



Item No. 1 Town of Atherton

CITY COUNCIL STAFF REPORT – STUDY SESSION

TO: HONORABLE MAYOR AND CITY COUNCIL

THROUGH: GEORGE RODERICKS, CITY MANAGER

FROM: STEPHANIE B. DAVIS, AICP SENIOR PLANNER

DATE: JANUARY 13, 2016

**SUBJECT: 2016 ENVIRONMENTAL PROGRAMS COMMITTEE (EPC)
SPECIFIC WORK PLAN ITEMS AS RECOMMENDED BY THE
EPC**

RECOMMENDATION

Review, provide comment, and direct staff as to the specific work plan items to be included prior to review of the Climate Action Plan.

BACKGROUND

The Town's Environmental Programs Committee (EPC) is established and governed under City Council Resolution No. 15-10, which outlines the Committee's principles, rules of procedures, powers and duties. The EPC is charged with the following powers and duties:

To act in an advisory and recommending capacity to the City Council:

- Make recommendations to the City Council upon request on all matters pertaining to the Town's natural and built environment and the Town's regional role and responsibilities as one of the communities on the San Francisco Bay Peninsula.
- Create pro-active community engagement programs for residents, commercial and public enterprises active within the Town's jurisdictions for presentation and approval by the City Council.

Most recently, the EPC has been working over the course of several months to develop a series of potential greenhouse gas (GHG) reduction measures for the Town to implement in order to meet the minimum State mandated reduction in GHG levels by at least 15% by the year 2020, as well as creating a draft Climate Action Plan (CAP) in which these measures would be integrated within. The Council will consider formal adoption of a Town CAP at a future meeting in early 2016.

To more broadly address climate change within the Town, combined with the forthcoming draft CAP, the EPC has prepared a 2016 EPC Policy Statement and detailed, draft Work Plan to assist

the Town to address climate change and implement the CAP (Attachments 1 and 2 respectively). As an advisory committee, the EPC work plan must be reviewed and approved by the City Council before the EPC can begin implementing identified programs.

It is the preference of the Council to consider the complete, proposed EPC work plan in conjunction with the draft CAP. This was the feedback provided by the Council at the November 4 Study Session. However, in the interim, completion of the CAP was delayed due to contractual issues with the consultant, postponing its completion at a minimum to the end of January.

The Committee Chair requested that the EPC Work Plan be placed on the then January 6 Study Session for Council consideration. On December 21, the City Manager advised the Chair that this was not the direction of the Council and that the Work Plan should be reviewed by the Council in the context of and concurrently with their thorough review of the CAP. On December 22, Mayor Lewis and Council Member DeGolia met with Chair Gardener to discuss the issue. At that time, the Mayor requested that the January 6 Study Session be canceled and that a Special Meeting be called for January 13 to discuss the items on tonight's agenda – inclusive of abbreviated EPC Work Plan. The abbreviated EPC Work Plan would consist of the Atherton 2020/Home Energy Program and the 2016 Earth Day event. The remaining items within the EPC Work Plan would be discussed concurrently with the CAP at a future meeting.

As such, it is requested that the Council consider two, specific proposed Work Plan items for the EPC:

1. Authorization to plan and prepare for the Town's (2016) Earth Day event.
2. Authorization to implement the "Atherton 2020" program.

Consideration of the EPC Work Plan Policy Statement and all remaining, proposed Work Plan items as listed in Attachment 1 and 2 would be considered at a future City Council meeting.

ANALYSIS

The EPC has prepared an overall Policy Statement which outlines the organizations and priorities of the Committee's Work Plan, identifies the role for the EPC, and builds upon three primary goals. The prepared 2016 Work Plan outlines three programs and actions to conform to the goals and priorities of this Policy Statement, as well as including its own, specific Policy Statement regarding the establishment of funding to implement such programs.

Every year, the Town hosts a community Earth Day event which is planned for and led by the EPC. In anticipation of preparation and other necessary efforts for this year's April 22, 2016 Town Earth Day event, the EPC requests authorization to move forward with these planning efforts and would like to be able to use the event to inform the community of the Atherton 2020 program. Once a plan for the Earth Day event is developed, the EPC would be required to return to the Council for a budget amendment for the event before beginning any action(s) in furtherance of the event.

