

# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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### Meeting Agenda

#### Resource Management and Climate Protection Committee (RMCP)

**Date:** Wednesday, August 18, 2021

**Time:** 3:00 p.m.

**Location:** Remote meeting via Zoom link below

On March 17, 2020, the Governor issued Executive Order N-29-20 suspending certain provisions of the Ralph M. Brown Act in order to allow for local legislative bodies to conduct their meetings telephonically or by other electronic means. On June 11, 2021, the Governor issued Executive Order N-08-21 extending the suspension of these provisions to September 30, 2021. Thus, pursuant to Executive Order N-08-21, C/CAG Board meetings will be conducted via remote conferencing. Members of the public may observe or participate in the meeting remotely via one of the options below.

#### Join Zoom Meeting

<https://us02web.zoom.us/j/81592976513?pwd=cExkVkl6d3N4ZzIjBTjViZlJTdzJlZz09>

Meeting ID: 815 9297 6513

Passcode: 510953

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Persons who wish to address the RMCP Committee on an item to be considered at this meeting, or on items not on this agenda, are asked to submit comments in writing to [kspringer@smcgov.org](mailto:kspringer@smcgov.org) by 5:00 PM on Tuesday, August 17, 2021, per the guidelines below.

Emailed public comments should have a subject line of: "RMCP Meeting Comment" and note the specific agenda item on which you are commenting, note that your comment concerns an item that is *not* on the agenda, or note that it is *specific to* an agenda item. Members of the public are limited to one comment per agenda item. The length of the emailed comment should be commensurate with the two minutes customarily allowed for verbal comments, which is approximately 250-300 words. Staff will read the public comments addressing matters on this agenda received before the deadline of 5:00 PM on August 17, 2021 at the time the matter is called. Staff will read the public comments addressing items *not* on this agenda received before the deadline of 5:00 PM on August 17, 2021 during agenda item 2 "Public comments." Comments received after the deadline but before the end of the meeting will be provided to the RMCP Committee after the meeting.

1. Roll Call - Introductions
2. Public Comment
3. Approval of Minutes from July 21, 2021 RMCP Committee meeting.  
(Kim Springer – Committee Staff) Action
4. Review of draft scope of services for integrating equity into C/CAG’s programs.  
(Kim Springer – Committee Staff) Information/Comment
5. Presentation on integration of Hydrogen as building power backup and energy management.  
(Darin Painter, Plug Power) Information/Discussion
6. Presentation on addressing water quality and design when promoting residential graywater systems.  
(Laura Allen, Greywater Action) Information/Discussion
7. Committee Member Updates
8. Next Scheduled Meeting Date: September 15, 2021

PUBLIC NOTICING: Due to the impact of the Coronavirus (COVID–19), all notices of C/CAG regular Board meetings, standing committee meetings, and special meetings will be posted at C/CAG’s website at: <http://www.ccag.ca.gov>.

All notices of C/CAG regular Board meetings, standing committee meetings, and special meetings will be posted at the San Mateo County Transit District Office, 1250 San Carlos Ave., San Carlos, CA, and on C/CAG’s website at: <http://www.ccag.ca.gov>.

PUBLIC RECORDS: Public records that relate to any item on the open session agenda for a regular Board meeting, standing committee meeting, or special meeting are available for public inspection. Those public records that are distributed less than 72 hours prior to a regular Board meeting are available for public inspection at the same time they are distributed to all members, or a majority of the members, of the Board. The Board has designated the City/County Association of Governments of San Mateo County (C/CAG), located at 555 County Center, 5th Floor, Redwood City, CA 94063, for the purpose of making public records available for inspection. Such public records are also available on C/CAG’s website at: <http://www.ccag.ca.gov>.

PUBLIC PARTICIPATION: Public comment is limited to two minutes per speaker. Persons with disabilities who require auxiliary aids or services in attending and participating in this meeting should contact Mima Guilles at (650) 599-1406, five working days prior to the meeting date.

