City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Meeting Agenda

City Council

THE FORT BRAGG CITY COUNCIL MEETS CONCURRENTLY AS THE FORT BRAGG MUNICIPAL IMPROVEMENT DISTRICT NO. 1 AND THE FORT BRAGG REDEVELOPMENT SUCCESSOR AGENCY

Tuesday, October 13, 2020 | **6:00 PM** | **Via Video Conference**

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

PLEASE TAKE NOTICE

DUE TO THE PROVISIONS OF THE GOVERNOR'S EXECUTIVE ORDERS N-25-20 AND N-29-20 WHICH SUSPEND CERTAIN REQUIREMENTS OF THE BROWN ACT, AND THE ORDER OF THE HEALTH OFFICER OF THE COUNTY OF MENDOCINO TO SHELTER IN PLACE TO MINIMIZE THE SPREAD OF COVID-19, CITY COUNCIL MEMBERS AND STAFF WILL BE PARTICIPATING BY VIDEO CONFERENCE IN THE CITY COUNCIL MEETING OF TUESDAY, OCTOBER 13, 2020.

In compliance with the Shelter-in-Place Orders of the County and State, this meeting will be closed to the public. The meeting will be live-streamed on the City's website at https://city.fortbragg.com/ and on Channel 3. Public Comment regarding matters on the agenda may be made in any of the following ways: (1) By joining the Zoom video conference, (2) Through the City's online eComment agenda feature, (3) Emailed to City Clerk June Lemos, jlemos@fortbragg.com, (4) Written comments delivered through the drop-box for utility payments to the right of the front door at City Hall, 416 N. Franklin Street, or (5) Voice mail comments called in to (707) 961-1694 by 5:00 PM on the day of the meeting.

Comments can be made at any time prior to the meeting, in real-time while the item is being considered by the Council and up to 12:00 PM on Wednesday, October 14, 2020. The Clerk will read aloud all eComments or emails received before or during the meeting that have not been published with the agenda packet. Public comments are restricted to three minutes. Written comments on agendized matters and those exceeding three minutes will be included in the public record as part of the agenda packet the next business day after the meeting.

We appreciate your patience and willingness to protect the health and wellness of our community and staff. If you have any questions regarding this meeting, please contact the City Clerk at (707) 961-1694 or jlemos@fortbragg.com.

ZOOM WEBINAR INVITATION

You are invited to a Zoom webinar.
When: Oct 13, 2020 06:00 PM Pacific Time (US and Canada)
Topic: City Council

Please click the link below to join the webinar:
https://zoom.us/j/95296164400
Or iPhone one-tap :
US: +16699009128,,95296164400# or +12532158782,,95296164400#
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 669 900 9128 or +1 253 215 8782 or +1 346 248 7799 or +1 646 558 8656 or +1 301 715 8592 or +1 312 626 6799
Webinar ID: 952 9616 4400
International numbers available: https://zoom.us/u/aea83LFJHU

TO SPEAK DURING PUBLIC COMMENT PORTIONS OF THE AGENDA VIA ZOOM, PLEASE JOIN THE MEETING AND USE THE RAISE HAND FEATURE WHEN THE MAYOR OR ACTING MAYOR CALLS FOR PUBLIC COMMENT ON THE ITEM YOU WISH TO ADDRESS.

AGENDA REVIEW

1. MAYOR'S RECOGNITIONS AND ANNOUNCEMENTS

1A. 20-869 Presentation of Proclamation Recognizing October as Domestic Violence Awareness Month

Attachments: 07-Domestic Violence Awareness Month
DVAM 2020 PowerPoint Presentation
DVAM October Calendar of Events

1B. 20-873 Presentation of Proclamation Recognizing City Clerk June Lemos for Seven Years of Service with the City of Fort Bragg

Attachments: 08-Recognizing City Clerk
Public Comment 1B

2. PUBLIC COMMENTS ON: (1) NON-AGENDA, (2) CONSENT CALENDAR & (3) CLOSED SESSION ITEMS

MANNER OF ADDRESSING THE CITY COUNCIL: All remarks and questions shall be addressed to the City Council; no discussion or action will be taken pursuant to the Brown Act. No person shall speak without being recognized by the Mayor or Acting Mayor.

TIME ALLOTMENT FOR PUBLIC COMMENT ON NON-AGENDA ITEMS: Thirty (30) minutes shall be allotted to receiving public comments. If necessary, the Mayor or Acting Mayor may allot an additional 30 minutes to public comments after Conduct of Business to allow those who have not yet spoken to do so. Any citizen, after being recognized by the Mayor or Acting Mayor, may speak on any topic that may be a proper subject for discussion before the City Council for such period of time as the Mayor or Acting Mayor may determine is appropriate under the circumstances of the particular meeting, including number of persons wishing to speak or the complexity of a particular topic. Time limitations shall be set without regard to a speaker's point of view or the content of the speech, as long as the speaker's comments are not disruptive of the meeting.

BROWN ACT REQUIREMENTS: The Brown Act does not allow action or discussion on items not on the agenda (subject to narrow exceptions). This will limit the Council's response to questions and requests made during this comment period.

3. STAFF COMMENTS

4. MATTERS FROM COUNCILMEMBERS

5. CONSENT CALENDAR

All items under the Consent Calendar will be acted upon in one motion unless a Councilmember requests that an individual item be taken up under Conduct of Business.

5A. 20-866 Adopt City Council Resolution Temporarily Waiving the City of Fort Bragg General Plan Maintenance Fee

Attachments: RESO General Plan Maint. Fee Waiver

Public Comment 5A

5B. 20-867 Adopt City Council Resolution Approving a Side Letter Agreement with the Fort Bragg Police Association and Authorizing City Manager to Execute the Same

Attachments: RESO Reinstate PD Premium Pays

Exhibit A - Side Letter

Signed Side Letter 05242020

5C. 20-868 Adopt City Council Resolution Approving a Side Letter Agreement Between the City of Fort Bragg and the Fort Bragg Police Association and Authorizing the City Manager to Execute Same

Attachments: RESO FBPA Holiday Pay & CalPERS

Exhibit A - Side Letter

5D. 20-872 Adopt City Council Resolution Confirming the Continued Existence of a Local Emergency in the City of Fort Bragg

Attachments: RESO Declaring Continuing Local Emergency

5E. 20-870 Approve Minutes of September 28, 2020

Attachments: CCM2020-09-28

6. DISCLOSURE OF EX PARTE COMMUNICATIONS ON AGENDA ITEMS

7. PUBLIC HEARING

When a Public Hearing has been underway for a period of 60 minutes, the Council must vote on whether to continue with the hearing or to continue the hearing to another meeting.

8. CONDUCT OF BUSINESS

8A. 20-871 Receive Report and Community Development Committee Recommendations and Provide Direction to Staff Regarding the Scope of Work in a Request for Proposals for Professional Services to Prepare a

Commercial Cannabis Cultivation Ordinance for the Inland Area of Fort Bragg

Attachments: 10132020 Staff Report Cannabis Cultivation RFP

Att 1 - January 8, 2018 Council Report

Att 2- June 24, 2019 Council Report

Att 3 - September 22, 2019 CDC Report

Att 4 - RFP Scope of Work

Public Comment 8A

8B. 20-874 Receive Report and Consider Adoption of Joint City Council/Municipal Improvement District Resolution Approving Budget Amendment 2021-05 Adjusting Selected Expenditures and Revenue Budgets

Attachments: 10132020 FY 20-21 Budget Amendment 5

Att. 1 - Resolution

Att. 2 - Exhibit A to Resolution

Public Comment 8B

9. CLOSED SESSION

9A. 20-875 CONFERENCE WITH REAL PROPERTY NEGOTIATORS FOR POSSIBLE ACQUISITION OF REAL PROPERTY, Pursuant to Government Code Section §54956.8: Real Property: APN 018-430-22-00, 90 W Redwood Ave., Fort Bragg, CA 95437; City Negotiator: Tabatha Miller, City Manager; Negotiating Party: Dave Massengill, Environmental Affairs, Georgia Pacific Corporation; Under Negotiation: Terms of Acquisition, Price

ADJOURNMENT

The adjournment time for all Council meetings is no later than 10:00 p.m. If the Council is still in session at 10:00 p.m., the Council may continue the meeting upon majority vote.

NEXT REGULAR CITY COUNCIL MEETING:
6:00 P.M., MONDAY, OCTOBER 26, 2020

STATE OF CALIFORNIA)
)ss.
COUNTY OF MENDOCINO)

I declare, under penalty of perjury, that I am employed by the City of Fort Bragg and that I caused this agenda to be posted in the City Hall notice case on October 7, 2020.

_____

June Lemos, CMC
City Clerk

NOTICE TO THE PUBLIC:

DISTRIBUTION OF ADDITIONAL INFORMATION FOLLOWING AGENDA PACKET DISTRIBUTION:

- *Materials related to an item on this Agenda submitted to the Council/District/Agency after distribution of the agenda packet are available for public inspection upon making reasonable arrangements with the City Clerk for viewing same during normal business hours.*
- *Such documents are also available on the City of Fort Bragg's website at https://city.fortbragg.com subject to staff's ability to post the documents before the meeting.*

ADA NOTICE AND HEARING IMPAIRED PROVISIONS:

It is the policy of the City of Fort Bragg to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including those with disabilities. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities.

If you need assistance to ensure your full participation, please contact the City Clerk at (707) 961-2823. Notification 48 hours in advance of any need for assistance will enable the City to make reasonable arrangements to ensure accessibility.

This notice is in compliance with the Americans with Disabilities Act (28 CFR, 35.102-35.104 ADA Title II).

City of Fort Bragg

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Text File

File Number: 20-869

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Mayor's Office

In Control: City Council **File Type:** Proclamation

Agenda Number: 1A.

Presentation of Proclamation Recognizing October as Domestic Violence Awareness Month

Proclamation

DOMESTIC VIOLENCE AWARENESS MONTH

WHEREAS, in just one day, across the U.S and its territories, nearly 75,000 victims of domestic violence sought services from domestic violence programs and shelters; and

WHEREAS, approximately 15.5 million children are exposed to domestic violence every year; and

WHEREAS, when a family member is abused, it can have long-term damaging effects on the victim that also leave a mark on family, friends, and the community at large; and

WHEREAS, the problems of sexual and domestic violence are not confined to any group or groups of people, but crosses all economic, racial, gender, educational, religious, and societal barriers, and are sustained by societal indifference; and

WHEREAS, the crimes of domestic and sexual violence violate an individual's privacy, dignity, security, and humanity due to the systematic use of physical, emotional, sexual, psychological, and economic control and/or abuse; and

WHEREAS, a great deal of domestic violence incidents go unreported by survivors who experience fear of repercussions, threats of future violence, denial, guilt, shame, feelings of worthlessness, and/or fear of negative responses; and

WHEREAS, victims of violence should have access to medical and legal services, counseling, emergency and transitional housing, and other supportive services so that they can safely escape the cycle of abuse; and

WHEREAS, Fort Bragg joins others across the nation in supporting victims of domestic violence, as well as local programs, state collation, and national organizations that are committed to increasing public awareness of domestic violence and sending a clear message that domestic violence is not tolerated; and

WHEREAS, domestic violence impacts millions of people each year, but can be prevented. Preventing domestic violence requires the collective voice and power of individuals, families, institutions, and systems – each that add a valuable voice for transforming our communities.

NOW THEREFORE, I, Will Lee, Mayor of the City of Fort Bragg, on behalf of the entire City Council, hereby proclaim the month of October 2020, as Domestic Violence Awareness Month, and urge all citizens to actively support work towards the elimination of domestic violence in our community.

SIGNED this 13th day of October, 2020

_____

WILLIAM V. LEE, Mayor

ATTEST:

_____

June Lemos, CMC, City Clerk

No. 07-2020

Domestic Violence Awareness Month

Project Sanctuary

LEGAL ADVOCACY

EMERGENCY SHELTER

24-HR CRISIS RESPONSE

INDIVIDUAL COUNSELING

Services

All services are confidential, free of charge and move at the pace of the client.

PREVENTION

What is domestic violence?

Domestic violence is a pattern of coercive and controlling behavior that can include physical abuse, emotional abuse or psychological abuse, sexual abuse, or financial abuse.

Domestic violence affects people of all cultures, religions, ages, sexual orientations, educational backgrounds and income levels.

- About **1 in 4** women and nearly **1 in 10** men have experienced sexual violence, physical violence, and/or stalking by an intimate partner during their lifetime and reported some form of IPV-related impact.

- The Centers for Disease Control and Prevention have reported that in homes where violence between partners occurs, there is a **45% to 60%** chance of co-occurring child abuse a rate **15** times higher than the average. Even when they are not physically attacked, children witness **68% to 80%** of domestic assaults.

- **46%** of the homicides in 2019 (US) were killed by a current or former partner.

At-a-glance

Prevention

Teach safe and healthy relationship skills

- Social-emotional learning programs for youth
- Healthy relationship programs for couples

Engage Influential adults and peers

- Men and boys as allies in prevention
- Bystander empowerment and education
- Family-based programs

Disrupt the developmental pathways toward partner violence

- Early childhood home visitation
- Preschool enrichment with family engagement
- Parenting skill and family relationship programs
- Treatment for at-risk children, youth, and families

Create protective environments

- Improve school climate and safety
- Improve organizational policies and workplace climate
- Modify the physical and social environments of neighborhoods

Strengthen economic supports for families

- Strengthen household financial security
- Strengthen work-family supports

Support survivors to increase safety and lessen harms

- Victim-centered services
- Housing programs
- First responder and civil legal protections
- Patient-centered approaches
- Treatment and support for survivors of IPV, including teen dating violence

Project Sanctuary

We invite YOU to participate in our **20 for 2020** challenge this October. Why 20for2020? Every minute in the Unites, 20 people are physically abused by an intimate partner. This adds up to over **10 million** people per year.

Take the **20for2020** challenge with us and empower yourself, your family, and our community to prevent domestic violence.

October 2020

all events are free and online

TODOS LOS EVENTOS SON GRATUITOS Y POR ZOOM. HAGA CLIC EN EL ENLACE

Sun	Mon	Tues	Wed	Thu	Fri	Sat
				1	2	3
4 **9:00 AM** Gentle Yoga with Delphine	5 **6 PM** Healthy Communication Panel in English	6	7	8 **5:30 PM** At One Restorative Yoga Class	9	10 **11 AM** Toddler and Parents Exercise Class with Kassie Hayes
11 **9:00 AM** Gentle Yoga with Delphine	12 **6 PM** Comunicación Saludable, en español	13	14	15 **6 PM** Nurturing the Nature of Comfort and Health with John Worthington, RN	16	17 **11 AM** Gymnastics for "Big Kids" with Kassie Hayes
18 **9:00 AM** Gentle Yoga with Delphine	19 **6 PM** Raising Healthy Men Panel in English	20	21 **6 PM** Community Resiliency Model Training with Jade Aldrich	22 **6 PM** Movement for Well Being with Madeline Hurst	23	24
25 **9:00 AM** Gentle Yoga with Delphine	26 **6 PM** Criando Hombres Saludables, en español	27	28 **6 PM** Relaxation and Regulation in Spanish with Magdalena Weinstein	29 **6 PM** Intro to Polyvagal theory with Magdalena Weinstein	30	31

www.projectsanctuary.org
www.facebook.com/projectsanctuary.inc

#20for2020

CONTACT US!

707.961.1507
707.964-4357

October 2020

ALL EVENTS ARE FREE AND ONLINE

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Text File

File Number: 20-873

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Mayor's Office

In Control: City Council **File Type:** Proclamation

Agenda Number: 1B.

Presentation of Proclamation Recognizing City Clerk June Lemos for Seven Years of Service with the City of Fort Bragg

P R O C L A M A T I O N

Recognizing City Clerk June Lemos for Seven Years of Service with the City of Fort Bragg

WHEREAS, seven years ago, on October 21, 2013, June Lemos was hired by the City of Fort Bragg as an Administrative Assistant in the Community Development Department; and

WHEREAS, less than two years thereafter, on September 15, 2015, June was promoted to City Clerk pursuant to City Council Resolution No. 3852-2015; and

WHEREAS, on January 20, 2017, after an intensive course of study with the International Institute of Municipal Clerks (IIMC), June achieved the designation of Certified Municipal Clerk; and

WHEREAS, on June 15, 2018, she received her certification as a California Professional Municipal Clerk from the University of California, Riverside; and

WHEREAS, June was appointed by the City Clerks Association of California (CCAC) as a mentor to four Northern California city clerks; and

WHEREAS, she was chosen by the CCAC as a member of their Membership and Inclusivity Committee to help make new city clerks feel more welcome and prepared at conferences and trainings; and

WHEREAS, June is currently attending courses through the IIMC in pursuit of a Master Municipal Clerk's degree, with only 50 units remaining before she attains that prestigious designation; and

WHEREAS, June has paid for her continuing education costs out of her own pocket because the travel and training budget at the City has been cut due to the economic effects of Covid-19; and

WHEREAS, June has taken responsibility for direct supervision of the IT Systems Analyst and Administrative Services Admin Assistant to help reduce the supervisory responsibilities of the City Manager; and

WHEREAS, as the City's Elections Official, June has been instrumental in providing secure ballot protocols in conjunction with the Mendocino County Elections Office in anticipation of the upcoming general election; and

WHEREAS, the 51st Annual Professional Municipal Clerks Week occurred this year from May 3 through May 9, but because the regular City Council meeting of April 27 was cancelled due to Covid-19, the City Clerk was not acknowledged during this annual event honoring municipal clerks;

NOW, THEREFORE, I, William V. Lee, Mayor of the City of Fort Bragg, on behalf of the entire City Council, do hereby recognize and thank City Clerk June Lemos for her years of service to the City of Fort Bragg.

SIGNED this 13th day of October, 2020

_____

WILLIAM V. LEE, Mayor

ATTEST:

_____

June Lemos, CMC, City Clerk

No. 08-2020

18:24:16 From Athena Lemos : YAAAAAY!!!! SO deserved!!!!
18:24:30 From Robin Epley to All panelists : Congratulations June!
18:24:31 From Crystal P to All panelists : Thank you June!
18:24:34 From nancy to All panelists : so deserved
18:24:47 From Athena Lemos : Well done June!!!
18:24:51 From dave turner to All panelists : so true. June is the greatest!
18:24:52 From Tess Albin-Smith to June Lemos, CMC(Privately) : you are great!
18:24:54 From Pamela to All panelists : Congratulations to June, from her proud Cousin, Pamela Robinson McCurdy, Retired Deputy City Clerk. So Proud of Her!!!
18:25:07 From Sandy Arellano to All panelists : Congratulations to the BEST City Clerk Ever!!! You rock June! ☺
18:25:08 From Jamie to All panelists : Congratulations June!!
18:25:10 From June Lemos, CMC : Thank you everyone!!! Love you all
18:25:13 From Sarah McCormick to All panelists : Yaya! June!
18:25:17 From dave turner : so true. June is the greatest!
18:25:18 From Marie Jones to All panelists : Thanks June for all your hard work for everyone. You are a total professional and so amazing and competent. Thanks for all you do for our community and you high level of integrity and honesty! -- Marie
18:25:19 From Joanna Gonzalez to All panelists : June is amazing My role model
18:26:19 From Athena Lemos : Here here, Mr. Peters!!
18:27:01 From Emily Lemos to All panelists : Congratulations to the best City Clerk around!!! She is truly the most caring, thoughtful person. The community is so lucky to have her!
18:27:08 From Jill Lemos : Such great whereases! Correct whereas tense, please, June.
18:27:12 From cmv to All panelists : we love you June!!
18:27:54 From sheila semans to All panelists : Love working with June! Much deserved recognition…
18:27:54 From Chantell O'Neal to All panelists : Staff echos Councils support. Thank you June, you're the Best!
18:28:19 From linda ruffing to All panelists : Hooray for June. She is amazing and deserves all of these accolades. Thank you to the City Council for acknowledging her hard work and professionalism!
18:29:49 From nancy to All panelists : yes,put this in the record.. June is fabulous city clerk and great human!
18:30:42 From Athena Lemos : Well said, Jessica!!!
18:31:14 From Sandy Arellano to All panelists : Not only a great person to work with but and amazing human being.
18:32:12 From Charles to All panelists : June, you are the best! Cheers! Charles H.
18:41:05 From Sofia Lemos : Congratulations June, so proud of you! Debbie, Derek, and Sofia.
18:46:33 From Judy to All panelists : Congratulations June, and thank you for all you do.
18:49:13 From June Lemos, CMC : Thank you, one and all. Your kind words are much appreciated!

From: noreply@granicusideas.com
To: Lemos, June
Subject: New eComment for City Council - Via Video Conference
Date: Wednesday, October 14, 2020 10:31:02 AM

SpeakUp

New eComment for City Council - Via Video Conference

Laura Limbird submitted a new eComment.

Meeting: City Council - Via Video Conference

Item: 2. PUBLIC COMMENTS ON: (1) NON-AGENDA, (2) CONSENT CALENDAR & (3) CLOSED SESSION ITEMS

eComment: I would like to add my congratulation to June Lemos for well deserved recognition of her service and dedication to the City of Fort Bragg. It is an honor and a pleasure to work with you, June.

View and Analyze eComments

This email was sent from https://granicusideas.com.

Unsubscribe from future mailings

From: Carly Wells
To: Lemos, June
Subject: Your Proclamation of Recognition
Date: Wednesday, October 14, 2020 1:15:05 PM

Good Afternoon.

I just wanted to send you a quick note. I was multitasking last night, listening to the council meeting while cooking dinner so I was unable to add to the chat box. I wanted to echo everything everyone said; this was so well deserved. Over the last several years as I have navigated my way through some new to me administrative tasks for the C. V. Starr Community Center and Mendocino Coast Recreation and Park District you have been a wealth of knowledge. You have always gotten back to my questions even when I knew that you were busy. The way that you share you knowledge is very friendly and helpful. I have found my self puzzled several times with my ah ha moment being "Call June! She will know!" So thank you and Congratulations!