As noted in the background, consideration of the overall Policy Statement and Work Plan programs, (with the exception of Atherton 2020) will be considered at a future Council meeting. The Atherton 2020 program is summarized below and is followed by a brief discussion of associated implementation and other matters the Council may wish to consider.

1. Atherton 2020 - Home Energy Efficiency, Water Conservation and Education Program

The re-introduction of Atherton 2020 is the Committee's primary programmatic focus of the Work Plan in the attempt to assist the Town to reduce its own contributions to climate change, namely its carbon emissions, and help the community prepare for increasingly severe climate impacts. Atherton 2020 was a home energy reduction program with a goal to help homeowners begin to reduce their home energy footprint using a state-of-the-art online energy audit system. Specifically, the program would consist of home energy and water audits conducted by an outside consultant for residents to help education them on changes they could make to allow their home greater energy and water efficiencies and conservation. While this program was developed by the EPC back in 2011, actual implementation efforts of the program were ceased at this time. It is the thought of the EPC that reinstating this program will be an efficient effort as the general program framework is already established.

Under this program, the Committee has identified the development of a community, environmental education website to disseminate such water and energy conservation programs and practices, as well as to further broadly share and receive any and all pertinent, environmentally based information throughout the Town.

Matters to Consider: The actual energy and water audits are proposed to be implemented by a professional, outside consultant. The cost of service to offer this program to all Town residents is roughly estimated at \$9,000. The creation of the program implementation, marketing and public outreach component through development of an environmentally based informational website is roughly estimated at \$10,000 - \$20,000. It noted that this website development cost estimate would not be just for dissemination of the Atherton 2020 program, but for the additional two Work Plan items identified by the EPC to be considered by the Council at a future meeting.

Additional staff resources necessary to assist in supporting and managing these efforts should also be considered. Specific costs are unknown at this time, but anticipated to exceed the currently budgeted funds to support the EPC on bi-monthly basis.

Until the remaining, complete Work Plan is considered by the Council, future EPC meeting agendas would be developed in accordance with any items approved by the Council at tonight's meeting.

POLICY FOCUS

As noted in the “BACKGROUND AND ANALYSIS” section above, the EPC has specific duties and powers as governed by Resolution No. 15-10. In its existing capacity, the EPC is charged to serve as an advisory committee making policy recommendations to the Council; not a “working” Committee to implement programs and policies on behalf of the Town, nor oversee or manage staff resources. Currently, there is no advisory Committee that operates independent programs and services with funding sources and separate accounts. An advisory Committee would only be allowed funds allocated directly by the Council on a programmatic basis, with those funds disbursed through staff. Currently all Committee requested purchases must be made by Staff and not the Committee. Staff must facilitate all programs implemented by a Committee currently such that the Committee is not independently expending Town funds or using Town resources beyond what may be authorized. Some of the components of the proposed Work Plan identify the hiring of outside consultants to assist in their development and application. Currently, there is no citizen advisory committee that manages or directs Town sponsored consultants to support their committee charge.

FISCAL IMPACT

The 2015/2016 Fiscal Year (FY) Budget includes \$5,000 for the Environmental Program Committee - General Support for committee work. This amount is for all work associated with the Committee beyond staff support. This is a General Fund obligation. Any expenditures from the line item must be authorized in advance and monitored by staff as currently, a Committee does not have authorization to commit or expend funds on the Town’s behalf.

There is an additional FY allocation of \$5814.50 of budget for staffing resources to support the EPC (which includes attendance at bi-monthly meetings annually, preparation and coordination of bi-monthly EPC agendas and packet materials, annual Earth Day coordination and attendance efforts). This allocated staff budget may not be adequate to fully support the specific Work Plan items as proposed – as noted it is estimated that an additional \$9,000 amount would be necessary to hire a consultant to assist in implementing the Atherton 2020 program and \$10,000 - \$20,000 to hire a consultant to develop an informational website. Final consultant costs would be prepared after detailed, requests for program services are prepared.

Additional staff resources and funding would be necessary to support, coordinate, and facilitate the efforts of the third party consultants identified as components as part of the Work Plan.

Per Resolution No. 15-10, in the event funding for a Committee is desired, a budget shall be prepared and presented to the City Council for review and approval.

PUBLIC NOTICE

Public notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting in print and electronically. Information about the project is also disseminated via the Town’s electronic News Flash and Atherton Online. There are approximately 1,200 subscribers to the Town’s electronic News Flash publications. Subscribers include residents

as well as stakeholders – to include, but be not limited to, media outlets, school districts, Menlo Park Fire District, service providers (water, power, and sewer), and regional elected officials.