*If you have any questions about this agenda, please contact C/CAG staff:*

*Executive Director: Sean Charpentier [scharpentier@smcgov.org](mailto:scharpentier@smcgov.org)*

*RMCP Committee Staff: Kim Springer [kspringer@smcgov.org](mailto:kspringer@smcgov.org)*

# C/CAG

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Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

### Meeting Minutes

#### Resource Management and Climate Protection Committee (RMCP)

***Date: Wednesday, July 21, 2021***

#### **1. Roll Call – Introductions**

**Staff completed the roll call of Committee Members with the following quorum:**

##### **Committee Members in Attendance:**

Maryann Moise Derwin - Portola Valley  
Diane Papan – San Mateo  
Donna Colson – Burlingame  
Rick DeGolia, Atherton  
Tom Francis – BAWSCA  
Jeff Smith – Sares Regis Group  
Alex Fernandez - Filoli  
Bill Chiang - PG&E

##### **Not in Attendance**

Don Horsley - San Mateo County Supervisor  
Drew Combs - Menlo Park  
Deborah Ruddock – Half Moon Bay  
Ortensia Lopez - El Concilio  
Christine Kohl-Zaugg – Sustainable San Mateo County

##### **Additional Attendees**

Nicole Sandkulla - BAWSCA  
Sandy Wong – C/CAG  
Sean Charpentier – C/CAG  
Kim Springer – C/CAG  
Matt Fabry – C/CAG  
Reid Bogert – C/CAG  
Charles Ice – County Environmental Health  
Greg Smith – County Environmental Health  
Carol Steinfeld – Sierra Club, Loma Prieta Chapter  
Susan Wright – Office of Sustainability  
John Allan – Office of Sustainability  
Alexandria Gallizioli – Office of Sustainability  
Tess Bartlett – Supervisor Don Horsley’s Office

Lena Silberman – Supervisor Don Horsley’s Office  
Frank Fraone – PG&E  
Diana Hawkins – Atherton City Council  
Drew – Member of Public

## **2. Public Comment**

There were no public comments prior to the meeting by email, nor at the meeting under this item.

## **3. Approval of Minutes from April 21, 2021 RMCP Committee meeting.**

There were no edits or corrections to the minutes.  
Motion to approve and second: Francis/Papan  
Motion passes unanimously by committee members present.

## **4. Election of RMCP Committee Vice Chair**

Member Papan nominated member Colson, who accepted the nomination. The nomination was seconded by member Chiang.  
Colson elected unanimously by committee members present.

## **5. PG&E update on efforts to reduce wildfire risk and Public Safety Power Shutoffs.**

Bill Chiang and Frank Fraone of PG&E provided the presentation, which is posted on the C/CAG RMCP website.

Chiang began the presentation by announcing PG&E’s intentions to underground 10,000 miles of distribution lines. A second item mentioned by Chiang is that PG&E and been advised to revise its criteria to consider removal of “overstrike” trees from the “fall zone” of PG&E power lines. Chiang handed off to Fraone.

Fraone reviewed the data contained in the presentation slides, including updates on numbers of: Community Resource Centers, CBO Partnerships, Transmission and Distribution Sectionalizing Devices installed, Weather Stations, and High-definition Cameras.

Springer: Can you say more about the sectionalizing devices?

Fraone: it allows PG&E to make the PSPS grid much smaller to affect fewer customers;

DeGolia: Can you say more about the undergrounding of power lines: how much of the undergrounding will be in San Mateo County and where?

Fraone: The presentation slide mentions System Hardening, not undergrounding specifically. The update on undergrounding was just new today, so not sure of the specifics yet. It will likely be concentrated on the higher fire risk areas, T3 areas. Most likely in the La Honda and Pescadero area.

Chiang: Likely it will be concentrated outside of the Bay Area in Northern California.

Francis: 10,000 miles seems like a lot. What percentage of the PG&E system is that?

Chiang: I believe the distribution total line is in the 24,000-mile range.

Fraone: In San Mateo County, it’s about 1,600 miles, of which about 25% are in the high fire risk areas.

Fernandez: What does the new overstrike rules mean to property owners?

