
    - MPWSP is the only source of water supply that could provide this supplemental water
- Seaside Basin is a critical water supply source for the Peninsula and the majority of CalAm's water supplies come from the Basin:
    - native Seaside Basin groundwater;
    - recycled water from the PWM Project injected and stored in the Seaside Basin; and
    - Carmel River water diverted for storage in the Seaside Basin under the ASR permits
- Developing a reliable and sustainable source of replenishment water, such as the MPWSP, is necessary to achieve protective groundwater levels



Project Does Not Adversely Affect Coastal Resources

- Phased Project further reduces potential impacts
- **ESHA –** No significant physical impacts and phased Project further reduces previously identified impacts
- **Vernal Ponds** – Extensive analysis shows the Project would not adversely affect nearby ponds and vegetation
- **Groundwater –** Commission's hydrogeologist previously confirmed no adverse impacts to municipal groundwater supplies
- **Public Access** – Reduced Project footprint on CEMEX site; Cal-Am has proposed Public Access Plan
- **Energy** – Cal-Am is committed to using 100% renewable energy to make Project net-zero
- **Coastal Hazards** – Slant wells would be protected from sea level rise under extreme risk aversion scenarios through proposed 25-year permit term
- **Coastal Waters & Marine Life** – slant well technology avoids impacts to marine life; Cal-Am has agreement with Surfrider regarding brine discharge

ESHA IMPACTS MITIGATED TO MAXIMUM EXTENT FEASIBLE

- EIR/EIS: ***no significant physical ESHA impacts with mitigation***
- No work during snowy plover nesting season without USFWS approval
- Phased Project and pipeline modifications ***reduce potential ESHA impact by 9.96 acres—almost 1/3*** of prior ESHA impact area
- Cal-Am would mitigate for up to **22.22 acres of potential ESHA impacts**
  - 1.94 acres from permanent infrastructure
  - 20.28 acres from construction disturbance – primarily along pipeline route
- Special Conditions 8 and 9 ensure mitigation consistent with Commission mitigation ratios
  - 1.9 acres of Dune Creation – ensures no-net-loss of dune habitat
  - Nearly 65 acres of Substantial Restoration at 3:1 ratio