Carly Wells
Administrative Services Supervisor/ Co-Director
C. V. Starr Community Center
Mendocino Coast Recreation and Park District
707-964-9446 .106

City of Fort Bragg

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Text File

File Number: 20-866

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Consent Agenda

In Control: City Council **File Type:** Resolution

Agenda Number: 5A.

Adopt City Council Resolution Temporarily Waiving the City of Fort Bragg General Plan Maintenance Fee

On September 8, 2020, staff presented to the Community Development Committee proposed updates to the City's Building Permit fees, including the City's General Plan Maintenance Fee. Staff proposed a revised fee of 5% of the calculated building permit fee applied only to new construction.

The current fee schedule includes a General Plan Maintenance Fee for each building permit. The current fee is 1.5% of the valuation for the permit. It was determined that the amount collected is more than other localities. Other cities collect a General Plan Maintenance Fee, but only on new construction projects. This would exempt interior remodels, electric panel upgrades, solar panels, reroofs and other similar permits from paying the fee. Most cities also make this a percentage of the overall building permit fee instead of a percentage of the valuation. For example, the City of Eureka collects a "Future General Plan Update Cost" of 3% of the building permit fee for new construction permits. They do not collect this fee on projects that are not new construction (i.e. remodels, reroofs, etc.).

The purpose of the General Plan Maintenance fee is to cover the costs reasonably necessary to prepare and revise the plans and policies that the City is required to adopt. The City has historically and plans to continue to utilize these funds for the development and environmental review of amendments to the Coastal General Plan, the Coastal Land Use and Development Code, the Inland General Plan, and the Inland Land Use and Development Code.

New or revised fees associated with recovering the costs of preparing and revising these plans and policies are subject to judicial challenge within 120 days of the effective date of the fee. In order to discourage and avoid such a challenge, staff believes it is prudent to conduct a study which establishes the estimated reasonable costs necessary to prepare and revise the City's General Plans and Policies. As a result, the revised General Plan Maintenance Fee of 5% of the calculated building permit fee applied only to new construction was not included in the proposed Fee Updates considered by City Council at its September 28, 2020 regular meeting. Temporarily waiving the General Plan Maintenance Fee avoids over or under charging the fee while staff establishes the estimated reasonable costs. At the September 28, 2020 meeting, the City Council provided staff direction to draft this resolution in anticipation of a complete study on an appropriate level for the City's General Plan Maintenance fee.

RESOLUTION NO. ____*-2020*

RESOLUTION OF THE FORT BRAGG CITY COUNCIL TEMPORARILY WAIVING THE GENERAL PLAN MAINTENANCE FEE

WHEREAS, the City of Fort Bragg adopted a General Plan Maintenance Fee on November 8, 2004 to be effective January 7, 2005 equal to 1.5 percent of the total construction permit valuation; and

WHEREAS, the Mendocino County Building Department currently provides, and at the time the City adopted General Plan Maintenance Fee provided, the plan check, building permitting and building inspection services for the City under a contract which allows the County to retain all building permit and plan check fees as a credit against the costs of providing services; and

WHEREAS, Fort Bragg staff have been unable to determine what method and information was used to determine the estimated reasonable cost necessary to prepare and revise the plans and policies when the General Plan Maintenance Fee was adopted on November 8, 2004; and

WHEREAS, adoption by the City of Bragg of the General Plan Maintenance Fee followed Assembly Bill 2936, signed into law on September 26, 2002 by the California State Governor and effective January 1, 2003 which authorized the establishment of fees, not to exceed the estimated reasonable cost necessary to prepare and revise the plans and policies that a local agency is required to adopt before it can make any necessary findings; and

WHEREAS, AB 2936 amended and is set forth in California Government Code Section 66014; and

WHEREAS, California Government Code Section 66014(c) provides that any judicial action or proceeding to attack, review, set aside, void, or annul the ordinance, resolution, or motion authorizing the charge of a fee subject to the code section shall be brought pursuant to Section 66022; and

WHEREAS, California Government Code Section 66022, limits judicial action or proceedings to attack, review, set aside, void, or annul the ordinance, resolution, or motion authorizing the charge of a fee as defined in sections 66013, **66014** and 66016 by a local agency to be commenced within 120 days of the effective date of the increase (emphasis added); and

WHEREAS, the Fort Bragg General Plan Maintenance Fee, when compared to many other jurisdictions, is proportionally higher compared to the total costs of a construction building permit; and

WHEREAS, to discourage and potentially avoid a judicial action or proceeding to attack, review, set aside, void, or annul the resolution, or motion authorizing the charge of General Plan Maintenance Fees, City staff finds it prudent to professionally review and document the basis for a revised General Plan Maintenance Fee so that the fee does not exceed the estimated reasonable cost necessary to prepare and revise the plans and policies that a local agency is required to adopt before it can make any necessary findings;

and

WHEREAS, the Fort Bragg City Council**,** at its September 28, 2020 regular City Council meeting, directed staff to draft a resolution to temporarily waive the City's General Plan Maintenance Fee in order to provide time to complete a review and documented study establishing the estimated reasonable cost necessary to prepare and revise the plans and policies that a local agency is required to adopt before it can make any necessary findings; and

WHEREAS, the temporary waiver of the General Plan Maintenance Fee is exempt from environmental review under the California Environmental Quality Act ("CEQA") pursuant to Title 14, the California Code of Regulations ("CEQA Guidelines"), Section 15273(a)(1) which provides an exception for modifications to fees for the purpose of meeting operating expenses. The General Plan Maintenance Fee was established to offset the cost to prepare and revise the plans and policies that Fort Bragg is required to adopt before it can make necessary findings; and

WHEREAS, based on all the evidence presented, the City Council finds as follows:

1. A more complete review and study of the reasonable costs to prepare and revise the plans and policies that a local agency is required to adopt before it can make any necessary findings will ensure that the Fort Bragg General Plan Maintenance Fee and any other appropriate fee charged is consistent with the requirements of California Government Code Section 66014;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Fort Bragg does hereby approve a temporary waiver of General Plan Maintenance Fee until June 30, 2021.

The above and foregoing Resolution was introduced by Councilmember _____, seconded by Councilmember _____, and passed and adopted at a regular meeting of the City Council of the City of Fort Bragg held on the 13th day of October, 2020, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:
RECUSED:

_____
WILLIAM V. LEE
Mayor

ATTEST:

_____
June Lemos, CMC
City Clerk

Lemos, June

From: noreply@granicusideas.com
Sent: Monday, October 12, 2020 10:40 AM
To: Lemos, June
Subject: New eComment for City Council - Via Video Conference

New eComment for City Council - Via Video Conference

Jacob Patterson submitted a new eComment.

Meeting: City Council - Via Video Conference

Item: 5A. 20-866 Adopt City Council Resolution Temporarily Waiving the City of Fort Bragg General Plan Maintenance Fee

eComment: The General Plan Maintenance Fee has a troubling history in Fort Bragg and this action is long-overdue. In fact, it is my understanding that the City already suspended collecting this fee, likely because individual fee payers likely had grounds to challenge the collection of the fee as improper. This remnant of past poor practices is but one of many examples of egregiously incompetent governance rubber stamped by a clueless city council when brought forward by staff. Please do better and fix it.

View and Analyze eComments

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City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Text File

File Number: 20-867

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Consent Agenda

In Control: City Council **File Type:** Resolution

Agenda Number: 5B.

Adopt City Council Resolution Approving a Side Letter Agreement with the Fort Bragg Police Association and Authorizing City Manager to Execute the Same

The Fort Bragg Police Association (FBPA) and the City of Fort Bragg reached agreement to reinstate special pays, which were voluntarily suspended effective May 24, 2020 as part of a citywide effort to shorten the projected $1.4 million budget deficit. Updated revenue and expenditure adjustments allowed the City Council on September 28, 2020 to approve a budget amendment, including funds to reinstate sworn officers' special pays. The FBPA and City Manager agreed to the early termination of the May 24, 2020 Side Letter, which was set to terminate on May 23, 2021 and by the attached Side Letter will now expire on October 11, 2020.

RESOLUTION NO. ___*-2020*

RESOLUTION OF THE FORT BRAGG CITY COUNCIL APPROVING THE SIDE LETTER AGREEMENT WITH THE FORT BRAGG POLICE ASSOCIATION AND AUTHORIZING CITY MANAGER TO EXECUTE SAME

WHEREAS, the City and the Fort Bragg Police Association (FBPA) commenced negotiations on April 8, 2019 for a new two-year Memorandum of Understanding (MOU); and

WHEREAS, the sessions concluded on June 5, 2019 when the parties agreed to an agreement package, which was ratified by the FBPA membership; and

WHEREAS, the new MOU was approved by the City Council on June 10, 2019; and

WHEREAS, on March 13, 2020, the President of the United States issued a proclamation declaring the COVID-19 outbreak in the United States as a national emergency, beginning March 1, 2020; and

WHEREAS, the Governor of the State of California and the Public Health Officer of the County of Mendocino have both issued Shelter-in-Place orders to combat the spread of COVID-19; and

WHEREAS, on March 17, 2020 the City Manager, as the City's Director of Emergency Services, issued Proclamation No. CM-2020-01 declaring a local emergency as authorized by Government Code section 8630 and Fort Bragg Municipal Code section 2.24.040(B); and

WHEREAS, the City, County and State economies were significantly impacted by the shutdown of nonessential businesses as a result of the Shelter-in-Place orders; and

WHEREAS, the City found it necessary to reduce staff levels through a combination of layoffs and furloughs; and

WHEREAS, the Fort Bragg Sworn Police Officers voluntarily agreed to forgo special pays in order to reduce public safety expenditures for the City; and

WHEREAS, the annual value of those special pays is approximately $88,000; and

WHEREAS, the City Council recognizes that the Fort Bragg Sworn Police Officers of the Fort Bragg Police Association have provided a valuable and much appreciated contribution to reducing the City's budget without impacting public safety services in Fort Bragg; and

WHEREAS, on June 29, 2020, the Fort Bragg City Council and the Fort Bragg Municipal Improvement District No. 1 adopted the Fiscal Year (FY) 2020-21 Budget; and

WHEREAS, the City Manager continues to review and revise the budget as the impacts from the COVID-19 pandemic and economic downturn are better understood; and

WHEREAS, the City Manager identified and updated revenue projections, additional expenditure adjustments and corrections to the FY 2020-21 budget as adopted by the City Council on June 29, 2020; and

WHEREAS, the Fort Bragg City Council adopted Resolution No. 4311-2020, which amended the FY 2020-21 Budget and included appropriating funds to prospectively reinstate the Sworn Officer special pays; and

WHEREAS, the negotiation session concluded on September 23, 2020, when parties agreed to a new Side Letter revoking the May 24, 2020 Side Letter and reinstating special pays to Sworn Officers of the Fort Bragg Police Association;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Fort Bragg does hereby approve the Side Letter attached hereto as Exhibit A, effective October 11, 2020, to the Memorandum of Understanding with the Fort Bragg Police Association and authorizes the City Manager to execute the same.

The above and foregoing Resolution was introduced by Councilmember _____, seconded by Councilmember _____, and passed and adopted at a regular meeting of the City Council of the City of Fort Bragg held on the 13th day of October, 2020, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:
RECUSED:

_____
WILLIAM V. LEE
Mayor

ATTEST:

_____
June Lemos, CMC
City Clerk

SIDE LETTER BETWEEN

THE CITY OF FORT BRAGG

AND

THE FORT BRAGG POLICE ASSOCIATION

CONCERNING PREMIUM INCENTIVE PAYS

This Side Letter reflects an agreement between the City of Fort Bragg (City) and the Fort Bragg Police Association (FBPA), and collectively, "the Parties."

The Parties agree to terminate and revoke the Side Letter dated May 24, 2020, as attached.

Termination of the May 24, 2020 Side Letter eliminates the increase to vacation time for all sworn employees covered under the current Fort Bragg Police Association Memorandum of Understanding (FBPA MOU), as set forth in the Side Letter dated May 24, 2020. Vacation time shall only accrue as specified in Article 17 of the FBPA MOU, as it read prior to execution of the May 24, 2020 Side Letter. Effective October 11, 2020, the cap on a sworn employee's vacation accrual bank will be returned to the levels noted in in Article 17.2 of the FBPA MOU prior to execution of the May 24, 2020 Side Letter. However, no sworn employee shall be forced to take vacation or lose any accrued hours as of the effective date of this Side Letter. Employees who as a result of the side letter dated May 24, 2020 have had their vacation accrual bank exceed the vacation time accrual cap shall have the option of carrying the excess hours on the books until they have been used or cashed out.

Termination of the May 24, 2020 Side Letter eliminates the option for FBPA employees to have hours accrued in their Compensatory Time Off bank paid out in a separate check on the first pay period of each quarter of the Fiscal Year. Employees covered under the current FBPA MOU only have the option to request Compensatory Time Off bank paid out on the same check as their regular payroll check.

This Side Letter will be effective from 10/11/2020 to 06/30/2021.

FOR THE CITY OF FORT BRAGG:

DATE:

_____

TABATHA MILLER
CITY MANAGER

DATE:_____

ATTEST:

_____

JUNE LEMOS, CMC

CITY CLERK

FOR THE FORT BRAGG POLICE
ASSOCIATION, INC.:

DATE:

_____
ANTHONY MELENDEZ
PRESIDENT

Fort Bragg Police Association
P.O. Box 368
Fort Bragg, CA 95437

Proposed Side Letter Title: Salary Reductions due to reduced City income as a result of the COVID 19 Pandemic.

Related MOU Articles(s): Article V Compensation

Date: May 24, 2020

Association interest:
The Fort Bragg Police Association recognizes the City of Fort Bragg's current financial hardships, and further recognizes that there needs to be a city-wide effort to shorten the approximately $1,400,000 budget deficit which is projected for the upcoming fiscal year.

Association proposes:

The Association proposes that all employees covered under the current MOU, suspend the following premium incentive pay for one (1) calendar year, effective on the day these side letters are agreed to and signed by The City of Fort Bragg, and the Fort Bragg Police Association. Sworn Staff (Police Officer) and (Police Sergeant) do not agree to suspend any step increases, or increases in base salary as a result of P.O.S.T Certificate status change.

1. FTO Pay
2. Bilingual Pay
3. Shift Differential Pay
4. Relief Shift Pay
5. K-9 Officer Pay
6. Standby Pay
7. Officer in Charge Pay
8. Motor Officer Pay
9. Detective Pay
10. Call Back Pay, will be reduced from a rate of 2.0 times the employee's regular rate of pay to 1.5 times the employee's regular rate of pay.

The association requests that the City of Fort Bragg agree to increase all sworn employees covered under the current MOU vacation time by rounding up to the next whole number and adding one (1) hour of additional hour to that number for the duration of this side letter. The cap on the vacation accrual bank will be increased to 450 total hours, while this side letter is in effect. The sworn employee will not be forced to take vacation, or lose any accrued hours upon the expiration of this side letter. Employees covered under the current MOU will also have the option to have hours accrued in their Compensatory Time Off bank to be paid out in a separate check on the first pay period of each quarter of the Fiscal Year.

This proposal will be effective from 05/24/2020 to 05/23/2021.

FOR THE CITY OF FORT BRAGG:

DATE: 5-26-20

TABATHA MILLER
CITY MANAGER

DATE: 5.27.2020

ATTEST:

JUNE LEMOS, CMC
CITY CLERK

FOR THE FORT BRAGG POLICE ASSOCIATION, INC.:

DATE: 5-22-20

ANTHONY MELENDEZ
ACTING PRESIDENT

DATE: 5-24-20

OSCAR LOPEZ
ACTING VICE PRESIDENT

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Text File

File Number: 20-868

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Consent Agenda

In Control: City Council **File Type:** Resolution

Agenda Number: 5C.

Adopt City Council Resolution Approving a Side Letter Agreement Between the City of Fort Bragg and the Fort Bragg Police Association and Authorizing the City Manager to Execute Same The California Public Employees' Retirement System (CalPERS) conducted a review of 58 public agencies, including the City of Fort Bragg. The review covered the time frame from January 1, 2017 through December 31, 2019. The review determined that Fort Bragg was reporting and collecting retirement contributions on Holiday Pay for sworn and non-sworn Police Department staff required to work the holidays, which included certain supplemental pays. This treatment of holiday pay was inconsistent with the Memorandum of Understandings effective during the audit period.

By approving the side letter agreement, effective January 1, 2017, between the City of Fort Bragg and the Fort Bragg Police Association, the labor agreements reflect the historic and current calculation when reporting special compensation to California Public Employees Retirement System and complies with California Public Employee Retirement Law.

RESOLUTION NO. ___*-2020*

RESOLUTION OF THE FORT BRAGG CITY COUNCIL APPROVING THE SIDE LETTER AGREEMENT BETWEEN THE CITY OF FORT BRAGG AND THE FORT BRAGG POLICE ASSOCIATION AND AUTHORIZING CITY MANAGER TO EXECUTE SAME

WHEREAS, the Memorandum of Understanding is the collective bargaining agreement between the City of Fort Bragg and the Fort Bragg Police Association (FBPA); and

WHEREAS, the City of Fort Bragg and the FBPA executed the Memorandum of Understanding between the City of Fort Bragg and the Fort Bragg Police Association (FBPA MOU) effective April 13, 2015 through June 30,2017; effective July 1, 2017 through June 30, 2019; and effective July 1, 2019 through June 30, 2021; and

WHEREAS, FBPA ARTICLE 25-HOLIDAYS stipulates the City pay full-time regular sworn employees represented by the FBPA who are required to regularly work on holidays noted in Section 4 of Article 25 at one and one-half (1.5) times the employee's hourly rate paid in two equal installments during the first pay period in June and December; and

WHEREAS, the City of Fort Bragg was notified by CalPERS that ARTICLE 25-HOLIDAYS does not meet the California Code of Regulations (CCR) 571(b)(1)(B), Government Codes 20636 and 7522.34(c)(5) requirements for special compensation; and

WHEREAS, a Side Letter is required to clearly indicate the conditions for payment of holiday pay, including, but not limited to, eligibility for, and amount of, the special compensation; and

WHEREAS, The City of Fort Bragg and the FBPA have met and conferred in good faith; and

WHEREAS, a Side Letter agreement between the City of Fort Bragg and the FBPA has been created and incorporates the information required by the California Code of Regulations; and

WHEREAS, the changes incorporated are reflective of previous and current practice; and

WHEREAS, based on all the evidence presented, the City Council finds as follows:

1. That by incorporating into the Side Letter agreement the information required by the California Code of Regulations, the City of Fort Bragg will be in compliance with California Public Employees Retirement Law.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Fort Bragg does hereby approve the Side Letter, attached as Exhibit A, and authorizes the City Manager to execute the same.

The above and foregoing Resolution was introduced by Councilmember _____, seconded by Councilmember _____, and passed and adopted at a regular meeting of the City Council of the City of Fort Bragg held on the 13th day of October, 2020, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:
RECUSED:

_____
WILLIAM V. LEE
Mayor

ATTEST:

_____
June Lemos, CMC
City Clerk

SIDE LETTER BETWEEN

THE CITY OF FORT BRAGG

AND

THE FORT BRAGG POLICE ASSOCIATION

CONCERNING HOLIDAY PAY

This Side Letter reflects an agreement between the City of Fort Bragg (City) and the Fort Bragg Police Association (FBPA), and collectively, "the Parties."

The Parties agree to amend Article 25 of the Memorandum of Understandings (MOU) between the City and the FBPA, effective April 13, 2015 through June 30,2017; effective July 1, 2017 through June 30, 2019; and effective July 1, 2019 through June 30, 2021 to read as follows:

ARTICLE 25—HOLIDAYS

1. The City agrees to pay full-time regular sworn and non-sworn employees represented by the FBPA who are required to regularly work on holidays noted in Section 4, below, ninety-six (96) holiday hours per year at one and one-half (1.5) times the employee's hourly rate and shall include supplemental pay, which may apply to the specific officer including: Field Training Officer Pay; Bilingual Pay; Officer in Charge Pay; Motor Officer Pay; Detective Pay and Working Out of Class Pay. Holiday pay shall be paid in two (2) equal installments, separate from any other salary payment, during the first pay period in June and December.

2. Full-time probationary employees shall be paid for holidays on a prorated basis based upon eight (8) holiday hours per full month worked.

3. Part-time employees shall be paid for holidays on a prorated basis based upon the number of hours worked.

4. Specified holidays for all non-sworn, full-time probationary and regular employees are as follows:

    a. New Year's Day
    b. Martin Luther King Jr. Birthday
    c. President's Day
    d. Memorial Day
    e. Independence Day
    f. Labor Day
    g. Indigenous Peoples' Day
    h. Veteran's Day
    i. Thanksgiving Day
    j. Day After Thanksgiving
    k. Day before Christmas
    l. Christmas

m. Every day proclaimed by the Governor and recognized by the City Council as a public holiday, day of mourning or day of thanksgiving.

This side letter is effective January 1, 2017 through June 30, 2021.

FOR THE CITY OF FORT BRAGG:

DATE: _____

_____
TABATHA MILLER
CITY MANAGER

DATE: _____

ATTEST:

_____
JUNE LEMOS, CMC
CITY CLERK

FOR THE FORT BRAGG POLICE
ASSOCIATION, INC.:

DATE: _____

_____
ANTHONY MELENDEZ
ACTING PRESIDENT

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Text File

File Number: 20-872

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Consent Agenda

In Control: City Council **File Type:** Resolution

Agenda Number: 5D.

Adopt City Council Resolution Confirming the Continued Existence of a Local Emergency in the City of Fort Bragg

At a special meeting on March 24, 2020, the Fort Bragg City Council ratified the City Manager's Proclamation declaring a local emergency due to COVID-19 in its Resolution No. 4242-2020. Since that date, the Council has adopted the following resolutions reconfirming the existence of a local emergency:

Date	Resolution No.
April 6, 2020	4245-2020
April 20, 2020	4247-2020
May 11, 2020	4250-2020
May 26, 2020	4253-2020
June 8, 2020	4266-2020
June 22, 2020	4270-2020
July 13, 2020	4284-2020
July 27, 2020	4289-2020
August 10, 2020	4294-2020
August 31, 2020	4300-2020
September 21, 2020	4304-2020

The City is required to reconfirm the existence of a local emergency every 21 days pursuant to Fort Bragg Municipal Code Section 2.24.040.