Fraone: PG&E only has access to the public rights of way, so PG&E will look to property owners to provide access for these additional safety measures.

Chiang: Kudos to Portola Valley for proactively establishing a committee to address this issue.

Fraone: Both Portola Valley and Woodside. Many thanks given to all cities who work collaboratively with PG&E.

## **6. Bay Area Water Supply and Conservation Agency update on Water Supply Reliability Roundtable and drought in San Mateo County.**

Committee member Tom Francis, BAWSCA, provided the presentation, which is posted on the C/CAG RMCP website and began with the drought topic.

California is generally in severe drought and water supplies are down from normal. Hetch Hetchy is down about 14% from normal, at 83.6%, and overall storage (Tuolumne and Local storage systems) is about 18% below normal. Francis added that we are far better off than many of the systems in California.

The rain fall has ended, and we are at about half the normal rainfall and, locally in the Bay Area, it's about the same, at 12.5 inches as opposed to the normal 26.9 inches. No rain in June or July and probably none in August. The snowpack was well below the median level, and the snow melt is already finished.

In terms of what this means to San Mateo County: the Governor's May 10, 2021 Executive Order affected Alameda and Contra Costa Counties, but not San Mateo County. The July 8, 2021 Governor's Executive Order expanded the emergency to San Mateo and Santa Clara Counties and that all Californians voluntarily reduce water use by 15% below their 2020 water use and that the State Water Board track progress towards that 15% reduction.

The message that BAWSCA is sending; it's important to use water wisely and reduce outdoor water use and take advantage of the rebates and programs offered by BAWSCA and its agencies. The SFPUC passed the same message to its member agencies. The idea is to preserve storage in upcountry supplies because it's likely we could have another dry upcoming season. BAWSCA participation in events and outreach messaging is aligned with that of other BAWSCA agencies.

Smith: What are the real numbers related to usage of residential verses agriculture or commercial?

Francis: We get this question a lot: agriculture is getting less water; less water is used in urban areas than agriculture. Water rights, especially pre-1914, are untouchable. Groundwater sustainability plans are also key. There may be more drastic measures if next year as dry as well.

Fernandez: You mentioned water use is down 16% since the last drought.

Francis: Water use it down significantly, but there is always some rebound. During COVID we saw our water use go up because of the residential nature of our area. SF say a decrease as businesses closed. Still, the governor is asking for 15% voluntarily, so that's what we'll be tracking. It will be challenging because we're already conserving well. Communities should look to outdoor landscaping for additional conservation.

Tom Francis moved on to the topic of the BAWSCA Roundtable.

BAWSCA has taken to heart the idea of forming a Roundtable on One Water in response to Carol Steinfeld and in discussion with BAWSCA, Kim Springer, and Matt Fabry.

BAWSCA provided a concept paper with indicated stakeholders, goals, work product, and a timetable, which was described by Francis, based on the slides, and which are provided on the C/CAG RMCP website. The draft concept paper is included in the July 21, 2021 Agenda packet.

The Roundtable is aimed at providing input to BAWSCA's next long-term water supply reliability strategy. The next strategy will be more locally focused, considering smaller and multiple projects that could add up to more significant water supply benefits.

Francis asked for feedback from the committee.

Papan: Connection to the Regional Housing Needs Assessment (RHNA) numbers and how we enhancing water supplies in our communities to meet those numbers?

Francis: BAWSCA already fielding questions from communities on this question. Roundtable could ask that question as a topic; the effect of the RHNA numbers will have on reliable water supply. Nicole Sandkula is engaged with ABAG/MTC RHNA staff, since this has a direct nexus on our reliable water supply.

Papan: Is the Flood and Sea Level Rise Resiliency District involved, since they are guarding against significant water events; some of that water has potential reuse.

Francis: Appreciate the comment and will add that to the list. Diversion of storm water and its possible water supply makes sense.

Smith (Committee member): There are some expert civil and other engineers in our community that could be tapped.

Francis: That's a good idea Jeff, I was thinking about the same thing but also folks like you who are on the business side.