ESHA REDUCTION SUMMARY – FROM PHASING

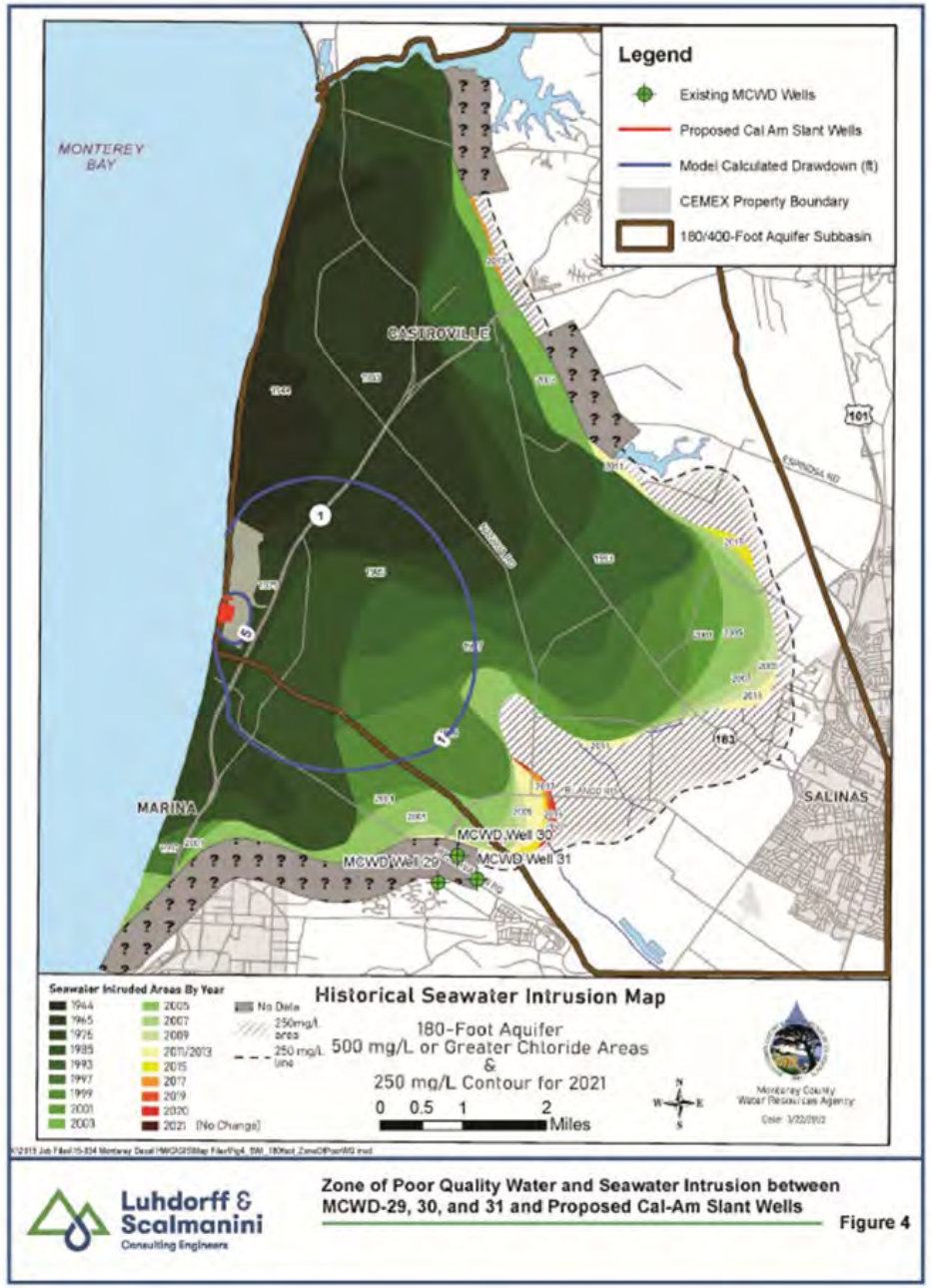
Impact Location in Coastal Zone	CDP Application MPWSP Footprint (acres)		Updated MPWSP Footprint (acres)		Total Footprint Change (acres)
	Permanent Infrastructure	Construction Disturbance	Permanent Infrastructure	Construction Disturbance	
CEMEX Site	2.32	6.61	1.89	5.73	-1.31
Pipeline Route Outside of CEMEX	0.05	23.2	0.05	14.55	-8.65
Total	2.37	29.81	1.94	20.28	-9.96
	32.18		22.22		

NO ADVERSE VERNAL POND IMPACTS

- Armstrong Ranch Ponds – closest to Project's slant wells
  - Extensive analysis over two-years shows ***MPWSP would not adversely affect the Armstrong Ranch Ponds and vegetation***
    - Testing simulated MPWSP drawdown → showed no impact to ponds and vegetation
    - Root depth and root density analysis → showed no impact to ponds and vegetation
  - Ponds act independently of Dune Sand Aquifer because of a restrictive layer
- Marina Ponds
  - No evidence that ponds depend on Dune Sand Aquifer
  - Analysis shows that urban development has affected existing functions of the ponds
  - Since December 2020 Cal-Am has sought approvals from Marina to conduct further analysis; Marina has denied access and prevented any analysis from occurring
- Special Condition 13 ensures comprehensive Adaptive Management Program
  - Cal-Am proposing additional requirements to further ensure no adverse effects