RESOLUTION NO. ____*-2020*

RESOLUTION OF THE FORT BRAGG CITY COUNCIL CONFIRMING THE CONTINUED EXISTENCE OF A LOCAL EMERGENCY IN THE CITY OF FORT BRAGG

WHEREAS, California Government Code section 8630 empowers the Fort Bragg City Council to proclaim the existence of a local emergency when the City is threatened or likely to be threatened by the conditions of extreme peril to the safety of persons and property that are or are likely to be beyond the control of the services, personnel, equipment, and facilities of this City; and

WHEREAS, California Government Code section 8558(c) states that a "local emergency" means the duly proclaimed existence of conditions of disaster or extreme peril to the safety of persons and property within the territorial limits of a city; and

WHEREAS, COVID-19, a novel coronavirus causing infectious disease, was first detected in China in December 2019 and has spread across the world and to the United States. Symptoms of COVID-19 include fever, cough, and shortness of breath; outcomes have ranged from mild to severe illness, and, in some cases, death. The Center for Disease Control and Prevention (CDC) has indicated the virus is a tremendous public health threat; and

WHEREAS, on March 13, 2020, the President of the United States issued a proclamation declaring the COVID-19 outbreak in the United States as a national emergency, beginning March 1, 2020; and

WHEREAS, the Governor of the State of California and the Public Health Officer of the County of Mendocino have both issued Shelter-in-Place orders to combat the spread of COVID-19; and

WHEREAS, on March 17, 2020 the City Manager, as the City's Director of Emergency Services, issued Proclamation No. CM-2020-01 declaring a local emergency as authorized by Government Code section 8630 and Fort Bragg Municipal Code section 2.24.040(B); and

WHEREAS, at a special meeting on March 24, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4242-2020, ratifying the City Manager's Proclamation declaring the existence of a local emergency; and

WHEREAS, at a special meeting on April 6, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4245-2020 by which it continued the local emergency; and

WHEREAS, at a special meeting on April 20, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4247-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on May 11, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4250-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on May 26, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4253-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on June 8, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4266-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on June 22, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4270-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on July 13, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4284-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on July 27, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4289-2020 by which it continued the local emergency; and

WHEREAS, at a regular meeting on August 10, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4294-2020 by which it continued the local emergency; and

WHEREAS, at a special meeting on August 31, 2020, the City Council of the City of Fort Bragg adopted Resolution No. 4300-2020 by which it continued the local emergency; and

WHEREAS, at a special meeting on September 21, 2020, the City Council of the City of Fort Bragg adopted Resolution 4304-2020 by which it continued the local emergency;

NOW, THEREFORE, BE IT RESOLVED AND PROCLAIMED by the City Council of the City of Fort Bragg that for reasons set forth herein, said local emergency shall be deemed to continue to exist until the City Council of the City of Fort Bragg, State of California, proclaims its termination; and

BE IT FURTHER RESOLVED that the City Council of the City of Fort Bragg will review the need for continuing the local emergency at least once every 21 days until the City Council terminates the local emergency; and

BE IT FURTHER RESOLVED that this resolution confirming the continued existence of a local emergency shall be forwarded to the Director of the Governor's Office of Emergency Services and the Governor of the State of California, as well as the Mendocino County Office of Emergency Services.

The above and foregoing Resolution was introduced by Councilmember _____, seconded by Councilmember _____, and passed and adopted at a regular meeting of the City Council of the City of Fort Bragg held on the 13th day of October, 2020, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:
RECUSED:

_____
WILLIAM V. LEE
Mayor

ATTEST:

_____
June Lemos, CMC
City Clerk

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Text File

File Number: 20-870

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Consent Agenda

In Control: City Council **File Type:** Minutes

Agenda Number: 5E.

Approve Minutes of September 28, 2020

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Meeting Minutes

City Council

THE FORT BRAGG CITY COUNCIL MEETS CONCURRENTLY AS THE FORT BRAGG MUNICIPAL IMPROVEMENT DISTRICT NO. 1 AND THE FORT BRAGG REDEVELOPMENT SUCCESSOR AGENCY

Monday, September 28, 2020 | **6:00 PM** | **Via Video Conference**

AMENDED

CALL TO ORDER

Mayor Lee called the meeting to order at 6:00 PM, all Councilmembers appearing by video conference.

PLEDGE OF ALLEGIANCE

ROLL CALL

Present: 5 - Mayor Will Lee, Vice Mayor Bernie Norvell, Councilmember Tess Albin-Smith, Councilmember Jessica Morsell-Haye and Councilmember Lindy Peters

AGENDA REVIEW

Mayor Lee moved Item 8C to follow 8E in the agenda order so he could recuse himself from hearing this item due to a conflict of interest.

1. MAYOR'S RECOGNITIONS AND ANNOUNCEMENTS

2. PUBLIC COMMENTS ON: (1) NON-AGENDA, (2) CONSENT CALENDAR & (3) CLOSED SESSION ITEMS

(1) Non-Agenda Items: Comments from Nancy Bennett regarding tourism efforts provided for by Measure AA/AB were read into the record by the City Clerk.
(2) Consent Calendar Items: None.
(3) Closed Session Items: None.

3. STAFF COMMENTS

City Manager Miller spoke about the 2020 Census, tenant eviction moratorium, and the Tenant Based Rental Assistance program. She noted that the next regular Council meeting will be on Tuesday, October 13 due to Indigenous Peoples' Day falling on Monday, October 12. She briefly reported on the broadband consortium projects group. Miller requested that the Mayor assign an ad hoc council committee to work on the solid waste franchise agreement. Mayor Lee appointed himself and Lindy Peters to this ad hoc committee for a period of one year. City Clerk Lemos reported that two positions on the Noyo Harbor Commission will expire on October 31, 2020. The Council directed the City Clerk to publicize the positions, collect applications for the Noyo Harbor Commission appointments, and set a joint meeting

with the Mendocino County Board of Supervisors for October 26.

4. MATTERS FROM COUNCILMEMBERS

Mayor Lee offered support for friends and neighbors in Napa and Sonoma County who are being evacuated because of fires. Councilmember Peters shared a personal experience about being evacuated from Santa Rosa due to fire threat. Councilmember Morsell-Haye gave an update on the Citizens Commission's second meeting and noted that two commissioners have been added to balance out the group. She explained some of the difficulties and challenges of the commission's mission. Vice Mayor Norvell has stepped down from the commission and Councilmember Morsell-Haye will act more as a moderator than a member. Councilmember Albin-Smith stated that Mendocino Council of Governments funded a Caltrans study for a Mendocino County fire evacuation plan.

5. CONSENT CALENDAR

Approval of the Consent Calendar

A motion was made by Vice Mayor Norvell, seconded by Councilmember Peters, to approve the Consent Calendar. The motion carried by the following vote:

Aye: 5 - Mayor Lee, Vice Mayor Norvell, Councilmember Albin-Smith, Councilmember Morsell-Haye and Councilmember Peters

5A. 20-858 Adopt City Council Resolution Approving a Loan Agreement with Fort Bragg South Street LP, a California Limited Partnership for which Danco Communities Serves as a Co-Administrative General Partner, to Assist with the Development of The Plateau, an Affordable Housing Project Located at 441 South Street and Authorizing City Manager to Execute Same (Amount Not To Exceed: $3,250,000; Account No. 329-6123-0319 in amount of $3,000,000 and Account No. 176-4810-0607 in amount of $250,000)

This Resolution was adopted on the Consent Calendar.

Enactment No: RES 4306-2020

5B. 20-860 Adopt City Council Resolution Establishing a City of Fort Bragg Master Salary Rate Compensation Plan Confirming the Pay Rates/Ranges for All City of Fort Bragg Classifications Effective September 28, 2020

This Resolution was adopted on the Consent Calendar.

Enactment No: RES 4307-2020

5C. 20-863 Approve Minutes of Special Meeting of September 21, 2020

These Minutes were approved on the Consent Calendar.

6. DISCLOSURE OF EX PARTE COMMUNICATIONS ON AGENDA ITEMS

None.

7. PUBLIC HEARING

7A. 20-847 Receive Recommendation from the Community Development Committee, Conduct Public Hearing, and Consider Adoption of City Council Resolution Revising the City's Fee Schedule for Various Building Permit Fees and Services

Mayor Lee opened the public hearing at 6:48 PM.
Engineering Division Assistant Director O'Neal presented the staff report on this agenda item and responded to questions from Councilmembers.
Public Comment: The City Clerk read comments from Jacob Patterson and the Mendocino Action Council for Accountable Government Organizations into the record.
Mayor Lee closed the public hearing at 7:17 PM.
Discussion: After discussing the matter, it was determined that the methodologies for changes to building permit costs were reasonable. Council directed staff to bring back an item on imposing a revocable moratorium on the General Plan Maintenance fee at the next regularly scheduled Council meeting.

A motion was made by Vice Mayor Norvell, seconded by Councilmember Morsell-Haye, that these Resolution be adopted. The motion carried by the following vote:

Aye: 4 - Mayor Lee, Vice Mayor Norvell, Councilmember Morsell-Haye and Councilmember Peters

No: 1 - Councilmember Albin-Smith

Enactment No: RES 4308-2020

8. CONDUCT OF BUSINESS

8A. 20-859 Receive Report and Consider Adoption of City Council Resolution Endorsing the Strategic Plan to Address Homelessness in Mendocino County as Adopted by the Mendocino County Homeless Services Continuum of Care

Mayor Lee recessed the meeting at 7:46 PM; the meeting reconvened at 7:53 PM.
City Manger Miller presented the staff report on this agenda item.
Public Comment: None.

A motion was made by Councilmember Peters, seconded by Councilmember Albin-Smith, that this Resolution be adopted. The motion carried by the following vote:

Aye: 5 - Mayor Lee, Vice Mayor Norvell, Councilmember Albin-Smith, Councilmember Morsell-Haye and Councilmember Peters

Enactment No: RES 4309-2020

8B. 20-862 Receive Report and Consider Adoption of City Council Resolution Downgrading the Stage 2 Water Conservation Measures to Stage 1 Water Conservation Measures

Public Works Director Smith presented the staff report on this item and responded to questions from Councilmembers.
Public Comments: None.
Discussion: Councilmembers were in general agreement with the reduction to Stage 1 water conservation measures based on staff analysis and recommendations.

A motion was made by Vice Mayor Norvell, seconded by Councilmember Morsell-Haye, that this Resolution be adopted. The motion carried by the following vote:

Aye: 5 - Mayor Lee, Vice Mayor Norvell, Councilmember Albin-Smith, Councilmember Morsell-Haye and Councilmember Peters

Enactment No: RES 4310-2020

8D. 20-864 Receive Report and Consider Adoption of Joint City Council/Municipal Improvement District Resolution Approving Budget Amendment 2021-04 Adjusting Selected Expenditure Budgets

City Manager Miller presented the report on this matter.
Public Comment from Jacob Patterson was read into the record by the City Clerk.

A motion was made by Councilmember Peters, seconded by Councilmember Albin-Smith, that this Resolution be adopted. The motion carried by the following vote:

Aye: 5 - Mayor Lee, Vice Mayor Norvell, Councilmember Albin-Smith, Councilmember Morsell-Haye and Councilmember Peters

Enactment No: RES 4311-2020 / RES ID 434-2020

8E. 20-865 Receive Report and Consider Adoption of Joint City Council/Municipal Improvement District Resolution for Emergency Repair of a Sewer Main Line in Highway 1 and Authorizing the City/District Manager to Sign Related Documents

Public Works Director Smith summarized the staff report on this agenda item.
Public Comment from Jacob Patterson was read into the record by the City Clerk.
Discussion: Council applauded staff for the handling of this emergency and the consensus was to expeditiously proceed with repairs to the sewer main.

A motion was made by Councilmember Albin-Smith, seconded by Councilmember Peters, that this Resolution be adopted. The motion carried by the following vote:

Aye: 5 - Mayor Lee, Vice Mayor Norvell, Councilmember Albin-Smith, Councilmember Morsell-Haye and Councilmember Peters

Enactment No: RES 4312-2020 / RES ID 435-2020

8C. 20-861 Receive Report and Consider Adoption of City Council Resolution Ratifying the City Manager's Execution of a Memorandum of Understanding between the City of Fort Bragg and Adventist Health Mendocino Coast Authorizing Adventist Health Mendocino Coast 's Application and Enrollment in the Section 340B of the Public Health

Services Act Program

Mayor Lee recused himself from this item, citing a conflict of interest as he is an employee of the hospital. He appointed Vice Mayor Norvell as Mayor Pro Tem and left the video conference at 8:33 PM. Vice Mayor Norvell recused himself from this item, citing a conflict of interest as his wife works at the hospital. He appointed Councilmember Peters as Mayor Pro Tem and left the video conference at 8:34 PM.
City Manager Miller gave the staff report on this agenda item.
Public Comment: None.

A motion was made by Councilmember Morsell-Haye, seconded by Councilmember Albin-Smith, that this Resolution be adopted. The motion carried by the following vote:

Aye: 3 - Councilmember Albin-Smith, Councilmember Morsell-Haye and Councilmember Peters

Recuse: 2 - Mayor Lee and Vice Mayor Norvell

Enactment No: RES 4313-2020

9. CLOSED SESSION

ADJOURNMENT

Mayor Pro Tem Peters adjourned the meeting at 8:40 PM.

_____
WILLIAM V. LEE, MAYOR

_____
June Lemos, CMC, City Clerk

IMAGED (_____)

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
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Text File

File Number: 20-871

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Business

In Control: City Council **File Type:** Staff Report

Agenda Number: 8A.

Receive Report and Community Development Committee Recommendations and Provide Direction to Staff Regarding the Scope of Work in a Request for Proposals for Professional Services to Prepare a Commercial Cannabis Cultivation Ordinance for the Inland Area of Fort Bragg

AGENCY:	City Council
MEETING DATE:	October 13, 2020
DEPARTMENT:	City Manager
PRESENTED BY:	S McCormick
EMAIL ADDRESS:	smccormick@fortbragg.com

AGENDA ITEM SUMMARY

TITLE

Receive Report and Community Development Committee Recommendations and Provide Direction to Staff Regarding the Scope of Work in a Request for Proposals for Professional Services to Prepare a Commercial Cannabis Cultivation Ordinance for the Inland Area of Fort Bragg

ISSUE:

The City of Fort Bragg has established regulations for Cannabis Businesses and allows the land uses, "Manufacturing/Processing Cannabis" with Use Permit, and "Cannabis Retail" with Minor Use Permit approval. On January 8, 2018, Council received a report and the Public Safety Committee's recommendations regarding policy approaches to address cannabis cultivation in the City (Attachment 1). On June 24, 2019, City Council discussed developing an ordinance allowing and regulating commercial cannabis cultivation, and directed staff to do so (Attachment 2). Several factors delayed said ordinance, including the withdrawal of a development application for a proposed commercial cannabis cultivation project (Root One Botanical), staffing changes in City Hall, and the challenges involved with the associated environmental document, pursuant to the California Environmental Quality Act (CEQA).

Members of the Community Development Committee (CDC) requested this matter to be brought forward for discussion at the regularly scheduled September meeting (Attachment 3). Committee members considered whether or not the current land use, "Cannabis Retail," satisfied market demand for cannabis cultivation in City limits. Cannabis Retail includes provisions to operate a cannabis microbusiness, which is a facility that engages in a combination of retail, distribution, manufacturing and/or *cultivation*.

CDC members also discussed whether or not commercial cannabis cultivation should be allowed on parcels other than the inland industrial zoned parcels north of Pudding Creek. Due to operating characteristics, the potentially large size of building footprints, and weighing the fact that commercial zoning is best retained for businesses that provide services and contribute sales tax, CDC confirmed that the industrial zoning designation is best suited for commercial cannabis cultivation activities. However, CDC recommends that Council consider expanding commercial cannabis cultivation to include all industrial zoned parcels in the inland area, rather than just those north of Pudding Creek.

The table below incorporates CDC's recommendation to Council for the proposed ordinance. The information presented in the table below, as well as the proposed approach to the associated CEQA document following, will be included in the scope of work in a Request for Proposals:

Consideration	Direction
Location/Zoning	To be permitted in all inland industrial zoned parcels.
Permit Requirements	Use Permit Approval, implementing regulations of the proposed ordinance and utilizing the policies established by FBMC Chapter 9.30 for cannabis businesses.

AGENDA ITEM NO. 8A

Fees	No sales tax, or additional taxation specifically for cannabis, shall be collected. Standard fees, as identified by the City's Fee Schedule, in addition to fees associated with building permits as determined by Mendocino County will apply.
Design	No specific design requirements for commercial cannabis cultivation businesses have been identified. New development and significant remodels shall be subject to a Design Review Permit process and reflect design standards as outlined in Fort Bragg's Citywide Design Guidelines, Chapter 3: Industrial Design Guidelines.
Site Standards	Development site standards shall comply with those set forth in the City's Inland Land Use and Development Code for Light Industrial (IL) and/or Heavy Industrial (IH) zoning.
Operating Characteristics	Submission of a plan to address odor and other public nuisances that may derive from the cultivation facility.
Water	City ordinances allow the use of groundwater for agricultural and industrial uses, which would allow commercial cannabis cultivators to use wells for irrigation. Connection to municipal water is required for all domestic uses. Municipal water can also be utilized for cultivation uses.

California Environmental Quality Act (CEQA)

Revision of the ILUDC requires CEQA evaluation. The basic purpose for the CEQA document is to inform decision makers and the public about potentially significant environmental effects of proposed activities, and to reduce those environmental impacts to the extent feasible. A CEQA analysis evaluating the potential environmental impacts of the proposed ordinance, which included all industrial zoned parcels in the inland area of the City would be a costly and complicated endeavor.

Staff is recommending that the proposed Ordinance be found exempt from CEQA per CEQA Guidelines Section 15061(b)(3). Section 15061(b)(3) states that CEQA applies only to those projects that may have the potential to cause a significant effect on the environment. Staff has determined that environmental review should be conducted on a project-by-project basis to accurately assess the environmental impacts of each proposal. The adoption of the proposed Ordinance does not allow construction of any building or structure or establishment of a new land use, but sets forth the regulations that shall be followed if and when a building, structure or land use is proposed to be constructed or a site is proposed to be developed. Therefore, the Ordinance itself has no potential for resulting in significant physical change in the environment, directly or ultimately.

The City can ensure CEQA obligations are met by incorporating site specific compliance into the proposed ordinance and local permitting process. This would involve the preparation of a site-specific environmental evaluation, pursuant to CEQA, for every proposed cannabis cultivation project as part of the Use Permit process that would be considered before the Planning Commission. Cannabis cultivation, similar to other agricultural land uses, is a high-water user and therefore may have individual or cumulative impacts on the City's water supply. The individual and cumulative impacts on the City's water supply will in part depend on whether well water is available for cultivation uses. The availability, quantity and quality of well water is unique to every property and therefore, are appropriate for a site-specific evaluation. In order to address the specific impacts of cannabis cultivation in the City, Staff is proposing that a water supply assessment be required as part of the Use Permit application submittal to ensure the potential impacts to water supply are adequately addressed.

RECOMMENDED ACTION:
Staff recommends the City Council provide direction regarding the development of an ordinance to amend Title 18 of the City of Fort Bragg's Inland Land Use and Development Code in order to establish requirements and regulations for commercial cannabis cultivation in all industrial zoning designations.

1. Would Council like to proceed with a commercial cannabis ordinance, or instead allow cultivation only as part of the cannabis microbusiness model allowed under the land use Cannabis Retail and/or as regulated by the City's medical marijuana cultivation ordinance?
2. If Council wishes to proceed with the proposed ordinance, are there changes or modifications Council would like to make to the Community Development Committee's recommendations?

FISCAL IMPACT:
Preparation of an ordinance by a contracted service professional solicited through a Request for Proposals will require efforts by staff and the City Attorney, as well as by the selected firm or individual. These costs would be paid through the City's General Plan Maintenance Fund. If an ordinance is adopted allowing commercial cannabis cultivation, new businesses may open creating jobs and revenue.

CONSISTENCY:
The recommended actions would amend the ILUDC such that future commercial cannabis cultivation businesses could only be permitted consistent with the revised ordinance.

IMPLEMENTATION/TIMEFRAMES:
The implementation/timeframe to develop an ordinance allowing and regulating commercial cannabis cultivation is estimated as follows:

RFP Release	October 19, 2020
RFP Deadline for Written Questions	October 30, 2020
RFP Proposals Due	December 15, 2020
RFP Consultant Selection Date	December 21, 2020
RFP Finalize Contract and Scope of Work	December 31, 2020
RFP City Council Contract Approval	January 11, 2021
Consultant Draft for Staff Review	March 1, 2021
Planning Commission Review	March 24, 2021
City Council Review and Introduction	April 12, 2021
City Council Ordinance Adoption	April 26, 2021
Effective 30 days after adoption	May 26, 2021

ATTACHMENTS:
1. January 8, 2018 Council Report
2. June 24, 2019 Council Report
3. September 22, 2020 CDC Staff Report
4. RFP Scope of Work

NOTIFICATION:
Notify Me: Cannabis Legislation, Economic Development Planning
Fort Bragg Planning Commission

AGENCY:	City Council
MEETING DATE:	January 8, 2018
DEPARTMENT:	Community Development
PRESENTED BY:	S. Perkins
EMAIL ADDRESS:	sperkins@fortbragg.com

AGENDA ITEM SUMMARY

TITLE:
RECEIVE REPORT AND PUBLIC SAFETY COMMITTEE RECOMMENDATIONS REGARDING POLICY APPROACHES TO ADDRESS CANNABIS CULTIVATION IN FORT BRAGG AND PROVIDE DIRECTION TO STAFF

ISSUE:

The State of California has passed two pieces of legislation since the City's cultivation and dispensary ordinances became effective (2009 and 2005, respectively): the Medical Marijuana Regulation and Safety Act (MMRSA, 2015) and the Adult Use of Marijuana Act (AUMA, 2016). The State Bureau of Cannabis Control Proposed Text of Regulations was published on November 16, 2017. Each State law places various levels of regulatory responsibility on local jurisdictions.