Colson: Question on coordination of funding for recycled water projects. Several cities are looking at a potential MOU and development standards for approximately a million square feet of new development, including water conservation, such as: graywater, purple pipe, etc., So that there is necessary infrastructure should multiple cities want to join to build a water recycling plant, it seems like the Roundtable should consider standards for these type of water systems.

Francis: It seems like this Roundtable will discuss the funding topics Reach out to BAWSCA on some of these questions.

Derwin: Will the Roundtable result in communication between stakeholders to address the One Water Approach? This morning there was an article in the San Mateo Daily Journal about San Bruno and how they are going to find funding to update their stormwater system. This would be a great opportunity to get capture included.

Francis: That would be the intention. As you know finding funding to do these kinds of projects can be difficult. Getting people to the table and making it a collective voice as opposed to just water supply. Bringing everybody to the table to share what funding opportunities the different entities have will be helpful. And if there are opportunities, figuring out how to apply for it with coordination in the group.

Derwin: If you look at Israel, they are the gold standard. They recycle 80% of their water including wastewater to potable water. That's expensive but I think it's time to start thinking about those things especially as wastewater plants are being replaced. Are all these questions going to be discussed at the Roundtable and will there be a focus on San Mateo County specifically, and to address the coastside which is not covered by BAWSCA?

Francis: I will work with Kim to see what we can do about that. As you know BAWSCA has areas outside of San Mateo County and so for this Roundtable we must include some discussion in those other areas. That's a good thing, because regional projects and coordination can benefit the region.

I will commit to bringing up the topic of One Water and this round table is feeding information into the upcoming water reliability strategy. But there is likely going to be more focus on smaller local projects that collectively can reduce pressure on local water supplies. Both these kinds of strategies were around in 2014 when we did our last water supply reliability strategy, but these topics and concerns have become a lot more relevant.

Derwin: Is the round table going to result in actionable items we can do in our county?

Francis: We'll have to see. I'll be leveraging a consultant to help with the meetings and taking notes. We can include action items, but I know for BAWSCA, our action item is this reliability strategy. Likely each of the agencies who come to the round table will have their own priorities but maybe a priority could be looking at actual actionable project collaborations. For RMCP we are committed to giving updates as we move along.

Derwin: this is great but I'm wondering if we need our own In San Mateo County under C/CAG.

Francis: BAWSCA plans to engage C CAG heavily in this so I just ask that you participate for a year and see how this works.

Derwin: Policies are also something we should look out for.

Steinfeld: I'm glad you mentioned that Marianne because I've long thought that we need a specific effort in San Mateo County, but we didn't do that so BAWSCA is moving forward, That's why it's taken the form that it has. Through this process we'll find out what kind of new groups or where the energy is on this in our area, but there are a lot of models in other parts of the country for this. I think this is a good start and I hope that it gets started soon.

Derwin: When do you think this will get started Tom?

I wanted to have the chance to present it to the RMCP committee and I'll be reaching out to Kim and Matt and other stakeholders to set a date to get this started working on the agenda. Probably early fall.

Wright: The County is working on the Local Hazard Mitigation Plan, so that effort and staff might tie into this effort.

Derwin: Tom gave a presentation to our citizen group and I highly recommend Tom.

## **7. Presentation on onsite use of non-potable water in residential and commercial settings, and state efforts to establish regulations for various non-potable end uses.**

Greg Smith, County Environmental Health, Supervisor for Water Protection and Land Use Programs delivered a presentation on non-potable water reuse in San Mateo County. Smith's presentation is provided at the C/CAG RMCP Committee website.

Environmental Health doesn't just inspect restaurants, they are responsible for every septic system in the county, wells and drilling, clean up sites, beach and creek monitoring, regulation of small drinking water systems, and a cross-connection control program. The water reuse program generally falls within the cross-connection control program. Water reuse generally falls into gray water, treated gray water, stormwater, rainwater, and recycled water.