NO ADVERSE GROUNDWATER IMPACTS

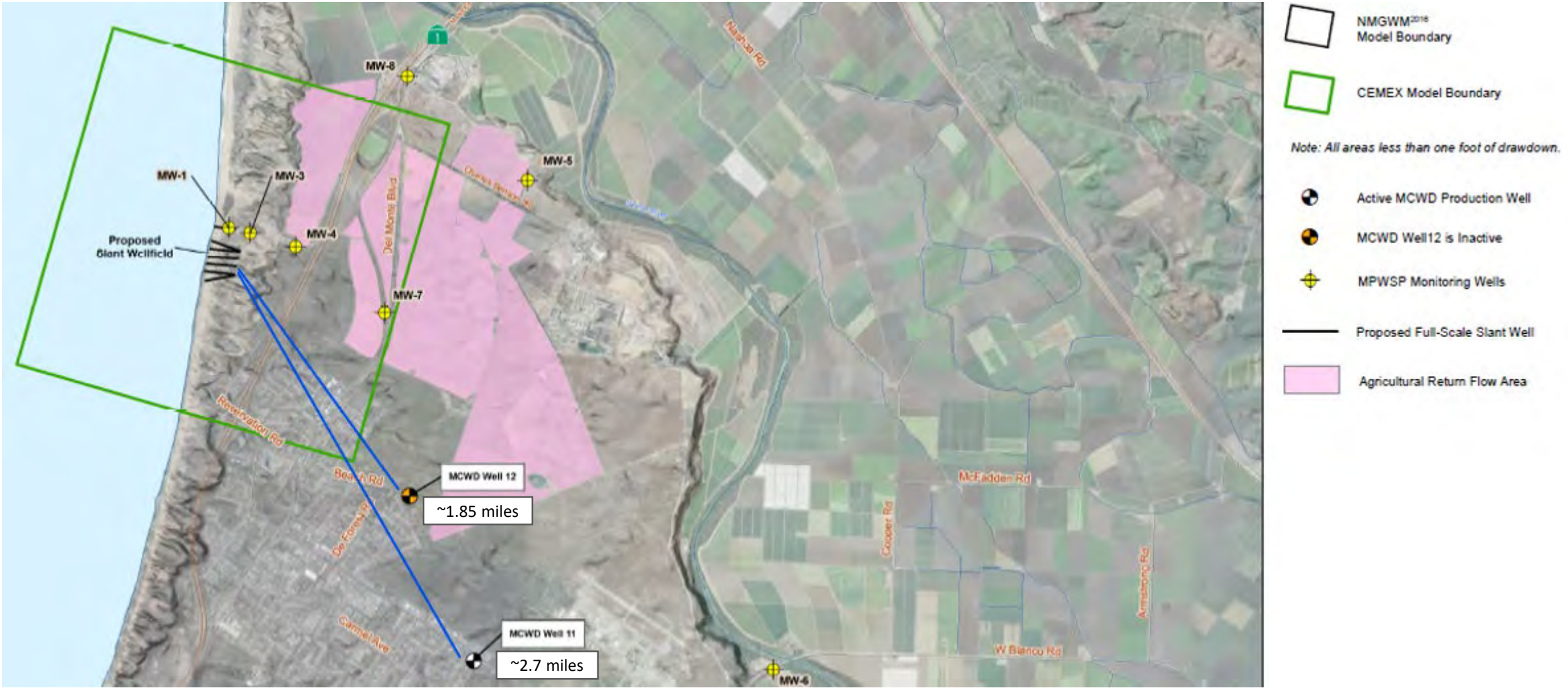
- EIR/EIS included six years of fieldwork and modeling results that were subject to extensive peer review and public comment - confirmed ***no adverse groundwater impacts***
  - Commission's independent hydrogeologist confirmed ocean water percentage estimates consistent with the EIR/EIS—88 to 99%
  - HWG modeling in 2022 per Commission hydrogeologist's recommendations confirmed ocean water percentage estimates in the same range—91 to 99%
- No new data undercuts analysis and Final EIR/EIS conclusion that ***water contaminated with seawater flows inland beneath the Project area***
- Project only draws source water from capture zone with contamination ***46 to 60 times greater*** than drinking water standard



NO ADVERSE IMPACTS TO GROUNDWATER USERS

- MCWD wells are not in the aquifers from which the Project will draw water
  - Project slant wells would draw water from the Dune Sand and 180-Foot Aquifers
  - Closest municipal supply wells are over 2 miles away in deeper aquifers of a different groundwater sub-basin
  - ***Commission's hydrogeologist confirmed no Project impacts to municipal supply wells***
- Special Condition 12 ensures robust monitoring to prevent harm to wells
  - Cal-Am proposing additional requirements to ensure monitoring program is feasible and no adverse effects to groundwater users