On June 26, 2017, the Public Safety Committee met to discuss future regulation of cannabis uses in the City of Fort Bragg and made various recommendations to Council. The newly-released State regulations will help inform the development of local regulations. This report describes the new State laws, existing City ordinances relating to cannabis cultivation, the City's responsibilities and options for regulating future cannabis cultivation, and the recommendations made by the Public Safety Committee.

REGULATORY FRAMEWORK:

California voters passed Proposition 64 in 2016, legalizing the use, cultivation and sale of recreational cannabis for citizens over 21 years of age. The Adult Use of Marijuana Act (AUMA) made it legal in California to use and cultivate cannabis (up to six plants) for personal, non-medical use. The AUMA seeks to establish State standards and licensing for cultivation, manufacture, transportation, storage, distribution and sale of cannabis effective January 1, 2018. The State's new "Proposed Text of Regulations" for implementation of AUMA was released November 16, 2017. While AUMA preserves the ability for localities to independently regulate or prohibit recreational cannabis uses, there are some significant differences that impact local jurisdictions. For example, AUMA prohibits cities from banning indoor cultivation for personal use of up to six plants.

The Proposed Text of Regulations allows the State to begin issuing temporary licenses on January 1, 2018, as the State Bureau of Cannabis Control continues crafting final regulations. The temporary regulations prohibit the State from issuing a license if a local jurisdiction does not yet have an ordinance in place that allows the use. This provides local jurisdictions time to review the newly-released regulations and complete their local ordinances. The City Council should continue developing cannabis cultivation regulations to explicitly define and regulate these uses at a local level as the State completes the formal licensing regulations.

City of Fort Bragg Cultivation Ordinance:

The City's existing ordinance for medical marijuana cultivation, adopted in 2009, allows for indoor cultivation of medical marijuana for personal use within residences of qualified patients. For

personal medical cultivation that requires more than fifty square feet, the applicant must obtain a Minor Use Permit and demonstrate that there is more than one qualified patient living in the residence and an inspection by the building inspector is required to address fire safety issues.

The existing cultivation standards prohibit outdoor cultivation, cultivation for recreational purposes, and cultivation of cannabis for sale.

Staff and the Public Safety Committee recommend Council develop one local regulatory scheme to regulate both recreational and medical cannabis cultivation since their impacts are very similar and one unified set of regulations will be easier to implement for law enforcement and the Community Development Department. However, staff can also draft two separate ordinances, if desired.

PERSONAL CULTIVATION:

Local Responsibility: AUMA allows local governments to "reasonably regulate" but not prohibit personal indoor cultivation of up to six marijuana plants within a private residence by a person older than 21 years of age for recreational purposes. This includes cultivation within a greenhouse or other structure on the same parcel, so long as it is not visible from a public space (public spaces include streets, sidewalks and alleys). Local governments may regulate or prohibit personal outdoor cultivation. The following are examples of what "reasonable regulations" a jurisdiction may enact on the personal indoor cultivation of six plants:

1. *Require a residential cultivation permit with an appropriate fee (fee must be directly associated with actual costs to process the permit);*
2. *Prohibit personal cultivation from drawing more electrical power than the structure is designed to withstand;*
3. *Presenting a health hazard, such as mold accumulation; and*
4. *Using more water than is reasonably required to cultivate six plants.*

Regulatory Options:

1. *Should the City allow outdoor personal cultivation?*

AUMA does not allow cities to prohibit indoor cultivation for personal use of six plants or less, but it does allow cities to regulate or prohibit outdoor cultivation. The Public Safety Committee recommends the Council prohibit outdoor cultivation for personal use. Due to limits on parcel sizes and population densities, it would be difficult to limit the impacts of outdoor cultivation in residential neighborhoods on surrounding property owners and land uses.

Prohibiting outdoor cultivation of six plants or fewer excludes the City from eligibility of some State-funded grants; however, it is anticipated that these grants would be in the neighborhood of $2 per citizen within the jurisdiction, or approximately $15,000 for the City of Fort Bragg. If the Council wishes to pursue allowing and regulating outdoor cultivation for personal use, staff will include draft regulations in the next discussion on cannabis uses.

2. *Should the City require a permit for personal cultivation?*

The City could require a personal cultivation permit to ensure that any personal indoor cultivation meets existing building and/or fire codes. There are two potential cultivation permit scenarios. In situations where the cultivation activity includes electrical, plumbing or construction changes, a traditional building permit would be required and would be processed in the typical fashion. However, the City could require an additional "cultivation permit" and fees for such a permit would be derived from the staff time required to review the applications, potentially inspect properties and issue personal cultivation permits. Permit review could require the assistance of the Mendocino County Building Department and Fort Bragg Fire Department. Personal cultivation permit fees

would likely need to cover these additional City and County costs. If Council directs staff to require personal cultivation permits, any indoor cultivation occurring without a cultivation permit would be a code violation, and staff would pursue code enforcement on the property, which may include fines. Additionally, permitting would lead to the development of a roster of individuals with permits to grow cannabis, helping law enforcement understand the location of these activities. The Public Safety Committee recommends the Council require a permit for personal cultivation.

The Council should be cognizant of the fact that the City does not have staff dedicated to cannabis uses, as some larger jurisdictions have established. A permit for personal indoor cultivation of six plants or fewer would likely result in an uptick in code enforcement for situations where residents grow cannabis in small quantities without a permit—even if only one plant. Council should weigh the utility of a personal cultivation permit against committing what could be a nontrivial amount of staff time to reviewing, inspecting, issuing and enforcing personal indoor cultivation permits.

3. *Should the City allow the personal indoor cultivation of more than six plants?*

AUMA does not allow cities to prohibit indoor cultivation for personal use of six plants or less, but cities may limit the quantity of personal cultivation beyond six plants. The City's current medical cultivation ordinance limits medical cultivation to a maximum of 100 square feet per residence with Minor Use Permit approval and compliance with various operating standards for fire safety and to retain living space for residential uses. The Council could elect to allow personal indoor cultivation beyond six plants. The Public Safety Committee discussed the option of allowing more than six plants for medicinal purposes with a doctor's prescription.

COMMERCIAL CULTIVATION

Regulatory Framework: The new State laws provide regulations for the licensing of cannabis cultivation businesses. Cities have the authority to allow or prohibit commercial cultivation. The City Council should consider if commercial cultivation is a use that should be allowable in the City, and if so, how to regulate these future uses.

1. *Indoor and Outdoor*

The Public Safety Committee discussed the potential to permit commercial cannabis cultivation, and recommends the Council prohibit outdoor commercial cultivation and consider regulations to allow indoor commercial cultivation. The Committee arrived at this recommendation because outdoor cultivation has a greater potential to impact neighboring uses due to odors, and few City parcels are of adequate size to support outdoor commercial cultivation. The Committee sought more information on the potential impacts and operating characteristics of commercial indoor cultivation to determine if the use should be allowed in the City. This report will consider regulations that would allow commercial indoor cultivation, but assumes outdoor cultivation would be prohibited.

2. *Location*

The Council should identify the appropriate zoning districts for commercial cannabis cultivation uses. The most similar use that presently exists in the ILUDC is "crop production, horticulture, orchard, vineyard." This use is presently permitted in all residential, commercial and industrial zoning districts without requiring a Use Permit. Since cannabis cultivation is a newly legal use, its impacts on adjacent properties are as yet undetermined, and the scale of future operations is unknown, staff recommends requiring a Use Permit for the use, should the Council decide to allow it.

When reviewing the purposes and definitions of the various City zoning districts, staff recommends that the use would be most consistent with the following districts, based on the excerpts highlighted:

a. General Commercial (CG): "…applied to areas of the City that are appropriate for less compact and intensive commercial uses…"

b. Light Industrial (IL): "…applied to areas of the City that are appropriate for a variety of commercial, manufacturing, wholesale and distribution...that do not generate significant customer traffic…uses must be entirely within enclosed structures…"

c. Heavy Industrial (IH): "…applied to areas of the City that are appropriate for…the storage and distribution of raw materials…and require locations removed from residential and visitor serving uses…"

While these zoning districts may be suitable for the use based on their defined purposes, the Council should consider the balance of uses in each district and how allowing a new business type could affect existing businesses. For example, there is a limited amount of property in the City zoned Light or Heavy Industrial. The industrial zoning districts are the only places in the City (and in some cases the entire Mendocino Coast) where warehousing, distribution, vehicle repair and manufacturing uses are permitted. Introducing a new business type into the limited land area of the industrial districts could have an unintended impact of displacing existing businesses and services that have limited real estate where they are allowed.

The Council could consider various options for the permitting of commercial cannabis cultivation uses:

a. Allow in CG, IL and IH with a Use Permit. This is a permissive approach that would allow the use in the greatest number of locations around town.

b. Allow in CG, IL and IH with a Use Permit, but limit the maximum number of permits available. This would allow the use in the greatest number of locations, but would limit the amount of businesses that could be displaced by the new uses.

c. Allow in IL and IH with a Use Permit. This approach limits the use to the northern end of town, essentially along Franklin Street north of the railroad tracks, and the portion of town north of Airport Road and east of Main Street.

d. Allow in IL with a Use Permit. This limits the uses to essentially the parcels north of Airport Road and east of Main Street.

e. Allow in IL and IH with a Use Permit, but restrict to properties that meet a minimum parcel size (i.e. one acre). This approach restricts the uses to essentially the larger parcels north of Airport Road and east of Main Street. These parcels are less likely to support the types of small-scale industrial uses that could be displaced with the arrival of a new industry type.

3. Water/sewer/well

The Public Safety Committee requested additional information on the impacts of cannabis cultivation uses on the City's water supply. Staff researched the question and found that the amount of water used is highly dependent on the process employed. Where water is expensive and limited, cultivators develop processes that are more efficient. In situations where water is inexpensive and plentiful, less efficient processes are utilized. **Attachment 1** compares cannabis cultivation water usage to other commercial businesses. For an inefficient operation, a 500-plant cultivation site could use approximately as much water as a 45 seat restaurant. An efficient operation could cultivate as many as 1000 plants for the same amount of water. Staff's research is an amalgamation of numerous sources and case studies of water usage for cannabis cultivation, but it should be noted that the industry is rapidly changing and new techniques frequently improve the efficiency of water usage for these operations. It is very possible for a cultivator to use more or less water than predicted in **Attachment 1**.

The parcels north of Airport Road are not served with City water or sewer connections. Per Section 14.04.127 of the Municipal Code, "wells for landscaping, irrigation or industrial purposes shall be allowed on any City lot. Such well shall meet the City's backflow preventive standards and shall be used for no other purpose but supporting the irrigation system or industrial use." This provision would likely allow commercial cultivation uses to utilize well water for the industrial process. However, these uses likely require restrooms, break rooms, or other limited water uses that are beyond what the Municipal Code allows for well use. If the City were to allow commercial cultivation uses north of Airport Road, Council will need to consider if the City should require water connections for the non-irrigation needs of these uses. Encouraging the use of water wells for these businesses would offset the impact on City water supplies.

If commercial cultivation is allowable south of Airport Road, the business would be required to connect to City water and sewer; however, the business could potentially drill a well to provide water for their irrigation and industrial uses. The City could consider requiring a well for these uses to limit the impact on City water supply.

Regarding wastewater, Municipal Code Section 14.16.030 states that "it is unlawful to construct any new privy, vault, septic tank, cesspool, seepage pit, or other facility intended or used for the disposal of wastewater within the District." An issue arises with potential cannabis cultivation uses north of Airport Road where wastewater connections are not currently in place. Per the Municipal Code, new businesses would have to extend the wastewater connection in order to develop a cultivation use on parcels on the north end of the City.

4. Hybrid Facilities

The Public Safety Committee discussed prohibiting outdoor cultivation, but wanted to continue considering indoor cultivation. The cannabis cultivation industry has been utilizing hybrid greenhouse structures that the Council should consider. These buildings can have traditional architectural stylings along the exterior elevations but utilize a greenhouse-style roof. Some individuals staff has spoken with who are interested in commercial cultivation have also asked about buildings with roofs that retract or open to allow moisture and rain into the facility.

Structures with traditional elevations and greenhouse roofs help reduce energy costs for cultivators, while maintaining an exterior appearance that matches existing nearby development. Many consider these buildings more attractive than a traditional greenhouse. Structures with roofs that open may be constructed with solid walls, as well; however, it is possible for an open roof to have increased odor impacts on nearby property owners. The Council should provide direction on the type of structures that should be allowable if commercial cultivation becomes a permitted use.

5. Odor

As stated in the discussion relating to odor for retail uses, the City code currently includes Section 18.30.080(J) to mitigate odor impacts:

> *No obnoxious odor or fumes shall be emitted that are perceptible without instruments by a reasonable person at the property line of the site.*

The recently-adopted cannabis manufacturing ordinance includes the following requirement for applications:

> *9.33.040(B) Any application for a cannabis manufacturing permit shall include the following information:*
>
> > *(14) Detailed operating procedures, which shall include the following:*
> >
> > > *(h) An odor prevention plan, illustrating how the use will be consistent with Section 17.30.080(J) and/or Section 18.30.080(J) . The odor prevention plan may include an odor absorbing ventilation and exhaust system or other measures to ensure the use*

does not produce odors which are disturbing to people of normal sensitivity residing or present on adjacent or nearby property or areas open to the public.

If indoor commercial cultivation is permitted, the Public Safety Committee recommends considering including language in cultivation policy that requires the applicant demonstrate how the project would comply with the existing odor regulations, similar to the requirement for cannabis manufacturing uses and similar to the Committee's recommendation for retail uses.

6. Security

Security measures are discussed under the retail cannabis use section of this staff report, and requirements for security are also included in the City's recently-adopted manufacturing ordinance. If indoor commercial cultivation is permitted, the Public Safety Committee recommends requiring applicants to develop a security plan to satisfy the Police Department which could attach special conditions as needed.

TAXES AND FEES

City staff is developing a staff report to discuss the fiscal implications of commercial cannabis uses, and expects to present it before Council early this year.

RECOMMENDED ACTIONS:

Staff recommends Council provide direction on the regulation of commercial cannabis businesses in the City of Fort Bragg.

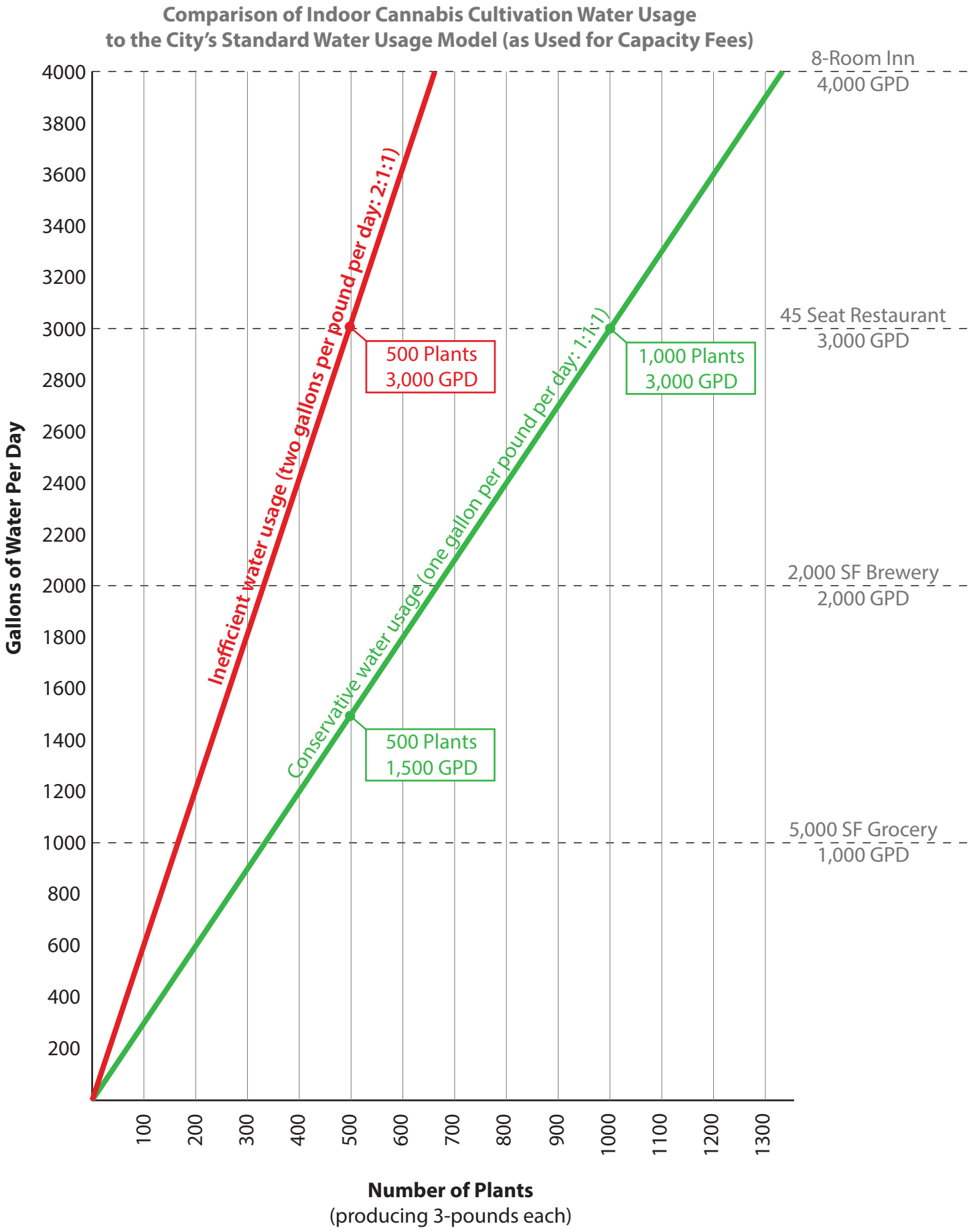
ENVIRONMENTAL REVIEW:
A new ordinance is subject to CEQA and an environmental document will be required.

FISCAL IMPACT:
A new ordinance has the potential to bring new businesses to the City. The fees for processing these permits will be discussed by the Council early next year.

IMPLEMENTATION/TIMEFRAMES:
Depending on Council's direction, staff will continue preparing a new ordinance and/or ordinance amendment for adoption in early 2018. The process will require CEQA review, a public hearing before the Planning Commission, and a public hearing before the City Council.

ATTACHMENTS:
1. Cultivation Water Usage

NOTIFICATION:
1. Notify Me – Cannabis Legislation


Comparison of Indoor Cannabis Cultivation Water Usage
to the City's Standard Water Usage Model (as Used for Capacity Fees)
Gallons of Water Per Day
4000
3800
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
8-Room Inn
4,000 GPD
45 Seat Restaurant
3,000 GPD
2,000 SF Brewery
2,000 GPD
5,000 SF Grocery
1,000 GPD
Inefficient water usage (two gallons per pound per day: 2:1:1)
Conservative water usage (one gallon per pound per day: 1:1:1)
500 Plants
3,000 GPD
1,000 Plants
3,000 GPD
500 Plants
1,500 GPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
Number of Plants
(producing 3-pounds each)

AGENCY:	City Council
MEETING DATE:	June 24, 2019
DEPARTMENT:	Public Works
PRESENTED BY:	Scott Perkins
EMAIL ADDRESS:	sperkins@fortbragg.com

AGENDA ITEM SUMMARY

TITLE:
Receive Report and Provide Direction to Staff Regarding the Possible Introduction of a Commercial Cannabis Cultivation Ordinance

ISSUE:

State Policy
Since the passage of the Medical Marijuana Regulation and Safety Act (MMRSA, 2015) and the Adult Use of Marijuana Act (AUMA, 2016), the State of California, through its Bureau of Cannabis Control, has been developing the laws, regulations and licensing requirements for cannabis businesses. On January 16, 2019, the California Office of Administrative Law (OAL) approved the Bureau of Cannabis Control's revised cannabis regulations.

Council Direction
The City Council adopted a Cannabis Manufacturing ordinance in early 2017, and has since directed staff to develop an ordinance to permit other cannabis businesses in the City (excluding commercial cultivators). On June 26, 2019, the Planning Commission will review a draft ordinance regulating cannabis retail businesses, distributors and testing facilities, and will make a recommendation to Council on an ordinance to adopt. The Council has yet to determine whether or not to permit commercial cannabis cultivation in the City.

On January 8, 2018, the City Council provided direction on a host of cannabis business types, including cultivation. Council discussed the potential impacts of cultivation on city infrastructure, specifically water resources, and directed staff to research the feasibility of permitting commercial cannabis cultivators in the industrial zoning districts north of Pudding Creek. Council identified this location as potentially suitable for cultivation uses since it provides industrially-zoned parcels large enough to accommodate these activities. In order to determine the ultimate impact of a cultivation operation on the north end of town, staff utilized the City's water model to analyze the water supply and water delivery considerations for development north of Pudding Creek. This report explains the outcome of this analysis so that Council can direct staff to either develop a cannabis cultivation ordinance or continue prohibiting the activity in the City.

RootOne Botanicals Application
RootOne Botanicals (R1B) is a local enterprise that holds a Use Permit for a cannabis manufacturing business in town. Presently, R1B has a building permit application in review with the Building Department, and intends to begin operating in the coming months. R1B submitted an application to the City to amend the zoning code to allow commercial cultivation. A copy of the R1B request is included as **Attachment 1**. As stated in the request, R1B proposes to construct and operate a commercial cannabis business north of Pudding Creek that includes cultivation, manufacturing and distribution activities. The request also includes an amendment to the maximum allowable floor area ratio in the industrial zoning districts, which is discussed later in this report.