For commercial and multifamily buildings, the water sources are black water from toilets grey water from clothes washers, bathtub showers, rainwater from precipitation, air conditioning condensate from air conditioning systems, and then stormwater, which is water that is collected below grade, and foundation drainage. Talking about each of these water sources, black water is typically not something that you can reuse on site. Rainwater, air conditioning condensate and foundation drainage are all sources of water that can be reused on site. Greywater can also be treated and used on site back into the building. If used back into the building, at the very least it must be disinfected. As a more extreme

example, Facebook has been permitted to do black water treatment on site. So, in general we are not seeing black water reuse going back into the building.

On the residential side, What the reuse can be is more limited 2 Gray water rainwater storm water and condensate. Regular Gray water is used for outdoor use and it must be treated or disinfected before it can be used back into the home. Current residential building code is not completely clear about reuse of water back into the home. It doesn't explicitly say that, but all indications are that is not for use back in the home for flushing toilets.

The reason why county environmental health is presenting on information that should be handled by building departments and the plumbing code, is because people are generally concerned about health implications. As of 2009, water reuse was only addressed in an appendix of the plumbing code, and cities would have to adopt that appendix separately to allow for residential water reuse. Since that time and the need for emergency regulations for water the requirements have been worked into the main sections of the plumbing code and are adopted every three years by building departments. As of the current, 2019, plumbing code all regulations are included in chapters 15 and 16.

In terms of residential greywater, residents must consider all the things that go down the sink from which water is reused including, her, skin, chemicals in soaps, etc. Most people don't consider what's in residential greywater and its effects on end use such as landscape irrigation. Plants don't care about dirt fecal matter dead skin hair lint spit because it doesn't hurt the plants. But chemicals soaps and detergents which contain salts, boron, and chlorine, and food and grease need to be considered.

Residential greywater should not be stored for more than 24 hours, it should infiltrate to at least two inches of mulch, and human and animal contact should be minimized. In addition, residential greywater must be able to be diverted to sewer, there must be signage and manuals especially when transferring to new home ownership and proper setbacks must be maintained. It's best for trees shrubs not root crops.

Approximately 50% of residential water usage is outdoors, plus an additional 9% from washers, 9% from shower heads, 9% from faucets, and 4% from baths, meaning that all but approximately 18% of residential water usage can be diverted to outdoor landscape use. This kind of water reuse equates to approximately 30 gallons per person per day. Considering the requirements and the energy use to disinfect and pump water back into the home for toilet flushing, really doesn't make much sense when there is considerable water savings by diverting to landscape alone.

Regarding why County Environmental Health is involved, California Plumbing Code (PCP) Section 1506 says that the local health department shall be consulted for indoor gray water systems permit issuance. So only for indoor use of treated water and only to see if other standards or ordinances apply. Any gray water coming back into the building must be disinfected. If there are no requirements, they NSF 350 are applied. County Environmental Health does not have an ordinance or published standard related to gray water that would be more restrictive than CPC, Chapter 15 or 16. So, all the regulation that apply are in the plumbing code.

On the horizon: SB 966 required the State Water Resources Control Board to establish uniform statewide recycling criteria for each varying type of use of recycled water to protect public health. Regulations for risk-based water quality standards should be adopted by December 1, 2022. Then, local jurisdictions may elect to establish a program for non-potable water systems by adopting a local ordinance incorporating those standards, and the California plumbing code must adopt the new standards by December 1, 2023.

Greg Smith then asked for questions, but also suggested that low tech solutions, including things like flushing toilets with water saved from showers, should be pushed out to the public in the form of PSAs or other ads. Smith also mentioned that he supports smaller distributed systems of recycling water, as opposed to shipping water to wastewater treatment plants and then using energy to pump it back to locations where it can be used.

Francis: Great presentation. BAWSCA could do more on this type of education. Do you know what is going on in terms of on-site reuse?

Greg Smith: We do not keep a log or listing. We usually hear about it after the fact. WE guide them to the city building department and then jointly give them feedback.

Francis: We would like to engage you and the Roundtable.

Steinfeld: Impressed with the presentation. I agree that gray water for outdoor irrigation is a good pathway, but there are cities that have created a pathway for indoor graywater and even black water reuse. City building departments need to be educated so that there is clarity on what's allowed.