NEAREST MCWD PRODUCTION WELLS



MPWSP COMPLIES WITH WATER RIGHTS AND GROUNDWATER LAWS

- CPUC and State Water Board both confirmed Cal-Am may develop all necessary water rights for MPWSP
  - ***No water right required to pump seawater*** from beneath Monterey Bay
  - Small amount of brackish groundwater that Cal-Am will pump is not usable in the Basin without treatment, and thus is ***surplus water that Cal-Am may appropriate***
  - Cal-Am will not develop its water right until it has treated the surplus water
  - No one has a current right to use this brackish water because it has not been put to a beneficial use
- Project complies with Sustainable Groundwater Management Act (SGMA) by creating a seaward gradient in contaminated aquifers that will ***halt or reduce landward seawater intrusion***
  - SVBGSA Groundwater Sustainability Plan recommends installation of slant wells like MPWSP to create a seawater intrusion barrier

COASTAL HAZARDS

- Conservative sea level rise (SLR) analysis confirms ***no coastal erosion impacts during Project well lifetime*** (~25 years)
  - Analysis evaluated 3.8 ft of SLR by 2060—more conservative than new State principle of 3.5 ft of SLR by 2050
- Soft measures – revegetation, monitoring, and maintenance – would eliminate potential risks to well heads from sand burial
- Special Condition 6 ensures 25-year permit term
  - Requires Cal-Am to analyze SLR near expiration of term and explore potential well relocation, if necessary

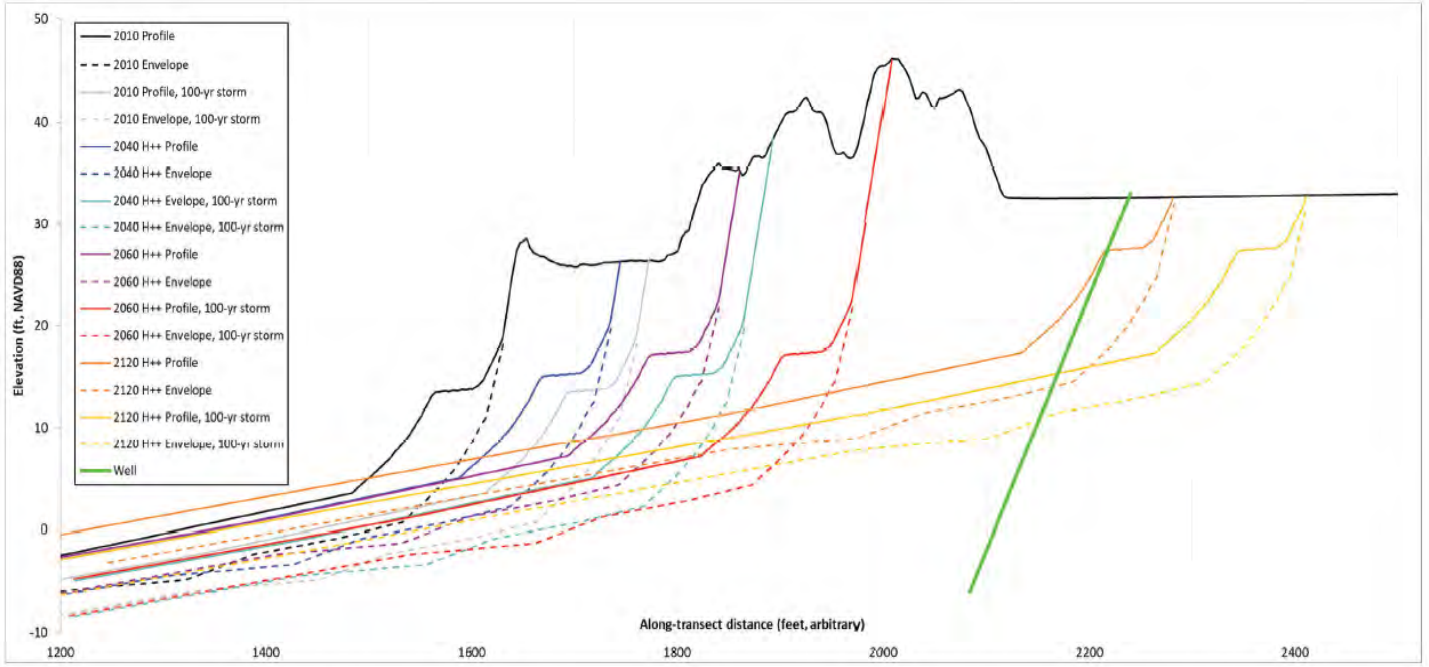


Figure 6. Proposed slant well field 100-year event profile erosion based on Extreme Risk Aversion sea level rise projection for H++ scenario