AGENDA ITEM NO. 8A

ANALYSIS:

Presently, the City does not allow commercial cannabis cultivation. In order to permit cannabis cultivation, the City Council would have to direct staff to revise the Municipal Code and Zoning Code to allow the land use and provide standards for their approval (i.e. require a Use Permit and prescribe standards for Use Permit approval). If Council gives direction for staff to develop an ordinance allowing and regulating cannabis cultivation, staff would begin this process. Revision of the Municipal Code and Zoning Code requires: 1) CEQA evaluation of the amendment; 2) Planning Commission review and recommendation to City Council; 3) Review and introduction of the ordinance by City Council; 4) Adoption of the ordinance by City Council; and 4) An effective date 30 days after adoption of the ordinance. The following analysis is provided for Council to determine if allowing commercial cultivation in the City is feasible and desirable.

Water

There is currently no water or sewer service provided north of Airport Road. Depending on the location and nature of future development, upgrades to or extensions of the water and sewer system may be required to establish new businesses north of Pudding Creek.

City ordinances allow the use of groundwater (wells) for agricultural and industrial uses:

> 14.04.127 WELLS FOR NONDOMESTIC USE. Wells for landscaping, irrigation or industrial purposes shall be allowed on any City lot. Such well shall meet the City's backflow preventive standards and shall be used for no other purpose but supporting the irrigation system or industrial use.

The existing policy would permit commercial cannabis cultivators to use groundwater (wells) for irrigation and industrial purposes. The policy was developed to avoid using costly, treated City water for purposes where it is not necessary. Wells are permitted and regulated through the Mendocino County Department of Environmental Health, with City opportunity to review applications and comment. City policy, however, does not currently allow groundwater to be used for offices, restrooms and other domestic needs—the City instead requires connection to municipal water for these domestic activities. In order to establish future cannabis businesses (or any new use), a connection to the City's municipal water supply would be required for the business's domestic needs. Based on the discussion below and use of the water model, the City has the water supply necessary to serve future connections; however, the sizing of existing infrastructure around and north of Pudding Creek makes it complicated to achieve the pressure required for "fire flow" for future land uses.

Water: Supply

City staff has worked to fine tune and improve the water supply model developed in 2014 by engineers Lawrence and Associates. The results of the water model were discussed in depth with the Planning Commission and City Council over the last month. In summary, using data from 1973 through the drought of 2015, and with consideration of the City's existing water source capabilities and water storage infrastructure, the model indicates that the City can manage total community growth of approximately 74.8% while maintaining 5 million gallons (MG) in storage, as long as conservation methods similar to those during the drought of 2015 are implemented. If we use the demand from 2018 as a representation of non-conservation demand, the accommodated total growth drops to 56.5%.

Future commercial cannabis cultivation uses in the City would likely rely on groundwater for irrigation purposes, and utilize treated City water for domestic uses (bathrooms, offices, etc.). Under this scenario, the quantity of City water required for cultivation activities would be relatively low and

comparable to other low-impact land uses in the City. Provided commercial cultivators have access to groundwater, and given the outcomes of the City's water model predictions, there would be adequate water supply to serve future commercial cultivation uses. If the City Council directs staff to develop an ordinance to allow commercial cultivation in the City, the Council could consider requiring future cultivation businesses to use only non-City water sources for irrigation activities (as allowed by Municipal Code Section 14.04.127 above), limiting the overall impact these uses would have on City water supply.

Water: Delivery

As required by Municipal Code Section 14.04.127 above, any future commercial cultivation project would need to connect to the City's municipal water system for domestic uses. The complexity and cost of the connection would depend on the proposed location of the project—projects north of Airport Road would have to extend the water system to reach the property being developed. In addition to simply connecting to the system, improvements to the existing infrastructure would be required to meet water pressure requirements for fire flows. The size of the existing water mains and the lack of a "loop" system on the north end of town limits the pressure in the water distribution system north of Pudding Creek. Tapping into or extending the water main that presently terminates at Airport Road to serve future land uses further north would fail to meet the minimum pressures required for fire suppression.

Existing water pressure drops from about 1,250 gallons per minute (gpm), measured at the hydrant just north of Pudding Creek, to about 630 gpm at the last fire hydrant, just north of Airport Road. In order to provide future land uses with adequate fire suppression, flows should generally be at least 1,500 gpm. Future commercial cultivation businesses north of Pudding Creek would have to consider the following approaches to meet the fire flow pressure requirements, in addition to extending the water line to their proposed project.

1. *Upgrade and Expand Infrastructure*

The existing infrastructure delivering water to the north end of town is shown in **Attachment 2**, and ends at Airport Road. In order to achieve water pressure of 1,500 gpm to meet fire flow requirements for new development, the following improvements are necessary for the water delivery system:

- Relocate the existing 10-inch main currently on the Pudding Creek Dam to the Pudding Creek Bridge on Main Street, at an estimated cost of $1,500,000. Caltrans is including permitting and environmental review for the water line's relocation as part of their future bridge-widening project, but funding for the relocation has yet to be identified.
- Upsize the existing 6-inch water main from the Pudding Creek bridge to the Beachcomber Hotel's southern boundary to a 10-inch water line (±1,500 feet at an estimated cost of $500,000).
- Upsize the existing 8-inch water main from the Beachcomber Hotel's southern boundary to Caltrans yard north boundary to a 10-inch water line (±1,700 feet at an estimated cost of $550,000). This improvement would depend on specific needs for development.
- Extend a new 8-inch water main beyond the existing line's termination to a future proposed development. The estimated cost to extend the main to the north end of the City Limits is $750,000.
- Looping the water system will probably be necessary to fully achieve recommended flows and to eliminate chlorine residuals at the end of the line. This would involve extending the existing 8-inch water main that terminates in Glass Beach Drive across the Pudding Creek

Trestle and along the Haul Road to tie back into the main located in Main Street, in the vicinity of the proposed Avalon Hotel (1201 N Main).

Expanding and extending water lines in the Main Street right-of-way would require environmental review and permitting. Required permits would include a Coastal Development Permit, since the Coastal Zone boundary is the east side of the Main Street right-of-way. Very rough estimates of the costs to upgrade the existing facilities is approximately $2.5 million (this does not include the cost of looping the system).The results of environmental studies and the mitigation required for any unknown impacts could greatly alter this estimate.

Increasing the size of the existing water lines and extending the main to the parcel of future development should provide adequate pressure to fight fires; however, having a “dead end” line is not preferable, as water in the system can lose the required levels of chlorine that keep the water potable if not circulated through a loop. Constructing a parallel water line down the Haul Road to create a loop would be the best scenario for water delivery on the north end of town. Costs for development of this type of system would be substantial.

The full extent of system improvements and extensions would depend on the ultimate location of a proposed cannabis cultivation facility.

2. *Provide Onsite Water for Fire Suppression*

A second approach for future development to achieve the water pressure necessary for fire suppression is to provide onsite storage tanks to gravity-feed water in the event of a fire. It would be incumbent on the applicant to design a water storage system that could be dedicated for fire suppression and supplies adequate pressure. Not all development sites could necessarily accommodate a fire suppression system of this nature.

Wastewater
The City’s wastewater system presently ends at approximately Airport Road. Unless an exemption is made by the Public Works Director due to special or unusual circumstances (14.08.050), the Municipal Code prohibits the creation of a new septic system in the City of Fort Bragg (14.16.030). As a result, projects north of the existing system would need to extend the sewer main to their property to receive wastewater services unless a septic or private sewer currently exists on the site (14.16.050). This scenario applies to potential cannabis cultivation projects, and all other future development on the north end of town. The further a project site is from the end of the existing sewer main, the greater the cost required to extend service.

Other Considerations
If Council directs staff to draft an ordinance for Planning Commission and Council review, staff seeks Council input on the following considerations.

<u>Project Design</u>
Most cities that allow commercial cultivation place restrictions on the appearance of these facilities. The Inland Land Use and Development Code (ILUDC) requires any nonresidential development projects more than 250 square feet in size to apply for a Design Review permit that is reviewed by the Planning Commission. In order to approve a Design Review permit, the Planning Commission must find that the project:

1. Provides design, massing and scale appropriate to and compatible with the site surroundings and the community;

2. Provides attractive and desirable site layout and design, including building arrangement, exterior appearance and setbacks, drainage, fences and walls, grading, landscaping, lighting signs, etc.;
3. Provides efficient and safe public access, circulation, and parking;
4. Provides appropriate open space and landscaping; and
5. Is compliant and consistent with the City's Design Guidelines.

A permissive cultivation ordinance would rely solely on the Design Review process to ensure the appropriate design of these projects. Alternatively, the Council could direct staff to incorporate additional language into a cultivation ordinance to place certain requirements on the design of these projects. Examples include:

1. Prohibition of outdoor commercial cultivation which may or may not include a prohibition on retractable roofs;
2. Require that plants not be visible from a public or private road, sidewalk, park or any common public viewing area;
3. Require exterior walls of a cultivation facility to be fully opaque, perpendicular to the ground and constructed with materials consistent with other types of industrial development (i.e. no hoop houses, glass walls, etc.); and
4. Any other design considerations Council recommends.

If a cultivation business were to move into an existing structure, a Design Review permit would not be required unless additions/improvements to the structure trigger permit review. Adding specific requirements for project design, such as the ones listed above, would be applicable to cultivators moving into existing structures. This could require improvements to the structure if it does not presently meet the design requirements required for cultivation uses.

<u>Operating Requirements</u>
Should cultivation businesses be made allowable in the City, the Council could consider policies regulating the operation of these uses. Examples include:

1. Pesticides and fertilizers shall be properly labeled and stored to avoid contamination through erosion, leakage or inadvertent damage from pests, rodents or other wildlife;
2. Requirements that the operation meets or exceeds minimum legal standards for drainage and runoff;
3. Require review of the operation's use of water, including the water source, irrigation plan and projected water use—limitations could be made on the maximum amount of municipal water used for the business to ensure that municipal water is only used for domestic purposes;
4. Submission of a plan to address odor and other public nuisances that may derive from the cultivation facility.

Based on trends in the cannabis industry, it is likely that cultivators would want to combine cultivation activities with other aspects of the supply chain. Staff recommends that if cultivation is allowable on the north end of town, to likewise allow cannabis manufacturing and distribution as part of a future facility, since these land uses are already allowable in the industrial districts.

<u>Location</u>
Previous Council direction indicated that these businesses may be best suited north of Pudding Creek and in industrial zoning districts, and requested an analysis of infrastructure to determine if these uses are appropriate. If Council chooses to allow cultivation uses in this location, staff would develop an ordinance allowing cultivation in this area with Use Permit approval. Alternatively, Council

could choose to allow cultivation in other zoning districts, or in conjunction with other cannabis businesses (i.e. accessory to retail as part of a micro-business).

Application Review

If Council directs staff to draft an ordinance to allow commercial cannabis cultivation, an ordinance could utilize the policies for other cannabis business types presently on the Planning Commission's July 10 agenda for cultivation businesses. These include policies that regulate odor, security, background checks, etc.

Floor Area Ratio

RootOne Botanicals obtained a Use Permit to construct a cannabis manufacturing facility on North Franklin Street in the Heavy Industrial (IH) zoning district. During their design and development of the site, the ILUDC requirement that the Floor Area Ratio (FAR) in the industrial zoning districts be less than 0.40 became problematic. The applicants were able to refine their project to meet the requirement, but the difficulty meeting the regulation sparked a conversation between the applicant and staff about the appropriateness of the policy.

The ILUDC defines FAR as follows:

> **Floor Area Ratio.** The floor area ratio (FAR) is the ratio of floor area to total lot area. FAR restrictions are used to limit the maximum floor area allowed on a site (including all structures on the site). The maximum floor area of all structures (measured from exterior wall to exterior wall) permitted on a site (excluding carports) shall be determined by multiplying the floor area ratio (FAR) by the total net area of the site (FAR x net site area = maximum allowable floor area).

As the definition dictates, FAR considers only structures on the parcel and excludes driveways or other site improvements. Each story for multi-level buildings counts separately toward FAR. The image in **Attachment 3** gives an explanation of FAR.

With a maximum allowable FAR of 0.40 in the industrial districts, single-story structures may only occupy a maximum of 40% of the site, leaving the remaining 60% for parking, setbacks, open space, etc. A two-story structure may only occupy 20% of the site, leaving 80% available for other purposes. The first table in **Attachment 4** lists the parcels in the industrial zoning districts of the ILUDC, their approximate size, square footage of existing development, and the existing FAR on site.

All of the industrial properties north of Pudding Creek conform to the 0.40 FAR requirements, due in part to the relatively large size of the parcels. In the Franklin Street corridor of the industrial zoning district (from the train tracks to Manzanita Street), 8 of the 22 parcels have FARs greater than the maximum allowed, and 14 have FARs less than the maximum allowed. The average FAR in the North Franklin Street industrial corridor is presently 0.34. At 0.34, these parcels are developed within 85% of the maximum FAR, and it is reasonable to assume that if the maximum FAR were higher, some of these properties may have developed to a greater degree. It's also possible that development on some of these parcels would consider expansion if the FAR would allow it. Since the City has a limited number of industrially-zoned parcels, increasing the FAR would allow more efficient use of the industrial districts by allowing more development in less space.

The second table in **Attachment 5** compares Fort Bragg's industrial FAR requirements with those of other nearby jurisdictions. Of the ten jurisdictions sampled, Fort Bragg has the most restrictive FAR requirement. In fact, the majority of the industrial districts in nearby jurisdictions have no maximum limit on FAR (or lot coverage).

Increasing the maximum FAR allowance in the industrial districts is unlikely to have a dramatic consequence on physical development. FAR is intended to restrict the size of structures that can be built on a given parcel, but other constraints such as height limits, parking, solid waste storage, access, setbacks, easements and stormwater improvements already constrain the size of structures that can be built. Even if the FAR were 1.0, the other various requirements in the zoning code would make lot line-to-lot line development impossible, and an FAR of 1.0 is unlikely to be realistically achieved.

In Fort Bragg's Low Density Residential district, the maximum lot coverage[1] is 40%, but applicants can increase their lot coverage to 50% with a Minor Use Permit and submission of a drainage plan. Staff recommends a similar scenario for FAR in industrial districts, where a new maximum FAR is established more consistent with neighboring jurisdictions, and projects requesting an FAR beyond that maximum may do so with Minor Use Permit approval.

Staff is seeking direction regarding FAR requirements for industrial zoning districts, in response to the amendment request by RootOne Botanicals.

RECOMMENDED ACTION:

Staff recommends Council provide direction on the following topics:

1. Should the City develop an ordinance to allow commercial cannabis cultivation? If yes:
    a. Should use of municipal water be allowed for irrigation purposes?
    b. What policies should an ordinance include on project design?
    c. Are there restrictions to how the cultivation activity could operate?
    d. Should cultivators be subject to additional application requirements, beyond other cannabis businesses?

2. Should the ILUDC be amended to allow greater FAR in industrial zoning districts with Minor Use Permit approval?

ALTERNATIVE ACTION(S):

Council could provide direction not to allow commercial cannabis cultivation, or provide direction to allow the land use in a different manner than previously discussed (i.e., other zoning districts and/or areas of town).

FISCAL IMPACT:

Allowing cannabis cultivation could promote business growth for the City.

CONSISTENCY:

Commercial cannabis cultivation is presently not allowed in the City limits. Providing direction to develop an ordinance would create a framework for future cultivation businesses to be consistent with City code.

[1] Lot coverage is distinct from FAR in that it includes all impervious surfaces (pavement, carports, etc.) and not just buildings, and does not consider the number of stories a building has.

IMPLEMENTATION/TIMEFRAMES:

Implementation would depend on Council direction. If Council directs staff to develop an ordinance and feels comfortable that questions and concerns are adequately addressed, staff would develop an ordinance and perform CEQA review, then present the draft ordinance at a Planning Commission public hearing. The Planning Commission would work with staff to develop an ordinance that they would recommend for Council adoption.

Alternatively, Council could request more information about the topic and workshop a future ordinance prior to Planning Commission review.

ATTACHMENTS:

1. RootOne Request
2. Existing Water System
3. FAR Explained
4. Existing FAR
5. FAR Comparison

NOTIFICATION:

1. Cannabis Legislation Notify Me Subscriber List
2. Jon McColley, RootOne Botanicals

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COUNCIL COMMITTEE ITEM SUMMARY REPORT

MEETING DATE:	September 22, 2020
TO:	Community Development Committee
FROM:	Sarah McCormick, Housing & Economic Development
AGENDA ITEM TITLE:	Provide direction on Exhibit B of a Request for Proposals to contact services for preparation of a commercial cannabis cultivation ordinance for the City of Fort Bragg

ISSUE/SUMMARY:

On June 24, 2019 City Council received a report and provided direction to staff regarding the possible introduction of a commercial cannabis cultivation ordinance. After much discussion, the Council provided the following direction:

- Proceed with development of a cannabis cultivation ordinance;
- Allow cultivation in industrial zoned parcels north of Pudding Creek and limit cultivation south of Pudding Creek to an accessory use of dispensary;
- Explore ways to allow Municipal water for irrigation without negatively impacting the water system;
- Consider commercial cannabis cultivation as a Cannabis Business, pursuant to Fort Bragg Municipal Code Chapter 9.30 – Cannabis Businesses; and
- Allow 0.8 FAR and increased FAR with use permit approval (currently industrial zoning allows 0.4 FAR).

The City is preparing a Request for Proposals (RFP) to select a consultant for the development of a commercial cannabis cultivation ordinance, and the associated environmental review pursuant to California Environmental Quality Act (CEQA). Since over a year has passed since Council provided the direction listed above, staff is seeking input from the Community Development Committee to ensure the ordinance is aligned with Council objectives. The draft RFP (Attachment 4), including the Community Development Committee's recommended Exhibit B (Attachment 5), will be brought before Council for further consideration at the regularly scheduled meeting of October 13, 2020.

To assist Community Development Committee discussion of this issue, the following topics are provided:

Cannabis Retail. At the time Council provided feedback regarding commercial cultivation of cannabis, the City had not yet adopted retail cannabis regulations. This is an important

consideration because the land use “Cannabis Retail” includes provisions for cultivation within a cannabis microbusiness model. Cannabis microbusinesses are facilities that engage in a combination of retail, distribution, manufacturing **and/or cultivation**. “Commercial Cannabis Cultivation” is defined by the Municipal Code as “the planting, growing or harvesting of cannabis plants that are intended to be transported, processed, distributed, dispensed, delivered or sold.

The retail component (aka dispensaries) provide economic value in terms of services and sales tax, while the “accessory uses” are an important tool for businesses competing in this industry. “Accessory” is defined by the Inland Land Use & Development Code (ILUDC) as “a use customarily incidental to, related and clearly subordinate to a primary use on the same parcel, which does not alter the primary use”. Community Development Committee may choose to discuss whether or not the City’s current regulations, which allow cultivation as an accessory use, already meet the City’s need for commercial cannabis cultivation. The cannabis microbusiness model is allowed in the Central Business District, General Commercial, and Highway Visitor Commercial zoning districts, with minor use permit approval.

Zoning. Current direction from Council is to allow commercial cannabis cultivation on industrial zoned parcels located north of Pudding Creek. Indeed, industrial zoned land is an appropriate zoning designation for those businesses primarily engaged in commercial cannabis cultivation. That said, the industrial land north of Pudding Creek has insufficient infrastructure to support growth. New development in this area would need to invest in costly improvements to serve sites with Municipal water/sewer services. Community Development Committee may choose to discuss including all parcels designated Light/Heavy Industrial.

Furthermore, committee members may wish to discuss including commercial cannabis cultivation or cannabis retail in more zoning districts. For instance, the land use “crop production, horticulture, orchard, vineyard” is permitted in all zoning districts throughout the City. Council may wish to expand areas where these land uses can occur, and possibly create specific regulations for specific zoning districts. Attachment 3 is provided to aid this discussion.

RECOMMENDATION:

Provide feedback on draft Exhibit B – Council Direction, to be brought forward as a recommendation for City Council consideration.

ATTACHMENTS:

1. FBMC Chapter 9.30 – Cannabis Businesses
2. ILUDC Section 18.42.057 – Cannabis Retail
3. General Plan - Land Use Designations
4. Draft RFP
5. Draft Exhibit B - Council Direction

CHAPTER 9.30
Cannabis Businesses

Section

9.30.010 Purpose and intent
9.30.020 Definitions
9.30.030 Limitations on use
9.30.040 Cannabis businesses permit
9.30.050 Applications
9.30.060 Time limit for filing application for permit
9.30.070 Term of permits and renewals
9.30.080 Fees
9.30.090 Investigation and action on application
9.30.100 Grounds for rejection of application
9.30.110 Appeal from Chief of Police decision to reject application
9.30.120 Processing of cannabis business permit
9.30.130 Operating requirements
9.30.140 Minors
9.30.150 Display of permit
9.30.160 Registration of new employees
9.30.170 Transfer of permits
9.30.180 Suspension and revocation – notice
9.30.190 Suspension and revocation – grounds
9.30.200 Suspension and revocation – appeals
9.30.210 Suspension or revocation without hearing
9.30.220 Separate offense for each day
9.30.230 Public nuisance
9.30.240 Criminal penalties
9.30.250 Civil injunction
9.30.260 Administrative remedies
9.30.270 Severability

9.30.010 PURPOSE AND INTENT.
It is the purpose and intent of this chapter to regulate cannabis businesses in order to promote the health, safety, morals, and general welfare of the residents and businesses within the City.
(Ord. 953, § 2, passed 11-12-2019)

9.30.020 DEFINITIONS.
For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning:

APPLICANT. A person who is required to file an application for a permit under this chapter, including an individual owner, managing partner, officer of a corporation, or any other operator, manager, employee, or agent of a cannabis business.