Smith: We've looked at on-site water recycling and it fits for larger projects, but not for smaller projects. The quality and hardness of the water at some sites becomes an issue.

Derwin: I have a 30,000-gallon rainwater capture system that ran out two months early this year, and water recycling in my guesthouse.

Springer: Thank you to all presenters. The water quality and what's in it may be a good topic for a next meeting.

## **8. Committee Member Updates**

There were no committee-member updates.

## **9. Next Scheduled Meeting Date: August 18, 2021**

# C/CAG AGENDA REPORT

**Date:** August 18, 2021  
**To:** Resource Management and Climate Protection Committee  
**From:** Kim Springer, Committee Staff  
**Subject:** Review of draft scope of services for integrating equity into C/CAG's programs.  
(For further information contact Kim Springer at [kspringer@smcgov.org](mailto:kspringer@smcgov.org))

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## **RECOMMENDATION**

Review and comment on a draft scope of services for integrating equity into C/CAG's programs.

## **FISCAL IMPACT**

None

## **BACKGROUND/DISCUSSION**

C/CAG acknowledges that historic and every-day actions taken by local agencies in the administration and implementation of programs and projects, affect equity and opportunity in the communities they serve. To assure progress on equity, C/CAG will release an RFP for consulting services supporting current and future C/CAG efforts towards equity in San Mateo County. Staff have researched the equity efforts of other agencies engaged in work similar to C/CAG's to help identify possible actions and the consulting support needed to ensure movement towards a more just and equitable future for communities in San Mateo County.

C/CAG, as an organization, oversees programs addressing multiple aspects of transportation, land use, stormwater pollutants and water, energy, and climate change. C/CAG's role in San Mateo County is both important and influential. However, C/CAG does not provide services as broadly as the County of San Mateo, for instance, which provides multiple welfare safety net services directly to communities. C/CAG is working to define an equity program that is fitting to its programs and the communities serves.

Ultimately, C/CAG will integrate equity into its efforts by identifying and listening to disadvantaged communities, increasing equity awareness internally, assessing existing and further integrating opportunities to address equity into programs and committee work, and by defining equity for and C/CAG's role in equity in San Mateo County. The selected consultant should include support from a few San Mateo County Community Based Organizations (CBOs) in order to ensure a community perspective in C/CAG's equity efforts. Prior to releasing and RFP, the following scope of services for consultant support has been developed for input from C/CAG committees and, eventually, the C/CAG Board.

A draft Equity Scope of Services developed by staff is provide as an attachment to this staff report.

## **ATTACHMENTS**



## Equity RFP - Draft Scope of Services

### Staff Awareness Training

- Historical Perspective
  - Awareness of government's role and opportunity in supporting equity in the communities they serve
  - Discussion about each of C/CAG's program areas and how, historically, disadvantaged communities have fallen behind in their ability to leverage or access similar programs. A few examples of positive steps that could be taken
- CBO Current Perspective
  - San Mateo County CBO perspective on transportation, energy, water, air quality, hazardous pollutants – presentations directly from CBO
  - Reality of living in Disadvantaged Communities (DACs) – presentation from CBO
- Defining DACs geographically and demographically in San Mateo County (from a C/CAG programs and project perspective)
  - Differentiate between different geographic and demographic metrics (DAC, MTC Equity Priority Community; EnviroScan; C/CAG Bicycle Plan including Housing and Transportation Burden.
  - Create a consolidated map showing the different geographies.
  - Accessible tools for locating DACs in San Mateo County
  - Coastside vs. Bayside – differences and similarities
  - Aspects and issues of income, race, access to services
  - Defining target communities for C/CAG by program area
  - Differentiating between the concept of geographic equity

### C/CAG Programmatic Review and Equity Integration

- Focused delineation of CCAG's role in equity given CCAG's mission.
- Analysis of existing program/project integrations
- Overview of CCAG existing processes and committees to ensure process equity.
- Opportunities for new integrations by program
- Overall programs integration focus and plan

- Definition of equity and types of equity relevant to C/CAG – follows from understanding of C/CAG scope of programs and communities served

### Policy and Statements

- Development of Board and staff pledge
- Development of C/CAG Equity Workbook and Framework for ongoing staff practice tied to C/CAG programs, including process for integrating equity into future programs
- Allowable (according to funding sources) project scoring rubrics, language, and metrics for evaluating equity in procurement and program/project evaluation
- Statements for contracts, website, RFPs, other outreach
- System to track C/CAG's integration of equity over time.