ATTACHMENTS

1. Draft 2016 EPC Policy Statement and Work Plan, as recommended by the EPC
2. Draft 2016 EPC Work Plan, as recommended by the EPC

EPC Policy Statement

Our committee is committed to educating the council and residents of the town about the seriousness of the environmental crisis that we are living with and charting the course that best enables the town to reduce its own contributions to climate change, namely its carbon emissions, and help the community prepare for increasingly severe climate impacts.

As we write this policy statement, the heads of nearly 200 nations have come together in Paris at the 21st Conference of the Parties, to address the problem of Climate Change globally. The seriousness of the challenge and known catastrophic impacts on the environment, ecosystem and mankind cannot be overstated — California’s current record-breaking drought being one — yet uncertainty as to the best response, real fear about what it means for our future, pessimism about our ability to do anything, as well as the prevalent distractions of dealing with daily life prevent many people from actively engaging on this difficult and long-term issue.

People rely on their elected representatives to alert them to threats and lead them. The council has established the EPC to advise and guide it as to best environmental policies and programs. Even with international heads of state working at the global level, the Executive Office and all federal agencies working at the national level, and the Governor and many State leaders working at the state level, there are still many critical things that local leaders can and need to do at the local level. These broadly include:

- I. Promoting education and support for strong climate action among residents.
- II. Capping and reducing the Town’s total carbon emissions as quickly as possible.
- III. Supporting and building community climate resiliency, especially with respect to water use, drainage and storage.

Accordingly, the EPC has submitted a draft Climate Action Plan for Atherton which is quite comprehensive and far-reaching. This includes an inventory of town emissions, a plan to help the town reduce emissions and, down the road, an assessment of our progress. The only piece missing is the availability of staff and funding to implement the CAP programs. Recognizing that the town does not currently have either staff or funding in place, the EPC has prioritized into its work plan the establishment of a funding mechanism that will enable the town to fund programs to achieve the following priority programs into the future:

- 1) *Home Energy Efficiency, Water Conservation, & Education*: Implement “Atherton 2020,” a town-wide program that helps to educate and provide useful tools to homeowners for the purposes of energy efficiency, water conservation and green building. The key feature will be an energy audit and energy tracking feedback that helps residents identify and reduce sources of wasted energy in their homes. Atherton homes use more natural gas and electricity than any other bay area community: we can

reduce carbon emissions by reducing wasted energy, saving money without impacting quality of life, and by replacing older, more inefficient appliances and motors. This program will serve to provide a portal for useful information to residents regarding the other goals cited below.

- 2) *Incentivize/Require Clean Energy Homes*: Atherton already uses a lot of energy. Every time an older home is remodeled or rebuilt, the size of the home size increases, a trend that, by itself, would defeat the town's efforts to reduce its carbon emissions. Luckily, it does not need to. Atherton should move aggressively to update its Building Code to require new homes to implement maximum green building features, including clean energy systems, such as solar, wind, geothermal or new technologies, so that the amount of energy pulled from the grid is not increased with each new home. Assuming a transition period, Atherton can implement various *incentives* that encourage compliance.
- 3) *Water Conservation, Reuse, Recharging and Storage*: With the current drought, the State of California has mandated reductions in water use. Many Atherton residences, however, have mature yards that are not well suited for drought tolerance. Additionally, our water infrastructure treats rainwater as a nuisance waste and channels it out to the bay, rather than treating it as a precious resource, even though many town properties (including Holbrook-Palmer Park, the Circus Club and hundreds of homes) rely on well water from aquifers for irrigation. The town needs programs that: a) Help residents implement water conservation at home; b) Educates residents about options for water reuse such as gray water systems and on-site rain water storage; c) incentivizes homeowners in flood-prone areas to reduce storm water run-off and build water absorption basins on site instead and d) upgrades the water district channel to provide for effective town-wide recharging of the underground aquifers.
- 4) *Education about Clean Energy, Smart Materials, Home Efficiency*: People cannot use or benefit from information, materials or technologies that they don't know about. With increased attention to the problems of climate change and demand for better solutions, new climate-smart materials and technologies are being developed all the time. Residents who are remodeling, homebuilders and new purchasers can benefit from better information relating to home energy performance, green materials and clean technologies. Given the demographic and size of homes, the town can play an important role in collecting and aggregating such information that can help residents build, buy and remodel the most energy efficient, resilient homes possible.