CANNABIS. All parts of the plant Cannabis sativa Linnaeus, Cannabis indica, or Cannabis ruderalis, or any other strain or varietal of the genus Cannabis that may exist or hereafter be discovered or developed that has psychoactive or medicinal properties, whether growing or not, including the seeds thereof. “Cannabis” also means cannabis as defined by § 11018 of the Health and Safety Code and

by other state law. “Cannabis” does not mean “industrial hemp” as defined by § 11018.5 of the Health and Safety Code.

CANNABIS BUSINESS. An entity engaged in the cultivation, possession, manufacture, distribution, processing, storing, laboratory testing, packaging, labeling, transportation, delivery or sale of cannabis and cannabis products for commercial purposes.

CANNABIS OPERATOR or ***OPERATOR.*** The person or entity that is engaged in the conduct of any commercial cannabis business.

CANNABIS PRODUCT. Cannabis that has undergone a process whereby the plant material has been transformed into a concentrate, including, but not limited to, concentrated cannabis, or an edible or topical product containing cannabis or concentrated cannabis and other ingredients.

CANNABIS RETAIL. A cannabis business where cannabis or cannabis products are offered, either individually or in any combination, for retail sale directly to customers. The primary use of a cannabis retail business is to sell products directly to on-site customers. Sales may also be conducted by delivery. Also known as a cannabis “dispensary.”

CANNABIS RETAIL – DELIVERY ONLY. A cannabis business that is closed to the public and conducts sales exclusively by delivery.

CHIEF OF POLICE. The Chief of Police of the City of Fort Bragg or the authorized representatives thereof.

COMMERCIAL CANNABIS CULTIVATION. The planting, growing or harvesting of cannabis plants that are intended to be transported, processed, distributed, dispensed, delivered or sold. Commercial cannabis cultivation is permitted as an accessory use to a permitted cannabis business.

DELIVERY OF CANNABIS. The commercial transfer of cannabis or cannabis products to a consumer. “Delivery” also includes the use of any technology platform owned and controlled by a cannabis business operator that enables customers to arrange for or facilitate the commercial transfer by a permitted cannabis retail facility.

EDIBLE CANNABIS PRODUCT. A cannabis product that is intended to be used, in whole or in part, for human consumption, including, but not limited to, chewing gum, but excluding products set forth in Division 15 (commencing with § 32501) of the Food and Agricultural Code.

PERMITTEE. A person who holds an effective and current permit under this chapter.

PERSON WITH AN IDENTIFICATION CARD. Shall have the same definition as Cal. Health and Safety Code §§ 11362.5 et seq., and as may be amended.

PRIMARY CAREGIVER. Shall have the same definition as Cal. Health and Safety Code §§ 11362.5 et seq., and as may be amended.

QUALIFIED PATIENT. Shall have the same definition as Cal. Health and Safety Code §§ 11362.5 et seq., and as may be amended.
(Ord. 953, § 2, passed 11-12-2019)

9.30.030 LIMITATIONS ON USE.

A. Compliance with City Code. Cannabis businesses shall only be allowed in compliance with this chapter and all applicable regulations set forth in the City Code, including but not limited to all regulations governing building, grading, plumbing, septic, electrical, fire, hazardous materials, nuisance, and public health and safety.

B. Compliance with State Laws and Regulations. Cannabis businesses shall comply with all applicable state laws and regulations, as may be amended, including all permit, approval, inspection, reporting and operational requirements, imposed by the state and its regulatory agencies having jurisdiction over cannabis and/or cannabis businesses. All cannabis businesses shall comply with the rules and regulations for cannabis as may be adopted and as amended by any state agency or department including, but not limited to, the Bureau of Cannabis Control, the Department of Food and Agriculture, the Department of Public Health, the Department of Pesticide Regulation, and the Board of Equalization.

C. Cannabis businesses shall provide copies of state, regional and local agency permits, approvals or certificates upon request by the City to serve as verification for such compliance.
(Ord. 953, § 2, passed 11-12-2019)

9.30.040 CANNABIS BUSINESSES PERMIT.

A. It shall be unlawful for any person to engage in, conduct or carry on, or to permit to be engaged in, conducted or carried on, in or upon any premises in the City the operation of a cannabis business unless the person first obtains and continues to maintain in full force and effect a cannabis business permit from the City and a state license as herein required.

B. Cannabis businesses shall be located in compliance with the requirements of the Inland Land Use and Development Code and/or the Coastal Land Use and Development Code, as applicable.

C. Cannabis businesses that are subject to the standards in this chapter shall not be established or maintained except as authorized by the land use permit required by Division 2 of the Inland Land Use and Development Code and/or the Coastal Land Use and Development Code, as applicable. “Cannabis retail” and “cannabis retail – delivery only” are defined land uses specifically referenced in Article 2 of the Inland Land Use and Development Code (ILUDC). The Director shall classify other cannabis businesses, including, but not limited to, those that involve manufacturing, distribution, processing, storing, laboratory testing, packaging, labeling, and/or transportation for commercial purposes as existing land uses already established by Articles 2 and 10 of the ILUDC, based on the characteristics of the proposed use. For example, a cannabis business proposing to engage in activities requiring a cannabis distribution license from the state may be classified as “wholesaling and distribution,” and allowable based on the permit and district requirements for the “wholesaling and distribution” use in Article 2 of the ILUDC.

D. *Dual Licensing.* State law requires dual licensing at the state and local level for cannabis businesses. All cannabis operators shall therefore be required to obtain a state cannabis license, and shall comply at all times with all applicable state licensing requirements and conditions. Cannabis businesses shall not be allowed to commence operations until the cannabis business can demonstrate that all necessary state licenses and agency permits have been obtained.

E. Failure to demonstrate dual licensing in accordance with this chapter shall be grounds for revocation of City approval. Revocation of a local permit and/or a state license shall terminate the ability of the cannabis business to operate until a new permit and/or state license is obtained.
(Ord. 953, § 2, passed 11-12-2019)

9.30.050 APPLICATIONS.
Any application for a cannabis business permit shall be filed with the Chief of Police. The application shall be made under penalty of perjury. Any application for a cannabis business permit shall include the following information:

A. The full name, present address, and telephone number of the applicant;

B. The address to which notice of action on the application and all other notices are to be mailed;

C. Previous addresses for the past 5 years immediately prior to the present address of the applicant;

D. Written proof that the applicant is over 21 years of age;

E. Photographs for identification purposes (photographs shall be taken by the Police Department);

F. The cannabis business history of the applicant, including whether the applicant, in previously operating in any city, county, or state under permit, has had a permit revoked or suspended and, if so, the reason therefor;

G. The name or names of the person or persons having the management or supervision of applicant's business;

H. Whether the person or persons having the management or supervision of applicant's business have been convicted of a crime(s), the nature of the offense(s), and the sentence(s) received therefor;

I. A security plan ensuring the safety of employees and visitors from criminal activity, including theft and unauthorized entry;

J. A sketch or diagram showing the interior configuration of the premises, including a statement of the total floor area occupied by the cannabis business and the purpose and security of each room or area of operation;

K. A diagram illustrating the use and coverage of security cameras, security lighting, and necessary access restrictions;

L. A notarized statement by the property owner certifying under penalty of perjury that he or she has given consent to the applicant to operate a cannabis business at the location, or providing proof that the applicant owns the property;

M. Detailed operating procedures, which shall include the following:

1. Proposed hours of operation;

2. How the business will comply with applicable state regulations;

3. Product safety and quality assurances;

4. Record keeping procedures;

5. Product recall procedures;

6. A solid waste disposal plan, with certification that waste transport entities and disposal facilities have agreed to haul and receive solid waste produced by the cannabis business;

7. Product supply chain information (cultivation, testing, transportation, manufacturing, packaging and labeling, etc.);

8. An odor prevention plan, illustrating how the cannabis business will be consistent with § 17.30.080(J) and/or § 18.30.080(J). The odor prevention plan may include an odor absorbing ventilation and exhaust system or other measures to ensure the use does not produce odors which are disturbing to people of normal sensitivity residing or present on adjacent or nearby property or areas open to the public; and

9. Other information as required by the Chief of Police as necessary to ensure the project's compliance with local, state and federal regulations;

N. Authorization for the City, its agents and employees to seek verification of the information contained within the application; and

O. A statement in writing by the applicant that he or she certifies under penalty of perjury that all the information contained in the application is true and correct.
(Ord. 953, § 2, passed 11-12-2019)

9.30.060 TIME LIMIT FOR FILING APPLICATION FOR PERMIT.
If the applicant has completed the application improperly, or if the application is incomplete, the Chief of Police shall, within 10 days of receipt for the original application, notify the applicant of the fact and, on request of the applicant, grant the applicant an extension of time of 10 days or more to submit a complete application.
(Ord. 953, § 2, passed 11-12-2019)

9.30.070 TERM OF PERMITS AND RENEWALS.
Cannabis business permits issued under this chapter shall expire 1 year following their issuance. Cannabis business permits may be renewed by the Chief of Police for additional 1-year periods upon application by the permittee, unless the permit is suspended or revoked subject to § 9.30.190. Applications for renewal shall be made at least 45 days before the expiration date of the permit and shall be accompanied by the nonrefundable fee referenced in § 9.30.080. When made less than 45 days before the expiration date, the expiration of the permit will not be stayed. Applications for renewal shall be acted on as provided herein for action upon applications for permits. The Chief of Police may deny an application for renewal based on any of the grounds referenced in §§ 9.30.100 and 9.30.190. An applicant aggrieved by the Chief of Police's decision to deny a renewal of a cannabis business permit may appeal pursuant to § 9.30.110.
(Ord. 953, § 2, passed 11-12-2019)

9.30.080 FEES.
Every application for a cannabis business permit or renewal shall be accompanied by a nonrefundable fee, as established by resolution adopted by the City Council from time to time. This application or renewal fee is in addition to fingerprinting, photographing, and background check costs and shall be in addition to any other permit fee imposed by this code or other governmental agencies.

Fingerprinting, photographing, and background check fees will be as established by resolution adopted by the City Council from time to time.
(Ord. 953, § 2, passed 11-12-2019)

9.30.090 INVESTIGATION AND ACTION ON APPLICATION.

After the making and filing of the application for the cannabis business permit and the payment of the fees, the Chief of Police shall conduct a background check of the applicant and conduct an investigation of the application. After the background checks and investigation are complete, the Chief of Police shall either formally accept or reject the application in accordance with the provisions of this chapter.
(Ord. 953, § 2, passed 11-12-2019)

9.30.100 GROUNDS FOR REJECTION OF APPLICATION.

The grounds for rejection of a cannabis business permit application shall be 1 or more of the following:

A. The business or conduct of the business at a particular location is prohibited by any local or state law, statute, rule, or regulation;

B. The applicant has violated any local or state law, statute, rule, or regulation respecting a cannabis business;

C. The applicant has knowingly made a false statement of material fact or has knowingly omitted to state a material fact in the application for a permit;

D. The applicant, his or her agent, or any person who is exercising managerial authority on behalf of the applicant has been convicted of a felony, or of a misdemeanor involving moral turpitude, or the illegal use, possession, transportation, distribution, or similar activities related to controlled substances, with the exception of cannabis related offenses for which the conviction occurred prior to passage of Proposition 215. A conviction within the meaning of this section means a guilty plea or verdict or a conviction following a plea of nolo contendere;

E. The applicant has engaged in unlawful, fraudulent, unfair, or deceptive business acts or practices;

F. The applicant is under 21 years of age;

G. The cannabis business does not comply with Title 18 (Inland Land Use and Development Code); and/or

H. The required application or renewal fees have not been paid.
(Ord. 953, § 2, passed 11-12-2019)

9.30.110 APPEAL FROM CHIEF OF POLICE DECISION TO REJECT APPLICATION.

The Chief of Police shall cause a written notice of his or her decision to reject a cannabis business permit application to be mailed to the applicant by certified U.S. mail, postage prepaid, return receipt requested, to the address provided by the applicant for sending of notices. An applicant aggrieved by the Chief of Police's decision to reject an application may appeal the decision in accordance with the procedures described in Chapter 1.08. If an appeal is not taken within such time, the Chief of Police's decision shall be final.
(Ord. 953, § 2, passed 11-12-2019)

9.30.120 PROCESSING OF CANNABIS BUSINESS PERMIT.
If an application is not rejected by the Chief of Police, it shall be forwarded to the Community Development Department for processing using the same permit process and requirements for the proposed cannabis business as defined in Title 17 (Coastal Land Use and Development Code) and/or Title 18 (Inland Land Use and Development Code), as applicable.
(Ord. 953, § 2, passed 11-12-2019)

9.30.130 OPERATING REQUIREMENTS.
A cannabis business shall meet the following operating requirements for the duration of the use:

A. The design, location, size and operating characteristics of the cannabis business shall comply with the findings and conditions of any applicable discretionary permit obtained for its operation.

B. A cannabis business use shall maintain a current register of the names of all employees currently employed by the use.

C. The building entrance to a cannabis business shall be clearly and legibly posted with a notice indicating that persons under the age of 21 are precluded from entering the premises unless they are a qualified patient or a primary caregiver and they are in the presence of their parent or legal guardian.

D. No cannabis business shall hold or maintain a license from the State Department of Alcoholic Beverage Control to sell alcoholic beverages, or operate a business that sells alcoholic beverages. In addition, alcohol shall not be provided, stored, kept, located, sold, dispensed, or used on the premises of the cannabis business use.

E. A cannabis business shall provide adequate security on the premises, including lighting and alarms, to ensure the safety of employees and visitors from criminal activity, including theft and unauthorized entry.

F. A cannabis business shall provide the Chief of Police and Fire Chief with the name, phone number, and facsimile number of an on-site community relations staff person to whom one can provide notice if there is an emergency or there are operating problems associated with the cannabis business. The cannabis business management shall make every good faith effort to encourage residents to call this person to try to solve operating problems, if any, before any calls or complaints are made to the Police or Planning Department.
(Ord. 953, § 2, passed 11-12-2019)

9.30.140 MINORS.
A. It shall be unlawful for any permittee, operator, or other person in charge of any cannabis business to employ any person who is not at least 21 years of age.

B. Persons under the age of 21 shall not be allowed on the premises of a cannabis business unless they are a qualified patient or a primary caregiver and they are in the presence of their parent or legal guardian.
(Ord. 953, § 2, passed 11-12-2019)

9.30.150 DISPLAY OF PERMIT.
Every cannabis business shall display at all times during business hours the permit issued pursuant to the provisions of this chapter for cannabis businesses in a conspicuous place so that the same may be readily seen by all persons entering the cannabis business use.
(Ord. 953, § 2, passed 11-12-2019)

9.30.160 REGISTRATION OF NEW EMPLOYEES.

A. As a further condition of approval of every cannabis business permit issued pursuant to this chapter, every owner or operator shall register every employee with the Police Department within 5 business days of the commencement of the employee's period of employment at the cannabis business, in order to provide necessary information to conduct background checks.

B. Each employee shall be required to provide 2 recent color passport quality photographs and, at the discretion of the Chief of Police, shall allow himself or herself to be fingerprinted by the Police Department for purposes of identification.

C. Failure to register each new employee within 5 days of the commencement of employment or to maintain a current register of the names of all employees shall be deemed a violation of the conditions of the permit and may be considered grounds for suspension or revocation of the permit.
(Ord. 953, § 2, passed 11-12-2019)

9.30.170 TRANSFER OF PERMITS.

A. A permittee shall not operate a cannabis business under the authority of a cannabis business permit at any place other than the address of the cannabis business stated in the application for the permit.

B. A permittee shall not transfer ownership or control of a cannabis business or transfer a cannabis business permit to another person unless and until the transferee obtains an amendment to the permit from the Chief of Police stating that the transferee is now the permittee. The amendment may be obtained only if the transferee files an application with the Chief of Police in accordance with § 9.30.050, accompanies the application with a transfer fee in an amount set by resolution of the City Council, and the Chief of Police determines in accordance with § 9.30.090 that the transferee would be entitled to the issuance of an original permit.

C. No permit may be transferred when the Chief of Police has notified the permittee that the permit has been or may be suspended or revoked.

D. Any attempt to transfer a permit either directly or indirectly in violation of this section is hereby declared void, and the permit shall be deemed revoked.
(Ord. 953, § 2, passed 11-12-2019)

9.30.180 SUSPENSION AND REVOCATION – NOTICE.

A. Any permit issued under the terms of this chapter may be suspended or revoked by the Chief of Police when it appears to him or her that the permittee has committed any 1 or more of the acts or omissions constituting the grounds for suspension or revocation under this chapter.

B. No permit shall be revoked or suspended by virtue of this section until a hearing has been held by the Chief of Police. Written notice of the time and place of the hearing shall be served upon the person to whom the permit was granted at least 5 days prior to the date set for the hearing. The notice shall contain a brief statement of the grounds to be relied upon for revoking or suspending the permit. Notice may be given either by personal delivery to the permittee or by depositing it in the U.S. mail in a sealed envelope, postage prepaid, addressed to the permittee at the address provided by the permittee for sending of notices.
(Ord. 953, § 2, passed 11-12-2019)

9.30.190 SUSPENSION AND REVOCATION – GROUNDS.

It shall be a ground for suspension or revocation of a permit if any permittee or person, his or her agent, or employee:

A. Does any act which violates any of the grounds set forth in § 9.30.100, which sets forth the grounds for rejection of an application for a permit for the cannabis business;

B. Violates any other provision of this chapter or any local or state law, statute, rule, or regulation relating to his or her permitted activity;

C. Conducts the permitted business in a manner contrary to the peace, health, or safety of the public;

D. Fails to take reasonable measures to control the establishment's patrons' conduct resulting in disturbances, vandalism, or crowd control problems occurring inside of or outside the premises, traffic control problems, or creation of a public or private nuisance, or obstruction of the business operation of another business;

E. Violates any provision of Title 15; or

F. Violates or fails to comply with the terms and conditions of any required discretionary permit.
(Ord. 953, § 2, passed 11-12-2019)

9.30.200 SUSPENSION AND REVOCATION – APPEALS.
Any permittee aggrieved by the decision of the Chief of Police in suspending or revoking a permit may, within 10 calendar days, appeal the decision in accordance with the procedures described in Chapter 1.08. If a decision of the Chief of Police to suspend or revoke a permit is not appealed within 10 calendar days, the decision of the Chief of Police shall be final.
(Ord. 953, § 2, passed 11-12-2019)

9.30.210 SUSPENSION OR REVOCATION WITHOUT HEARING.
If any person holding a permit or acting under the authority of the permit under this chapter is convicted of a misdemeanor in any court for the violation of any law which relates to his or her permit, the Chief of Police shall revoke the permit forthwith without any further action thereof, other than giving notice of revocation to the permittee. If a permit is summarily revoked pursuant to the provisions of this section, a permittee may, within 10 calendar days, appeal the revocation in accordance with the procedures described in Chapter 1.08. During the pendency of the appeal, the permit shall be deemed suspended. If the appeal is not taken within 10 days, the decision of the Chief of Police shall be final.
(Ord. 953, § 2, passed 11-12-2019)

9.30.220 SEPARATE OFFENSE FOR EACH DAY.
Any person that violates any provision of this chapter shall be guilty of a separate offense for each and every day during any portion of which any such person commits, continues, permits, or causes a violation thereof, and shall be penalized accordingly.
(Ord. 953, § 2, passed 11-12-2019)

9.30.230 PUBLIC NUISANCE.
Any use or condition caused or permitted to exist in violation of any of the provisions of this chapter shall be and is hereby declared a public nuisance and may be abated by the City pursuant to Chapter 6.12.
(Ord. 953, § 2, passed 11-12-2019)

9.30.240 CRIMINAL PENALTIES.
Any person who violates, causes, or permits another person to violate any provision of this chapter commits a misdemeanor.
(Ord. 953, § 2, passed 11-12-2019)

18.42.057 - Cannabis Retail
In addition to the operating requirements set forth in Chapter 9.30, this Section provides location and operating requirements for cannabis retail. Chapter 9.30 contains definitions of terms used herein.

A. Conditional use. A Minor Use Permit shall be required to operate cannabis retail in accordance with Table 2-6 of Article 2.

B. Delivery services. The primary use of a cannabis retail use shall be to sell products directly to on-site customers. Sales may also be conducted by delivery. Cannabis retail uses engaging in delivery in addition to on-site sales shall be subject to the following requirements:

1. Commercial delivery to locations outside a permitted cannabis retail facility shall only be permitted in conjunction with a permitted cannabis retail facility that has a physical location and a retail storefront open to the public. A cannabis retail use shall not conduct sales exclusively by delivery. Delivery of cannabis without a storefront component shall be considered cannabis retail - delivery only, and subject to the requirements of § 18.42.059, in addition to Chapter 9.30.

2. Minor Use Permit applications for cannabis retail shall include a statement as to whether the use will include delivery of cannabis and/or cannabis products to customers located outside the cannabis retail facility. If a permitted cannabis retail use without a delivery component chooses to provide delivery services at a later date, an amendment to the Minor Use Permit shall be required.

3. If delivery services will be provided, the application shall describe the operational plan and specific extent of such service, security protocols, and how the delivery services will comply with the requirements set forth in Chapter 9.30, this Section, and State law.

C. Drive-through services. Drive-through or walk-up window services in conjunction with cannabis retail are prohibited.

D. Operational requirements. In addition to project specific conditions of approval and the requirements set forth in Chapter 9.30, cannabis retail shall comply with the following operational requirements:

1. Employees. The cannabis operator shall maintain a current register of the names of all employees employed by the cannabis retailer, and shall disclose such register for inspection by any City officer or official for purposes of determining compliance with the requirements of this Section and/or any project specific conditions of approval prescribed in the Minor Use Permit.

2. Recordkeeping. The cannabis operator shall maintain patient and sales records in accordance with State law.

3. Photo identification. No person shall be permitted to enter a cannabis retail facility without government issued photo identification. Cannabis businesses shall not provide cannabis or cannabis products to any person, whether by purchase, trade, gift or otherwise, who does not possess a valid government issued photo identification card.