PUBLIC ACCESS AND ENERGY USE

Public Access:

- Area fenced for slant wells is very small (0.17 acre on nearly 400 acre property); most components buried underground
- No existing public access at site; no impediment to lateral beach access
- Cal-Am proposed development of a Public Access Plan

Energy Use:

- Project designed to be energy efficient
- Cal-Am commits to being net-zero GHG through on-site design features (e.g., solar) and purchase of 100% renewable energy
- Special Condition 19 ensures annual reporting and compliance

Impacts from Brine Discharge to Marine Resources:

- Potential brine impacts analyzed in detail and mitigation measures were developed with various parties including Surfrider
- Mitigation Measure 4.3-5 requires Cal-Am to perform water quality assessment prior to operations to ensure Ocean Plan compliance
- Staff Report confirms Regional Board must determine compliance

Impacts from Outfall Lining:

- Outfall lining work will be subject to separate CDP amendment process involving M1W—not current Project application
- EIR/EIS analyzed outfall lining activities; impacts determined to be less than significant
- Cal-Am and M1W have agreed upon 95% design drawings substantially similar to what EIR/EIS analyzed

MPWSP SATISFIES COASTAL ACT SECTION 30260

Test 1 – Alternative Locations Are Infeasible

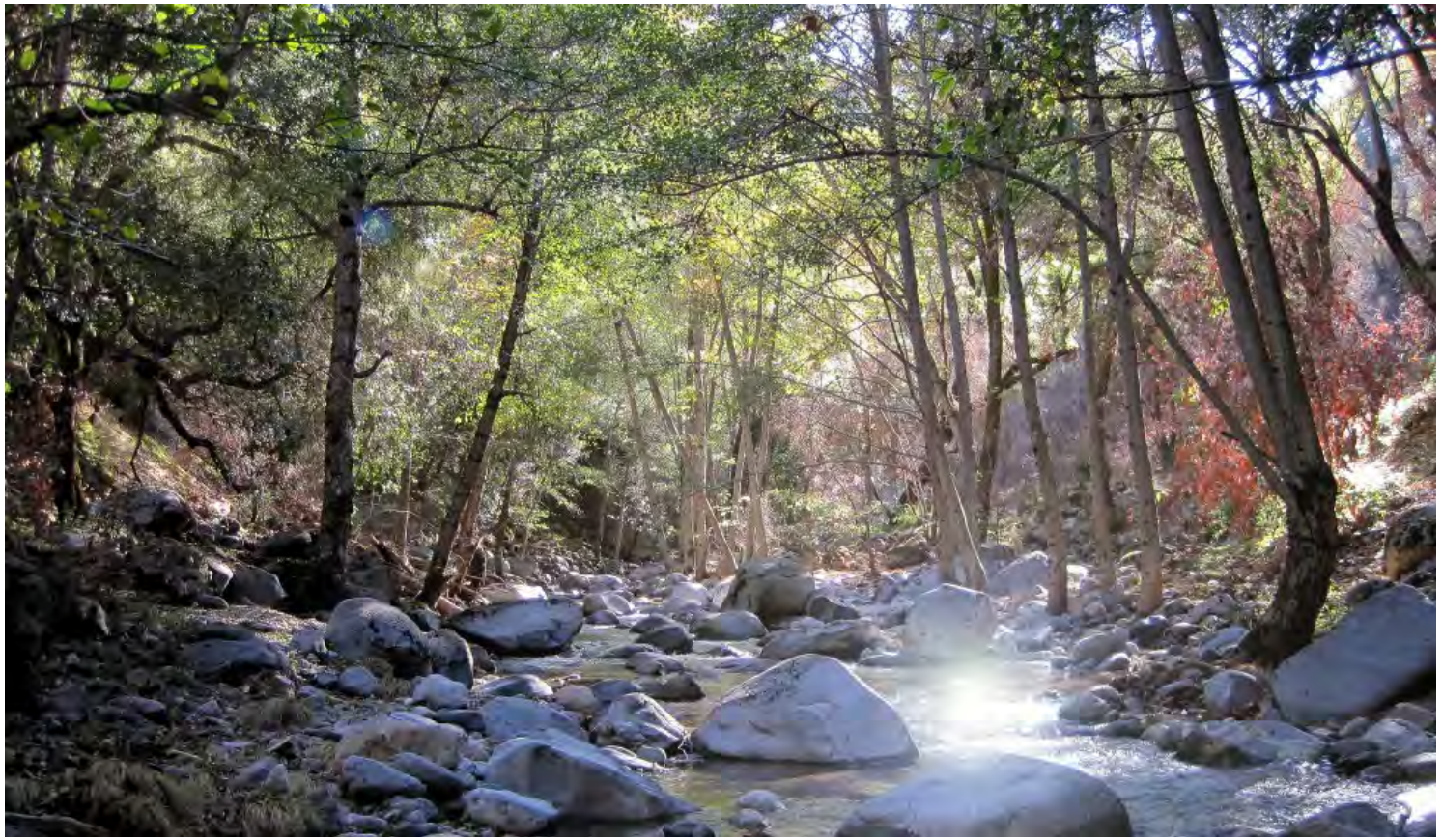
- EIR/EIS evaluated alternative locations; concluded increased impacts compared to CEMEX site
- Staff Report acknowledges PWM Expansion is not adequate to meet Peninsula's long-term supply needs