### Reports

- Final report
  - Draft report – presentation to C/CAG Board
  - Edited final draft and final report
  - Final report – presentation to C/CAG Board

# C/CAG AGENDA REPORT

**Date:** August 18, 2021  
**To:** Resource Management and Climate Protection Committee  
**From:** Darin Painter, Plug Power  
**Subject:** Presentation on integration of Hydrogen as building power backup and energy management.  
(For further information contact Kim Springer at [kspringer@smcgov.org](mailto:kspringer@smcgov.org))

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## **RECOMMENDATION**

Receive a presentation on integration of Hydrogen as building power backup and energy management.

## **FISCAL IMPACT**

None

## **BACKGROUND/DISCUSSION**

Two major measures for reducing greenhouse gas (GHG) emissions are fuel switching to electricity in both the building and transportation sectors. Phasing out of fossil fuels in the building sector means shifting away from natural (methane) gas and the infrastructure associated with its use.

However, reducing GHG emissions from both sectors may also include a transition to Hydrogen. For the residential sector, two demonstration houses, with a focus on appliances, are either being constructed or are already in testing. The Southern California Gas – Hydrogen Home demonstrates the role that Hydrogen can play in carbon neutrality. In the United Kingdom, Northern Gas Networks (NGN), the company responsible for distributing gas to homes in the north of England, has just opened two homes fueled entirely by Hydrogen. The companies promoting these solutions have in common the oversight and investment in the existing gas infrastructure.

For the commercial sector, transition to natural gas has been less focused on internal appliances, but more electrification and leveraging the benefits of Hydrogen backup generation. Where a traditional diesel backup generator is an asset that is used almost exclusively when electric power is off, applications of Hydrogen backup offer opportunities to participate in power management and the associated financial benefits.

Darin Painter, VP of Sales – Stationary Power at Plug Power, will share some of Plug Power’s Hydrogen initiatives, provide a presentation on some of the systems Plug Power offers for backup generation and how they have been integrated for managing power, such as reducing peak load (peak shaving) or responding to grid requests for reduced power use (demand response).

A copy of Plug Power’s GenSure high-power backup generation system specification sheet is

provided as an attachment to this staff report.

## **ATTACHMENTS**

Plug Power GenSure specification sheet

# GENSURE™

## GENSURE HP FUEL CELL GENERATORS Zero-Emission Power for Large-Scale Applications

Plug Power's GenSure HP zero-emissions hydrogen fuel cell: efficient, environmentally-responsible energy. Designed for large-scale power applications using our 125kW ProGen fuel cell engine, our GenSure products enable growth and capacity expansion in all regulatory environments with a solution that is more rapidly deployable and has reduced maintenance and higher reliability than a combustion generator. The GenSure HP fuel cell is fueled by hydrogen to provide extended emission-free runtime for critical equipment. Turnkey packages include power, fuel, installation/permitting, and aftermarket service, taking complexity out of the equation and enabling a seamless transition to hydrogen fuel cell-based power.

**Proven. Rugged. Reliable. Clean.** Plug Power has installed several thousand GenSure fuel cells of various sizes at customer sites around the United States in 36 other countries. Material handling professionals have deployed more than 30,000 GenDrive fuel cells in their operations. Our customers have completed over 38 million hydrogen fills - using more than 40 tons of hydrogen each day. Plug Power products are field-proven through snow and icestorms, hurricanes and other severe weather events. Because the only emissions are warm air and a small amount of water, GenSure fuel cell products are exempt from the most stringent air quality standards and are a valuable component of corporate sustainability efforts. Plug Power makes it easy to replace your high power combustion generators with clean, reliable fuel cell power.