4. Hours of operation. Cannabis retail may operate between the hours of 9:00 a.m. to 9:00 p.m. up to 7 days per week unless the review authority imposes more restrictive hours due to the particular circumstances of the application. The basis for any restriction on hours shall be specified in the permit. Cannabis retail uses shall only be permitted to engage in delivery services during hours that the storefront is open to the public, unless the review authority permits delivery outside these hours.

E. Accessory uses. As defined in Article 10, accessory uses are customarily incidental to, related and clearly subordinate to a primary use on the same parcel, which does not alter the primary use. Uses accessory to cannabis retail facilities may be allowable pursuant to the permitting requirements in Article 2. Accessory uses may include activities that require multiple State cannabis licenses, including, but not limited to, manufacturing, distribution, cultivation and/or processing. In no instance shall cannabis manufacturing using volatile solvents be allowable as uses accessory to cannabis retail uses.

(Ord. 952, § 2, passed 11-12-2019)

18.42.059 - Cannabis Retail - Delivery Only SHARE

In addition to the operating requirements set forth in Chapter 9.30, this Section provides location and operating requirements for cannabis retail - delivery only. Chapter 9.30 contains definitions of terms used herein.

A. Conditional use. A Minor Use Permit shall be required to operate cannabis retail - delivery only in accordance with Table 2-6 of Article 2.

B. Operational requirements. In addition to project specific conditions of approval and the requirements set forth in Chapter 9.30, cannabis retail - delivery only uses shall comply with the following operational requirements:

1. Cannabis retail - delivery only uses shall comply with the same operational requirements applicable to cannabis retail uses, as described in § 18.42.057.

2. The application shall describe the operational plan and specific extent of such service, security protocols, and how the delivery services will comply with the requirements set forth in Chapter 9.30, this Section, and State law.

(Ord. 952, § 2, passed 11-12-2019)

9.30.250 CIVIL INJUNCTION.
The violation of any provision of this chapter shall be and is hereby declared to be a public nuisance and contrary to the public interest and shall, at the discretion of the City, create a cause of action for injunctive relief.
(Ord. 953, § 2, passed 11-12-2019)

9.30.260 ADMINISTRATIVE REMEDIES.
In addition to the civil remedies and criminal penalties set forth above, any person that violates the provisions of this chapter may be subject to administrative remedies, as set forth by City ordinance.
(Ord. 953, § 2, passed 11-12-2019)

9.30.270 SEVERABILITY.
If any section, subsection, sentence, clause, or phrase of this chapter is for any reason held by a court of competent jurisdiction to be invalid or unconstitutional, the decision shall not affect the validity of the remaining portions of this chapter. The City Council of the City hereby declares that it would have passed the ordinance codified in this chapter and each section, subsection, sentence, clause, and phrase thereof irrespective of the fact that 1 or more sections, subsections, sentences, clauses, or phrases may be held invalid or unconstitutional.
(Ord. 953, § 2, passed 11-12-2019)

The Land Use Element of the City's General Plan provides the primary basis for City decisions on development applications. Privately and publicly-sponsored projects must be consistent with all parts of the Inland General Plan, but the Land Use Element is the first place to find out what type of development would be appropriate in a specific location, or what location would be suitable for a particular development type.

Suburban Residential (RS)
This designation is intended for single-family dwellings and is assigned to areas where infrastructure limitations and/or environmental constraints inhibit the establishment of urban development densities. The allowable density range is 1 to 3 units per acre.

Low Density Residential (RL)
This designation is intended for single-family residences on standard City lots in residential neighborhoods surrounding the more densely developed core of the City. With issuance of a conditional use permit, limited neighborhood-serving commercial uses are permitted, such as convenience stores, cafés, and restaurants located primarily on individual parcels or in small clusters of retail establishments. The allowable density range is 3 to 6 units per acre.

Medium Density Residential (RM)
This designation is intended for a variety of housing types, including single family homes, duplexes, triplexes, townhouses, and apartment units located in proximity to parks, schools, and public services. With issuance of a conditional use permit, limited neighborhood-serving commercial uses are permitted, such as convenience stores, cafés, and restaurants located primarily on individual parcels or in small clusters of retail establishments. The allowable density range is 6 to 12 units per acre.

High Density Residential (RH)
This designation is intended to allow a variety of higher density housing types, including townhouses, apartments, and mobile home parks on sites that are large and provide important open space or large properties where the City wishes to see creative planning and design. It is assigned primarily to larger parcels where innovative site design can provide for a mix of housing types, aesthetic and functional open space areas, and other features that enhance the development and the neighborhood. With issuance of a conditional use permit, limited neighborhood-serving commercial uses are permitted, such as convenience stores, cafés and restaurants located primarily on individual parcels or in small clusters of retail establishments. The allowable density range is 10 to 15 units per acre. Residential densities above 6 units per acre may only be permitted for projects which include open space, provide affordable housing, clustered housing, energy conservation, and/or aesthetically pleasing design features.

Very High Density Residential (RVH)
This designation is intended to allow high density multi-family housing on sites that are close to commercial areas and public services. Apartments, mobile home parks, and similar types of residential uses are allowed in this designation. With issuance of a conditional use permit, limited neighborhood-serving commercial uses are permitted, such as convenience stores, cafés, and restaurants located primarily on individual parcels or in small clusters of retail establishments. The allowable density range is 12 to 24 units per acre.

Central Business District (CBD)
This designation applies to the core of the downtown which is the civic, cultural, and commercial center of the community. Uses and site development patterns in the Central Business District are typically pedestrian-oriented. This designation is intended to accommodate government and professional offices, retail stores, theaters, and other similar uses. Residential uses on upper floors or on the ground floor at the rear of buildings are encouraged at a density of up to 40 units per net acre.

Neighborhood Commercial (CN)
This designation provides small-scale, convenience shopping and services for surrounding

residential neighborhoods. Retail and service businesses such as grocery stores, laundromats, restaurants, beauty salons, and similar types of uses are allowed in this designation.

General Commercial (CG)
The General Commercial designation is intended for a less compact and intensive type of development than found in the Central Business District. Typical land uses in this designation depend more on vehicular than pedestrian access and include automotive and service-related outlets, retail sales, hardware, paint or carpeting sales, offices, apparel stores, and food stores. Shopping centers are allowed with approval of a conditional use permit. Residential uses are permitted above the ground floor or on the ground floor at the rear of buildings at a maximum density of up to 24 units per acre.

Highway Visitor Commercial (CH)
This land use designation applies to land uses serving residents and visitors on sites which are located along Highway One and arterials at the entry points to the community. Typical uses allowed in this designation include motels and other lodging enterprises, restaurants, and retail outlets. Residential uses are permitted above the ground floor or on the ground floor at the rear of buildings at a maximum density of up to 24 units per acre.

Office Commercial (CO)
This designation is intended to serve the office and institutional needs of the community and permits such uses as professional offices, hospitals, medical clinics, and banks. Commercial uses supportive of the office and institutional uses, such as blueprint and copy shops, cafés and restaurants, pharmacies, and similar retail establishments are permitted. Residential uses are permitted at a maximum density of 24 units per acre with a conditional use permit.

Heavy Industrial (IH)
This designation is intended for a range of heavy industrial uses including manufacturing, assembly and processing, and the storage and distribution of raw materials, aggregate plants, and related heavy industrial uses which are generally incompatible with and require locations removed from residential and visitor serving uses.

Light Industrial (IL)
This designation is intended for a variety of commercial, manufacturing, wholesale and distribution, and industrial uses which do not generate a significant amount of on-site customer traffic or high levels of noise, dust, odors, or other potential off-site nuisance characteristics. Manufacturing uses are permitted provided they occur within an enclosed structure. Other uses permitted in this designation include offices ancillary to permitted uses, agricultural product sales and services, construction yards, and automobile repair shops.

SCOPE OF WORK

The proposed cannabis cultivation ordinance shall follow direction provided by City Council as described in Exhibit B and would consist of the following tasks:

1. **Project Management.** The consultant team should designate one Project Manager for this project. The project manager will be responsible for all communications with City Staff, refining the work program, monitoring the project schedule, providing regular progress reports and invoices. The Project Manager should also prepare and present the Administrative Draft before Planning Commission and Final Draft before City Council. Staff anticipates requiring a regular check-in conference call during the length of this consultation engagement to monitor progress and answer questions.
2. **Review Existing Documents.** The consultant shall review the City's Land Use and Development Code, General Plan, Municipal Code, California Code of Regulations: Title 3. Division 8. Chapter 1. Cannabis Cultivation Program, CEQA Guidelines; and other pertinent materials.
3. **Attend a Kick-Off Meeting.** The consultant shall meet with City staff to review and discuss the scope of work and schedule.
4. **Draft Report.** The consultant will submit a draft ordinance and draft report for staff review and comment. Said documents should include an analysis and relevant background data for the scope of work described herein.
5. **Final Report.** The consultant will submit a final report and revised draft ordinance that is responsive to staff comments.
6. **Presentation to Decision Makers.** The consultant shall provide a brief summary presentation to Planning Commission and City Council of the key findings as well as any recommended changes to the Land Use Plan.
7. **Electronic and Paper Copies.** The consultant shall submit both electronic and hard copies of the finished product in Microsoft Word and all GIS maps or other original software formats. Three paper copies of the final report will also be required.

Exhibit B
Fort Bragg City Council Direction Regarding Commercial Cannabis Cultivation Ordinance

The City has determined that the proposed ordinance shall require the land use "Commercial Cannabis Cultivation" to obtain Use Permit approval by the Planning Commission. As part of that process, a water supply assessment would be required in order to ensure the potential impacts to the City's water supply are adequately addressed. The ordinance shall also require that environmental review be conducted on a project-by-project basis to accurately assess the environmental impacts of each proposal.

The table below presents additional direction from Council to be incorporated into the proposed ordinance:

Consideration	Direction
Location/Zoning	To be permitted in all inland industrial zoned parcels.
Permit Requirements	Use Permit Approval, implementing regulations of the proposed ordinance and utilizing the policies established by FBMC Chapter 9.30 for cannabis businesses.
Fees	No sales tax, nor additional taxation specifically for cannabis, shall be collected. Standard fees, as identified by the City's Fee Schedule, in addition to fees associated with building permits as determined by Mendocino County will apply.
Design	No specific design requirements for commercial cannabis cultivation businesses has been identified. New development and significant remodels shall be subject to a Design Review Permit process and reflect design standards as outlined in Fort Bragg's Citywide Design Guidelines, Chapter 3: Industrial Design Guidelines.
Site Standards	Development site standards shall comply with those set forth in the City's Inland Land Use and Development Code for Light Industrial (IL) and/or Heavy Industrial (IH) zoning.
Operating Characteristics	Submission of a plan to address odor and other public nuisances that may derive from the cultivation facility.
Water	City ordinances allow the use of groundwater for agricultural and industrial uses, which would allow commercial cannabis cultivators to use wells for irrigation. Connection to municipal water is required for all domestic uses. Municipal water can also be utilized for cultivation uses.

Lemos, June

From: noreply@granicusideas.com
Sent: Monday, October 12, 2020 11:04 AM
To: Lemos, June
Subject: New eComment for City Council - Via Video Conference

New eComment for City Council - Via Video Conference

Jacob Patterson submitted a new eComment.

Meeting: City Council - Via Video Conference

Item: 8A. 20-871 Receive Report and Community Development Committee Recommendations and Provide Direction to Staff Regarding the Scope of Work in a Request for Proposals for Professional Services to Prepare a Commercial Cannabis Cultivation Ordinance for the Inland Area of Fort Bragg

eComment: see attached

View and Analyze eComments

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This is overkill for what can be a simple and efficient staff project, particularly when the City is adding planning staff and has a fill-time employee with a planning background charged with housing and economic development efforts. With the FAR increase as a separate project, updating the City's land use tables to require use permits for cannabis cultivation in industrial zoning districts should require a total of no more than 8-12 hours of actual work plus the public hearings. In fact, it might actually take more time to go through the process of farming this out than it would have taken to actually draft the ordinance and staff report! Considering this, we are better served by staff doing this work in-house, which will also help the General Fund because the City can fund the project using General Plan Maintenance Fee funds for what would otherwise be staff time billed to the General Fund. This fiscal benefit is lost by using those special funds to pay for an outside consultant, likely at far greater expense than the staff time equivalent. This is particularly true considering the City is proposing to apply a CEQA exemption and subject all future projects to a site-specific CEQA analysis thus significantly shortening the amount of time necessary to prepare the draft ordinance and staff report called for under the scope of work. This proposal is fiscally irresponsible and brings into question the actual value brought to the City by retaining staff resources who then proceed to farm out the substantive work and serve as little more than glorified project managers coordinating consultants. We can and should do better with the City’s limited resources.

From:	Evan Mills
To:	Lemos, June
Subject:	Can you show me where to post some comments?
Date:	Tuesday, October 13, 2020 3:23:08 PM
Attachments:	Energy-use-by-the-indoor-cannabis-industry.pdf cannabis-carbon-footprint.pdf

---

Hi June,

I noticed that there is a City Council meeting tonight about cannabis cultivation. There are big concerns about the carbon footprint of energy used that most policymakers aren't very aware of. I've done a couple of major studies on this that I'd like to share.

I went to the link marked for comments
https://cityfortbragg.granicusideas.com/meetings/1031-special-city-council-closed-session-via-video-conference/agenda_items/5f84e02424439894fa021dc8-1-public-comments-on-closed-session-items

... hoping to post there ... but there is no place to enter anything.

Please advise.

I'm attaching the two items, and I have a LinkedIN post that summarizes it here:
https://www.linkedin.com/pulse/energy-use-indoor-cannabis-industry-inconvenient-truths-evan-mills

Thanks,
~ Evan Mills

Energy Policy 46 (2012) 58–67

Contents lists available at SciVerse ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

The carbon footprint of indoor *Cannabis* production

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ARTICLE INFO

Article history:
Received 7 September 2011
Accepted 10 March 2012
Available online 17 April 2012

Keywords:
Energy
Buildings
Horticulture

ABSTRACT

The emergent industry of indoor *Cannabis* production – legal in some jurisdictions and illicit in others – utilizes highly energy intensive processes to control environmental conditions during cultivation. This article estimates the energy consumption for this practice in the United States at 1% of national electricity use, or $6 billion each year. One average kilogram of final product is associated with 4600 kg of carbon dioxide emissions to the atmosphere, or that of 3 million average U.S. cars when aggregated across all national production. The practice of indoor cultivation is driven by criminalization, pursuit of security, pest and disease management, and the desire for greater process control and yields. Energy analysts and policymakers have not previously addressed this use of energy. The unchecked growth of electricity demand in this sector confounds energy forecasts and obscures savings from energy efficiency programs and policies. While criminalization has contributed to the substantial energy intensity, legalization would not change the situation materially without ancillary efforts to manage energy use, provide consumer information via labeling, and other measures. Were product prices to fall as a result of legalization, indoor production using current practices could rapidly become non-viable.
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1. Introduction

On occasion, previously unrecognized spheres of energy use come to light. Important historical examples include the pervasive air leakage from ductwork in homes, the bourgeoning energy intensity of computer datacenters, and the electricity "leaking" from billions of small power supplies and other equipment. Intensive periods of investigation, technology R&D, and policy development gradually ensue in the wake of these discoveries. The emergent industry of indoor *Cannabis* production appears to have joined this list.[1]

This article presents a model of the modern-day production process – based on public-domain sources – and provides first-order national scoping estimates of the energy use, costs, and greenhouse-gas emissions associated with this activity in the United States. The practice is common in other countries but a global assessment is beyond the scope of this report.

2. Scale of activity

The large-scale industrialized and highly energy-intensive indoor cultivation of *Cannabis* is a relatively new phenomenon, driven by criminalization, pursuit of security, pest and disease management, and the desire for greater process control and yields (U.S. Department of Justice, 2011a; World Drug Report, 2009). The practice occurs across the United States (Hudson, 2003; Gettman, 2006). The 415,000 indoor plants eradicated by authorities in 2009 (and 10.3 million including outdoor plantations) (U.S. Department of Justice, 2011a, b) presumably represent only a small fraction of total production.

Cannabis cultivation is today legal in 15 states plus the District of Columbia, although it is not federally sanctioned (Peplow, 2005). It is estimated that 24.8 million Americans are eligible to receive a doctor's recommendation to purchase or cultivate *Cannabis* under existing state laws, and approximately 730,000 currently do so (See Change Strategy, 2011). In California alone, 400,000 individuals are currently authorized to cultivate *Cannabis* for personal medical use, or sale for the same purpose to 2100 dispensaries (Harvey, 2009). Approximately 28.5 million people in the United States are repeat consumers, representing 11% of the population over the age of 12 (U.S. Office of National Drug Control Policy, 2011).

Cultivation is also substantial in Canada. An estimated 17,500 "grow" operations in British Columbia (typically located in residential buildings) are equivalent to 1% of all dwelling units Province-wide, with an annual market value of $7 billion (Easton, 2004).

Official estimates of total U.S. *Cannabis* production varied from 10,000 to 24,000 metric ton per year as of 2001, making it the nation's largest crop by value at that time (Hudson, 2003; Gettman, 2006). A recent study estimated national production at far higher levels (69,000 metric ton) (HIDTA, 2010). Even at the

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[1] This article substantively updates and extends the analysis described in Mills (2011).

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http://dx.doi.org/10.1016/j.enpol.2012.03.023

lower end of this range (chosen as the basis of this analysis), the level of activity is formidable and increasing with the demand for *Cannabis*.

No systematic efforts have previously been made to estimate the aggregate energy use of these activities.

3. Methods and uncertainties

This analysis is based on a model of typical *Cannabis* production, and the associated energy use for cultivation and transportation based on market data and first-principals buildings energy end-use modeling techniques. Data sources include equipment manufacturer data, trade media, the open literature, and interviews with horticultural equipment vendors. All assumptions used in the analysis are presented in Appendix A. The resulting normalized (per-kilogram) energy intensity is driven by the effects of indoor-environmental conditions, production processes, and equipment efficiencies.

Considerable energy use is also associated with transportation, both for workers and for large numbers of small-quantities transported and then redistributed over long distances before final sale.

This analysis reflects typical practices, and is thus intended as a "central estimate". While processes that use less energy on a per-unit-yield basis are possible, much more energy-intensive scenarios also occur. Certain strategies for lowering energy inputs (e.g., reduced illumination levels) can result in lower yields, and thus not necessarily reduce the ultimate energy-intensity per unit weight. Only those strategies that improve equipment and process energy efficiency, while not correspondingly attenuating yields would reduce energy intensity.

Due to the proprietary and often illicit nature of Cannabis cultivation, data are intrinsically uncertain. Key uncertainties are total production and the indoor fraction thereof, and the corresponding scaling up of relatively well-understood intensities of energy use per unit of production to state or national levels could result in 50% higher or lower aggregate results. Greenhouse-gas emissions estimates are in turn sensitive to the assumed mix of on- and off-grid power production technologies and fuels, as off-grid production (almost universally done with diesel generators) can – depending on the prevailing fuel mix in the grid – have substantially higher emissions per kilowatt-hour than grid power. Final energy costs are a direct function of the aforementioned factors, combined with electricity tariffs, which vary widely geographically and among customer classes. The assumptions about vehicle energy use are likely conservative, given the longer-range transportation associated with interstate distribution.

Some localities (very cold and very hot climates) will see much larger shares of production indoors, and have higher space-conditioning energy demands than the typical conditions assumed here. More in-depth analyses could explore the variations introduced by geography and climate, alternate technology configurations, and production techniques.

4. Energy implications

Accelerated electricity demand growth has been observed in areas reputed to have extensive indoor *Cannabis* cultivation. For example, following the legalization of cultivation for medical purposes (Phillips, 1998; Roth, 2005; Clapper et al., 2010) in California in 1996, Humboldt County experienced a 50% rise in per-capita residential electricity use compared to other parts of the state (Lehman and Johnstone, 2010).

Aside from sporadic news reports (Anderson, 2010; Quinones, 2010), policymakers and consumers possess little information on the energy implications of this practice. A few prior studies tangentially mentioning energy use associated with *Cannabis* production used cursory methods and under-estimate energy use significantly (Plecas et al., 2010 and Caulkins, 2010).

Driving the large energy requirements of indoor production facilities are lighting levels matching those found in hospital operating rooms (500-times greater than recommended for reading) and 30 hourly air changes (6-times the rate in high-tech laboratories, and 60-times the rate in a modern home). Resulting power densities are on the order of 2000 W/m^2, which is on a par with that of modern datacenters. Indoor carbon dioxide (CO_2) levels are often raised to 4-times natural levels in order to boost plant growth. However, by shortening the growth cycle, this practice may reduce final energy intensity.

Specific energy uses include high-intensity lighting, dehumidification to remove water vapor and avoid mold formation, space heating or cooling during non-illuminated periods and drying, pre-heating of irrigation water, generation of carbon dioxide by burning fossil fuel, and ventilation and air-conditioning to remove waste heat. Substantial energy inefficiencies arise from air cleaning, noise and odor suppression, and inefficient electric generators used to avoid conspicuous utility bills. So-called "grow houses" – residential buildings converted for *Cannabis* production – can contain 50,000 to 100,000 W of installed lighting power (Brady, 2004). Much larger facilities are also used.

Based on the model developed in this article, approximately 13,000 kW/h/year of electricity is required to operate a standard production module (a $1.2 \times 1.2 \times 2.4$ m ($4 \times 4 \times 8$ ft) chamber). Each module yields approximately 0.5 kg (1 pound) of final product per cycle, with four or five production cycles conducted per year. A single grow house can contain 10 to 100 such modules.

To estimate national electricity use, these normalized values are applied to the lower end of the range of the aforementioned estimated production (10,000 t per year), with one-third of the activity takes place under indoor conditions. This indicates electricity use of about 20 TW/h/year nationally (including off-grid production). This is equivalent to that of 2 million average U.S. homes, corresponding to approximately 1% of national electricity consumption — or the output of 7 large electric power plants (Koomey et al., 2010). This energy, plus associated fuel uses (discussed below), is valued at $6 billion annually, with associated emissions of 15 million metric ton of CO_2 — equivalent to that of 3 million average American cars (Fig. 1 and Tables 1–3.)