Test 2 – Not Permitting MPWSP Would Adversely Affect Public Welfare

- Phased project responds to public concerns; Cal-Am proposed programs to minimize additional costs to low-income ratepayers
- Water urgently needed to lift moratorium, allow residential development and affordable housing, and support economic growth
- Prevents further SVGB seawater intrusion and helps Seaside Basin maintain groundwater levels
- Provides discounted water to Castroville and reduces pumping from seawater-intruded aquifers

Test 3 – Adverse Environmental Impacts Mitigated to Maximum Extent Feasible

- CPUC's Mitigation Monitoring and Reporting Program is robust
- Staff Report recommends 20 Special Conditions to ensure impacts are mitigated



MPWSP Achieves Environmental and Policy Goals for Desalination

- Reliable, diverse, **adequate water supply** for Monterey Peninsula that will allow lifting of moratorium and development of needed affordable housing
- **Cease illegal diversions** from Carmel River; comply with State Water Board CDO
- Supply reliable and clean municipal water for **Castroville,** a **severely disadvantaged community** facing severe water supply constraints
- Subsurface slant wells virtually **eliminate harm to sea life**, are preferred choice of SWRCB, Monterey Bay National Marine Sanctuary, Coastal Commission
- Protect and promote **Monterey economy**

MPWSP ACHIEVES POLICY GOALS FOR DESAL

- CPUC analyzed Project impacts over 6 years and unanimously approved it to meet PUC-determined water demand for Monterey Peninsula
  - Project uses ***intake technology preferred by federal and state resource agencies***
    - Contrast to “open ocean” intake systems, slant wells virtually ***eliminate any harm to sea life***
  - Slant well feasibility ***proven through test well*** at proposed site
    - Wells will ***extract from existing seawater intruded aquifers*****,** which will be conveyed to desalination plant for treatment
  - Staff Report confirms virtually all impacts fully mitigated
- Cal-Am proposed a phased Project approach in response to community feedback and in recognition that ***desalination is necessary to meet current and future Peninsula water demand***

COMPARISON OF MPWSP AND DOHENY DESALINATION PROJECT

	MPWSP	Doheny
Capacity	4.8 mgd, with potential increase to 6.4 mgd	5 mgd
Well Technology	Subsurface slant wells	Subsurface slant wells
Number of Wells	2 wellheads accommodating up to 4 slant wells, plus conversion of test slant well	2 wellheads accommodating up to 5 slant wells
Well Length	1,000+ feet (new wells); ~700 feet (existing test well)	~600-900 feet
Wellhead Elevation	~11 feet	~18 feet
Well Construction	15 months	28-24 months
Public Access	*De minimis* fenced footprint of 0.17 acre on nearly 400-acre CEMEX site, not open to public	Temporary closure of campground on Doheny State Beach during construction
Energy	Pursuant to CPUC mitigation, must be net zero GHG	Pursuant to Special Condition, must be net carbon neutral
Affordability	Expand existing low-income programs with goal of no increased desal costs; includes unprecedented cap to ensure desal costs of no more than $10/month for eligible low-income ratepayers	No existing low-income programs – rates projected to increase $7-$15 per month; pursuant to Special Condition, must perform study and identify all feasible programs

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