Environmental Programs Committee

From: Environmental Programs Committee (EPC)

To: City Council

Re: **2016 EPC Work Plan** (to conform to Policy Statement & Priorities)

Introduction: Climate change is the biggest challenge our country and the world faces. Over 200 nations are presently meeting in Paris to find ways to avert the global catastrophe that scientists have warned of for decades and which is already being felt, demanding the expenditure of hundreds of billions of dollars. No place, including Atherton, can continue business as usual. This 2016 Work Plan lists the initial things the EPC can achieve to help Atherton begin to respond to the very real threats we face from climate change by identifying three (3) specific programs, while we assess our longer term funding for the implementation of the CAP. Funding issues are discussed in the last section as a policy statement.

Work Program Items:

1. Re-design and Implement “Atherton 2020” as an Energy Efficiency, Water Conservation and Education Program.

Atherton 2020 was previously designed, funded and partially rolled out in 2011, prior to being shuttered prematurely. This program should be re-designed and rolled out to the town to include free energy audit to residents who sign up prior to a certain date. Because the program has been previously “tested” and various promotional assets funded and developed, it could be re-launched very quickly. Depending upon budget and implementation plan, many of the individual measures listed in the CAP can be incorporated as features of Atherton 2020, along with the primary EPC goals, listed below:

A. Tackling Energy Efficiency: Atherton is renown for having some of the most luxurious homes and largest lots in California. We also have one of the highest per capita carbon emission footprints in the country. Much of this high usage comes from wasted energy. Atherton 2020 energy audits will provide useful information and easily help residents identify and eliminate their home energy vampires and hogs. Home energy audits can be provided by an outside consultant, Home Energy Analytics (HEA), which uses PG&E smart meter data to efficiently educate residents about their actual usage. HEA has developed an intuitive interface and process that makes participation fun and time effective. The anticipated consultant cost to implement such a program to be made available to all Town residents is roughly estimated to cost \$9,000.

B. Residential Water Conservation: Atherton 2020 can also provide information about water conservation and water audits to residents and help them transition to more water efficient systems. HEA now provides water usage audits as well as energy audits, and can assist homeowners to implement efficient irrigation systems and point them to providers that can assist with gray water systems, rain water collection systems and other services and products. The anticipated cost to implement such a program to all Atherton residents from HEA is roughly estimated to cost \$9,000 as noted above.

C. Environmental Education: An Atherton 2020 website could be built to provide critical resources for homeowners seeking to explore information about home energy efficiency, green building, clean energy technologies, zero net energy, smart materials¹, water conservation, gray water reuse systems and town-wide carbon emissions, among other useful information. If successful, the Atherton 2020 website could help promote adoption of such programs as an Atherton Community Choice program, so Atherton can work independently to clean its energy stream.

It is anticipated that the development of an beneficial public outreach program (including initial marketing efforts, creation of content platform and informational website) to disseminate all environmentally based Town program and policy information (including those identified here in this work plan, those identified in CAP, and any other environmentally based Town topics as they may arise) to the community would be initially created by an outside consultant at an estimated cost of \$10,000 – 20,000.

2. Advisory and Support for All Town Environmental Issues

The EPC would serve as a reviewing and advisory body for any environmentally based issues that may arise within the Town for consideration. This would include, but not be limited to, such things as updates to the Municipal and or Building Code,

¹ Smart materials are a new class of materials that add a wide range of benefits, including safety, security, usage data and even energy. Some smart materials allow for real-time monitoring of structural health, so repairs or changes can be made before catastrophic damage or failure occurs. Some smart materials belong to a group of self-actuating materials that react to stimuli from the environment by invoking a physical, strain or stress, response in the material. This category includes piezoelectric and magnetostrictive materials. Piezoelectric materials can expand and contract and harvest energy, potentially converting the vibrations from cars, trains, and pedestrians, to storable energy. Piezoelectric floor mats have already been used in subway stations in Japan and even in European public places. While these materials are extremely new and still being developed, we believe that a program that brings the concept to Atherton can help to promote awareness and build acceptance of such materials.

Drainage District Upgrades, and/or any matters that have an impact on the Town's natural and/or physical built environment.