Powering Your Possibilities.

## HIGHLY RELIABLE

Plug Power's GenSure fuel cell systems perform in hot and cold, humid and arid environments. With minimal moving parts and optional built-in redundancy, these fuel cells are proven to perform reliably in real world conditions.

## ZERO-EMISSION / QUIET OPERATION

GenSure fuel cell systems offer zero-emission, quiet operation and are not subject to fuel spill containment and air quality reporting requirements. Our products support load peak shaving and demand response programs without impacting emissions and operating hour limitations.

## MINIMAL MAINTENANCE

Fuel cell health and fuel levels may be remotely monitored. Simple maintenance and fewer site visits mean significantly lower operational costs when compared to combustion generators. Infinite hydrogen storage life eliminates expensive fuel polishing requirements associated with combustion generators



## LOW ACOUSTIC SIGNATURE

Quiet operation enables GenSure fuel cell solutions to be located anywhere power is required, even in acoustically-sensitive locations.

CONFIGURATION	250KW	500KW	1.0MW
<b>OUTPUT</b>			
MINIMUM ELECTRICAL OUTPUT POWER (CONT)	60kW		
MAXIMUM ELECTRICAL OUTPUT POWER (CONT)	250kW	500kW	1.0MW
DUTY CYCLE	Stand-by, Prime		
ELECTRICAL EFFICIENCY (PEAK)	>45%		
SYSTEM OUTPUT VOLTAGE	480VAC, 3P, 50/60HZ		
<b>PHYSICAL</b>			
DIMENSIONS	20' ISO Container	30' ISO Container	40' ISO Container
PROTECTION	NEMA 3R Outdoor rated enclosure		
<b>OPERATIONAL</b>			
AMBIENT TEMPERATURE	-30°C* to 50°C*		
DESIGN LIFE	15 years		
NOISE	<65dBA at 150'		
EMISSIONS	Zero Emissions		
<b>FUEL</b>			
FUEL (FULL SPEC AVAILABLE ON REQUEST)	99.995% Hydrogen		
ENERGY STORAGE	Low pressure & high pressure gaseous, liquid options available		

\* Cold weather package required to achieve -30°C; hot weather package required to achieve 50°C

Infinite hydrogen storage life eliminates expensive fuel polishing requirements associated with combustion generators.

Specifications subject to change without notice. Information based on standard products working under normal operating conditions.

**Corporate Headquarters**  
968 Albany Shaker Road  
Latham, NY 12110  
518.738.0320

**PLUGPOWER.COM**  
gensure@plugpower.com



# C/CAG AGENDA REPORT

**Date:** August 18, 2021  
**To:** Resource Management and Climate Protection Committee  
**From:** Laura Allen, Greywater Action  
**Subject:** Presentation on addressing water quality and design when promoting residential graywater systems.  
(For further information contact Kim Springer at [kspringer@smcgov.org](mailto:kspringer@smcgov.org))

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## **RECOMMENDATION**

Receive a presentation on addressing water quality and design when promoting residential graywater systems.

## **FISCAL IMPACT**

None

## **BACKGROUND/DISCUSSION**

The RMCP Committee has been exploring water conservation, recycled water, and a One Water approach to maximizing use of water resources in San Mateo County.

At the July 21, 2021 RMCP Committee meeting, the Committee received a presentation on the building code and best practices for onsite reuse of gray- and other sources of onsite water at residential and commercial sites, from Greg Smith, County Environmental Health. The presentation included thoughts about potential water quality issues, specifically contaminants in gray water in “laundry to landscape” systems. In addition, committee members and public attendees suggested that there is considerable confusion among the public about what’s required and allowed for a residential gray water system. In addition, the Committee may not be aware of the necessary components of a “laundry-to-landscape” system.

Laura Allen, founding member of Greywater Action, will provide a presentation on gray water and/or laundry-to-landscape systems, information on standardized checklists that have been implemented in other counties (such as San Francisco and Oakland), and how residents can address water quality issues for laundry, shower, and bathroom sink water.

## **ATTACHMENTS**

None