Atherton's Building Codes generally adhere to California's minimum building requirements. Yet Atherton is an exceptional community with outsized homes and lots, and bigger per capita carbon footprints than any other Bay Area community. We should be conscientiously implementing higher standards because, even with California's progressive building standards, we will be continually increasing our community's carbon emissions unless we require new homes and remodels to cap or reduce their emissions. This cannot be accomplished without a dedicated team reviewing and evaluating meaningful, viable upgrades to the Building Code. The EPC can establish a subcommittee of experts to advise the council on such upgrades.

The Town currently needs to develop a proposal for how it will improve the environmental characteristics of the Marsh Road drainage channel. Assuming that Atherton can swap the Marsh Road channel work for that along Watkins, the EPC can help advise the town on the redesign of a revitalized and naturally-restored, meandering creek along Watkins Avenue at Holbrook-Palmer Park that blends natural creek restoration and habitat re-creation with a series of water collection ponds that provide increased areas for storm water overflow and absorption. This project can serve as a model for future improvements to the drainage channel that runs through and around Atherton, where natural and biological assets are blended with better water management goals, to achieve reduced flooding, as well as increased absorption.

3. Improve Resource Use Disclosure Requirements for Home Buyers

Atherton has virtually no commercial activity. Aside from town government building and schools, Atherton is dominated by residential neighborhoods. Assuming that a major goal of the town of Atherton is to improve the energy performance of its homes, the committee believes that Atherton should require sellers to provide prospective buyers with information about the home's special green features and its energy and water usage. This would enable buyers to not only compare homes based upon their square footage, visible features and price but also upon the invisible ongoing operating costs that can vary wildly between otherwise similar-seeming homes. The EPC, working in conjunction with town staff can develop a standard format and methodology that would enable sellers to report information to prospective buyers on an "apples-to-apples" basis, using both actual numbers but applying leveling calculations. This disclosure form would provide great incentives for homeowners to invest in home energy efficiency, renewable energy systems and increased levels of green building.

Such information is initially anticipated to be disseminated through public outreach and education efforts as identified in Work Plan Program Item #1 as detailed above.

Work Program Policy Statement:

Establish a Funding Mechanism for Atherton's Environmental Programs

Atherton currently has no budget allocated for environmental programs, such as those described above, aside from an allocation of a part-time planning staff person to support the Environmental Programs Committee, a volunteer town committee. In contrast, nearly all bay area towns have one or more staff people dedicated to Sustainability and Environmental Programs. We need dedicated staff and program funding in order to mount the response that enables Atherton to implement most if not all of the CAP measures described in the Climate Action Plan. The Town Council needs to allocate adequate funding to manage this sizeable amount of work and effect meaningful changes within the community. If the town is not able to commit substantially greater resources over many years to support the needs of the community to respond to climate change, then the Council may wish to consider alternative, general funding mechanisms, such as the following.

- A. Consider a Conservation Utility User Tax, which places a modest tax on the usage of utilities that directly pertain to Atherton's carbon emissions, namely electricity, natural gas and water, as appropriate.
- B. Consider voluntary contributions as was previously done during the creation of Atherton 2020.
- C. Allocate additional Town funds.

Bibliography

- CA.gov Climate Change Portal: <http://www.climatechange.ca.gov/>
- [5 Key Threats to California from Climate Change](#). Brian Clark Howard, National Geographic (8/12/2014)
- See California City Finance: [Utility User Tax Facts](#)
- Piezo Technology. "Piezoceramics as "Smart Materials" in Adaptive Systems Technology." *PI Ceramic*. PI Ceramic, n.d. Web. 18 Oct. 2014.
- Pilkington. "Thermal Insulation Glass." *Pilkington*. Pilkington, n.d. Web. 18 Oct. 2014.
- Ginley, David S. Cahen, David (2012). Fundamentals of Materials for Energy and Environmental Sustainability - 42.8.2 Smart Materials. Cambridge University Press.
- BeciriR, Damir. "Walk over Sustainable Dance Club Floor Tiles to Generate Power." *RobAid*. RobAid, 17 Apr. 2010. Web. 18 Oct. 2014.
- Kamizuru, Stephen. "People-powered Electricity in Japan." *DailyTech*. DailyTech, 15 Dec. 2008. Web. 18 Oct. 2014.
- BBC Research. "Smart Materials and Their Applications: Technologies and Global Markets." *BBC Research AVM023D* (2011): n. pag. Print.