Fuel is used for several purposes, in addition to electricity. The carbon dioxide injected into grow rooms to increase yields is produced industrially (Overcash et al., 2007) or by burning propane or natural gas within the grow room contributes about 1–2% to the carbon footprint and represents a yearly U.S. expenditure of $0.1 billion. Vehicle use associated with production and distribution contributes about 15% of total emissions, and represents a yearly expenditure of $1 billion. Off-grid diesel- and gasoline-fueled electric generators have per-kilowatt-hour emissions burdens that are 3- and 4-times those of average grid electricity in California. It requires 70 gallon of diesel fuel to produce one indoor *Cannabis* plant (or the equivalent yield per unit area), or 140 gallon with smaller, less-efficient gasoline generators.

In California, the top-producing state, indoor cultivation is responsible for about 3% of all electricity use, or 9% of household use.[2] This corresponds to the electricity use of 1 million average California homes, greenhouse-gas emissions equal to those from 1 million average cars, and energy expenditures of $3 billion per

[2] This is somewhat higher than estimates previously made for British Columbia, specifically, 2% of total Provincial electricity use or 6% of residential use (Garis, 2008; Bellett, 2010).

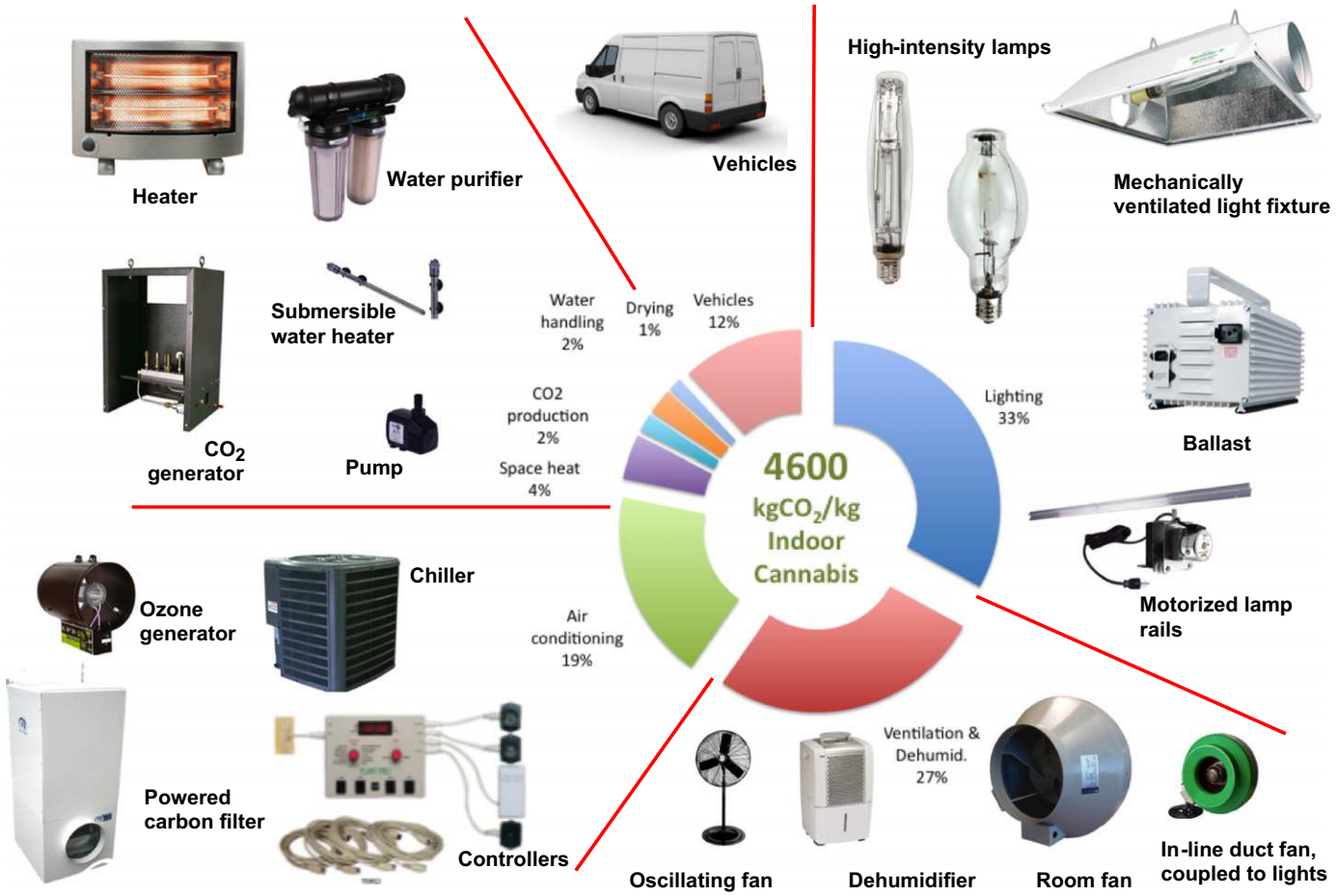

Fig. 1. Carbon footprint of indoor Cannabis production.

Table 1
Carbon footprint of indoor *Cannabis* production, by end use (average U.S conditions).

	Energy intensity (kW/h/kg yield)	Emissions factor ($kgCO_2$ emissions/kg yield)	
Lighting	2283	1520	33%
Ventilation & dehumid.	1848	1231	27%
Air conditioning	1284	855	19%
Space heat	304	202	4%
CO_2 injected to increase foliage	93	82	2%
Water handling	173	115	2%
Drying	90	60	1%
Vehicles		546	12%
Total	6074	4612	100%

Note: The calculations are based on U.S.-average carbon burdens of 0.666 kg/kW/h. "CO_2 injected to increase foliage" represents combustion fuel to make on-site CO_2. Assumes 15% of electricity is produced in off-grid generators.

year. Due to higher electricity prices and cleaner fuels used to make electricity, California incurs 50% of national energy costs but contributes only 25% of national CO_2 emissions from indoor *Cannabis* cultivation.

From the perspective of individual consumers, a single *Cannabis* cigarette represents 1.5 kg (3 pounds) of CO_2 emissions, an amount equal to driving a 44 mpg hybrid car 22 mile or running a 100-watt light bulb for 25 h, assuming average U.S. electricity emissions. The electricity requirement for one single production module equals that of an average U.S. home and twice that of an average California home. The added electricity use is equivalent to running about 30 refrigerators.

From the perspective of a producer, the national-average annual energy costs are approximately $5500 per module or $2500 per kilogram of finished product. This can represent half the wholesale value of the finished product (and a substantially lower portion at retail), depending on local conditions. For average U.S. conditions, producing one kilogram of processed *Cannabis* results in 4600 kg of CO_2 emissions to the atmosphere (and 50% more when off-grid diesel power generation is used), a very significant carbon footprint. The emissions associated with one kilogram of processed *Cannabis* are equivalent to those of driving across country 11 times in a 44-mpg car.

These results reflect typical production methods. Much more energy-intensive methods occur, e.g., rooms using 100% recirculated air with simultaneous heating and cooling, hydroponics, or energy end uses not counted here such as well-water pumps and water purification systems. Minimal information and consideration of energy use, coupled with adaptations for security and privacy (off-grid generation, no daylighting, odor and noise control) lead to particularly inefficient configurations and correspondingly elevated energy use and greenhouse-gas emissions.

The embodied energy of inputs such as soil, fertilizer, water, equipment, building materials, refinement, and retailing is not estimated here and should be considered in future assessments. The energy use for producing outdoor-grown *Cannabis* (approximately two-thirds of all production) is also not estimated here.

Table 2
Equivalencies.

Indoor Cannabis production consumes…	**3%**	of California's total electricity, and	**9%**	of California's household electricity	**1%**	of total U.S. electricity, and	2% of U.S. household electricity
U.S. Cannabis production & distribution energy costs…	**$ 6**	Billion, and results in the emissions of	**15**	Million tonnes per year of greenhouse gas emissions (CO_2)	Equal to the emissions of	**3**	million average cars
U.S. electricity use for Cannabis production is equivalent to that of…	**1.7**	Million average U.S. homes	**or**	**7**	Average U.S. power plants		
California Cannabis production and distribution energy costs...	**$ 3**	Billion, and results in the emissions of	**4**	Million tonnes per year of greenhouse gas emissions (CO_2)	Equal to the emissions of	**1**	Million average cars
California electricity use for Cannabis production is equivalent to that of…	**1**	Million average California homes					
A typical 4 × 4 × 8-ft production module, accomodating four plants at a time, consumes as much electricity as…	**1**	Average U.S. homes, or	**2**	Average California homes	or	**29**	Average new refrigerators
Every 1 kilogram of Cannabis produced using national-average grid power results in the emissions of…	**4.3**	Tonnes of CO_2	Equivalent to	**7**	Cross-country trips in a 5.3 l/100 km (44 mp g) car		
Every 1 kg of Cannabis produced using a prorated mix of grid and off-grid generators results in the emissions of…	**4.6**	Tonnes of CO_2	Equivalent to	**8**	Cross-country trips in a 5.3 l/100 km (44 mp g) car		
Every 1 kg of Cannabis produced using off-grid generators results in the emissions of…	**6.6**	Tonnes of CO_2	Equivalent to	**11**	Cross-country trips in a 5.3 l/100 km (44 mp g) car		
Transportation (wholesale+retail) consumes…	**226**	Liters of gasoline per kg	or	**$ 1**	Billion dollars annually, and	**546**	Kilograms of CO_2 per kilogram of final product
One Cannabis cigarette is like driving…	**37**	km in a 5.3 l/100 km (44 mpg) car	Emitting about	**2**	kg of CO_2, which is equivalent to operating a 100-watt light bulb for	**25**	Hours
Of the total wholesale price…	**49%**	Is for energy (at average U.S. prices)					

If improved practices applicable to commercial agricultural greenhouses are any indication, such large amounts of energy are not required for indoor *Cannabis* production.[3] The application of cost-effective, commercially-available efficiency improvements to the prototypical facility modeled in this article could reduce energy intensities by at least 75% compared to the typical-efficiency baseline. Such savings would be valued at approximately $40,000/year for a generic 10-module operation (at California energy prices and $10,000/year at U.S. average prices) (Fig. 2(a)–(b). These estimated energy use reductions reflect practices that are commonplace in other contexts such as more efficient components and controls (lights, fans, space-conditioning), use of daylight, optimized air-handling systems, and relocation of heat-producing equipment out of the cultivation room. Moreover, strain choice alone results in a factor-of-two difference in yields per unit of energy input (Arnold, 2011).

[3] See, e.g., this University of Michigan resource: http://www.hrt.msu.edu/energy/Default.htm

5. Energy intensities in context

Policymakers and other interested parties will rightfully seek to put these energy indicators in context with other activities in the economy.

One can readily identify other energy end-use activities with far greater impacts than that of *Cannabis* production. For example, automobiles are responsible for about 33% of U.S. greenhouse-gas emissions (USDOE, 2009), which is100-times as much as those produced by indoor *Cannabis* production (0.3%). The approximately 20 TW/h/year estimated for indoor *Cannabis* production is about one/third that of U.S. data centers (US EPA, 2007a, 2007b), or one-seventh that of U.S. household refrigerators (USDOE, 2008). These shares would be much higher in states where *Cannabis* cultivation is concentrated (e.g., one half that of refrigerators in California (Brown and Koomey, 2002)).

On the other hand, this level of energy use is high in comparision to that used for other indoor cultivation practices, primarily owing to the lack of daylighting. For comparison, the energy intensity of Belgian greenhouses is estimated at approximately 1000 MJ/m^2 (De Cock and Van Lierde, No date), or about 1% that estimated here for indoor *Cannabis* production.

Table 3
Energy indicators (average U.S. conditions).

	per cycle, per production module	per year, per production module	
Energy use			
Connected load		3,225	(watts/module)
Power density		2,169	(watts/m^2)
Elect	2756	12,898	(kW/h/module)
Fuel to make CO_2	0.3	1.6	(GJ)
Transportation fuel	27	127	(Gallons
On-grid results			
Energy cost	846	3,961	$/module
Energy cost		1,866	$/kg
Fraction of wholesale price		47%	
CO_2 emissions	1936	9,058	kg
CO_2 emissions		4,267	kg/kg
Off-grid results (diesel)			
Energy cost	1183	5,536	$/module
Energy cost		2,608	$/kg
Fraction of wholesale price		65%	
CO_2 emissions	2982	13,953	kg
CO_2 emissions		6,574	kgCO_2/kg
Blended on/off grid results			
Energy cost	897	4,197	$/module
Energy cost		1,977	$/kg
Fraction of wholesale price		49%	
CO_2 emissions	2093	9,792	kg
CO_2 emissions		4,613	kgCO_2/kg
Of which, indoor CO_2 production	9	42	kgCO_2
Of which, vehicle use			
Fuel use			
During production		79	Liters/kg
Distribution		147	Liters/kg
Cost			
During production		77	$/kg
Distribution		143	$/kg
Emissions			
During production		191	kgCO_2/kg
Distribution		355	kgCO_2/kg

Energy intensities can also be compared to those of other sectors and activities.

- Pharmaceuticals — Energy represents 1% of the value of U.S. pharmaceutical shipments (Galitsky et al., 2008) versus 50% of the value of Cannabis wholesale prices. The U.S. "Pharma" sector uses $1 billion/year of energy; Indoor Cannabis uses $6 billion.
- Other industries — Defining "efficiency" as how much energy is required to generate economic value, Cannabis comes out the highest of all 21 industries (measured at the three-digit SIC level). At ~20 MJ per thousand dollars of shipment value (wholesale price), Cannabis is followed next by paper (~14), nonmetallic mineral products (~10), primary metals (~8), petroleum and coal products (~6), and then chemicals (~5) (Fig. 3). However, energy intensities are on a par with *Cannabis* in various subsectors (e.g., grain milling, wood products, rubber) and exceed those of *Cannabis* in others (e.g., pulp mills).
- Alcohol — The energy used to produce one marijuana cigarette would also produce 18 pints of beer (Galitsky et al., 2003).
- Other building types — Cannabis production requires 8-times as much energy per square foot as a typical U.S. commercial building (4x that of a hospital and 20x that of a building for religious worship), and 18-times that of an average U.S. home (Fig. 4).

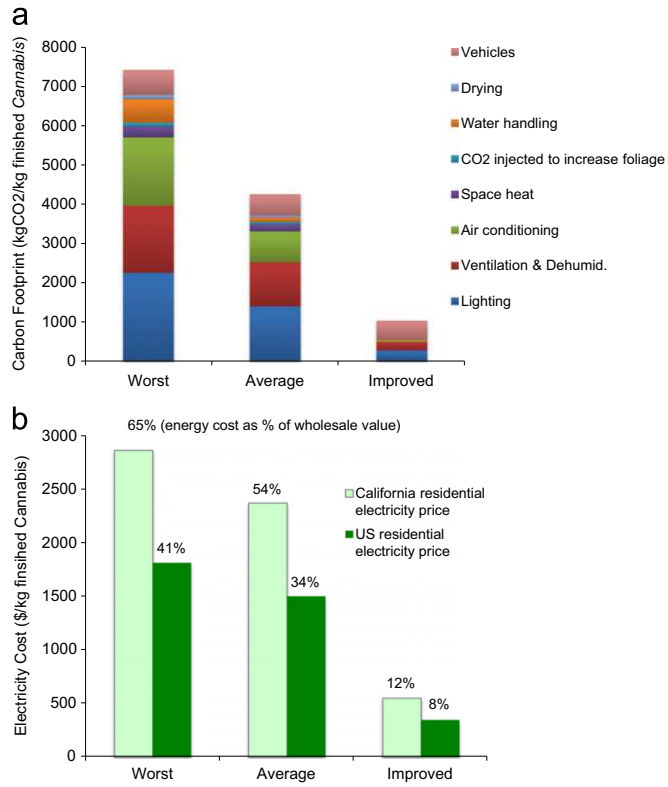

Fig. 2. Carbon footprint and energy cost for three levels of efficiency. (a) Indoor cannabis: carbon footprint. (b) Indoor cannabis: electricity cost. Assumes a wholesale price of $4400/kg. Wholesale prices are highly variable and poorly documented.

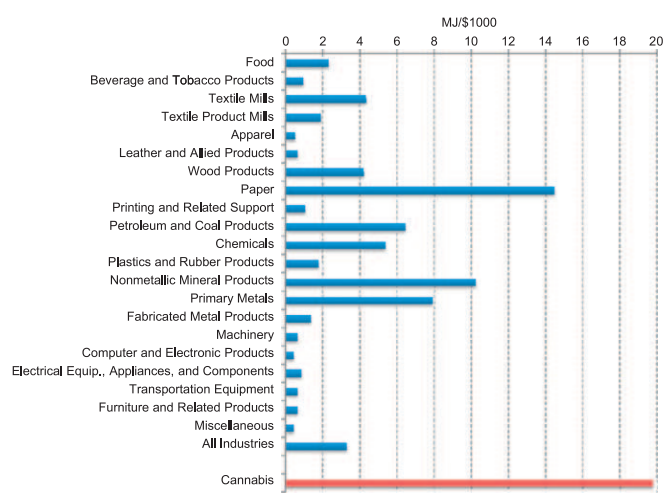

Fig. 3. Comparative energy intensities, by sector (2006).

6. Outdoor cultivation

Shifting cultivation outdoors can nearly eliminate energy use for the cultivation process. Many such operations, however, require water pumping as well as energy-assisted drying techniques. Moreover, vehicle transport during production and distribution remains part of the process, more so than for indoor operations.

A common perception is that the potency of *Cannabis* produced indoors exceeds that of that produced outdoors, leading

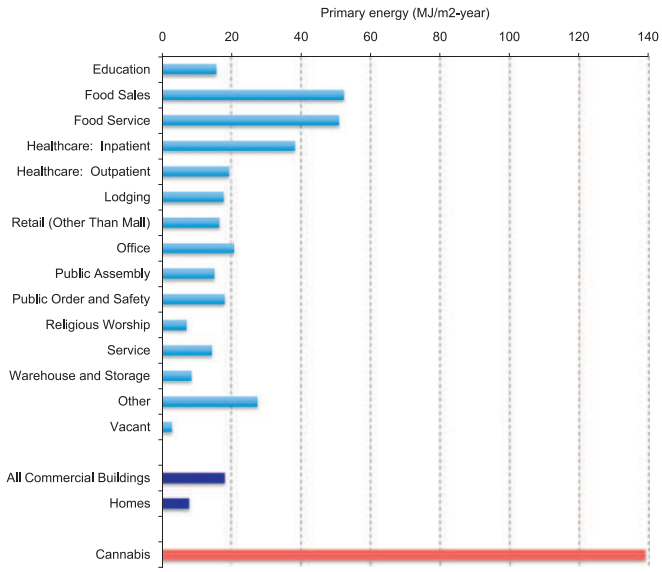

Fig. 4. Comparative energy intensities, by U.S. building type (2003).

consumers to demand *Cannabis* produced indoors. Federal sources (National Drug Intelligence Center, 2005) as well as independent testing laboratories (Kovner, 2011) actually find similar potencies when best practices are used.

Illegal clearing of land is common for multi-acre plantations, and, depending on the vegetation type, can accordingly mobilize greenhouse-gas emissions. Standing forests (a worst-case scenario) hold from 125 to 1500 t of CO_2 per hectare, depending on tree species, age, and location (National Council for Air and Soil Improvement, 2010). For biomass carbon inventories of 750 t/ha and typical yields (5000 kg/ha) (UNODC, 2009), associated biomass-related CO_2 emissions would be on the order of 150 kg CO_2/kg *Cannabis* (for only one harvest per location), or 3% of that associated with indoor production. These sites typically host on the order of 10,000 plants, although the number can go much higher (Mallery, 2011). When mismanaged, the practice of outdoor cultivation imposes multiple environmental impacts aside from energy use. These include deforestation; destruction of wetlands, runoff of soil, pesticides, insecticides, rodenticides, and human waste; abandoned solid waste; and unpermitted impounding and withdrawals of surface water (Mallery, 2011; Revelle, 2009). These practices can compromise water quality, fisheries, and other ecosystem services.

7. Policy considerations

Current indoor *Cannabis* production and distribution practices result in prodigious energy use, costs, and unchecked greenhouse-gas pollution. While various uncertainties exist in the analysis, the overarching qualitative conclusions are robust. More in-depth analysis and greater transparency of the energy impacts of this practice could improve decision-making by policymakers and consumers alike.

There is little, if any, indication that public policymakers have incorporated energy and environmental considerations into their deliberations on *Cannabis* production and use. There are additional adverse impacts of the practice that merit attention, including elevated moisture levels associated with indoor cultivation that can cause extensive damage to buildings,[4] as well as electrical fires caused by wiring out of compliance with safety codes (Garis, 2008). Power theft is common, transferring those energy costs to the general public (Plecas et al., 2010). As noted above, simply shifting production outdoors can invoke new environmental impacts if not done properly.

Energy analysts have also not previously addressed the issue. Aside from the attention that any energy use of this magnitude normally receives, the hidden growth of electricity demand in this sector confounds energy forecasts and obscures savings from energy efficiency programs and policies. For example, Auffhammer and Aroonruengsawat (2010) identified a

Table A1
Configuration, environmental conditions, set-points.

Production parameters		
Growing module	1.5	m^2 (excl. walking area)
Number of modules in a room	10	
Area of room	22	m^2
Cycle duration	78	days
Production continuous throughout the year	4.7	cycles
Illumination	Leaf phase	Flowering phase
Illuminance	25 klux	100 klux
Lamp type	Metal halide	High-pressure sodium
Watts/lamp	600	1000
Ballast losses (mix of magnetic & digital)	13%	0.13
Lamps per growing module	1	1
Hours/day	18	12
Days/cycle	18	60
Daylighting	None	none
Ventilation		
Ducted luminaires with "sealed" lighting compartment	150	CFM/1000 W of light (free flow)
Room ventilation (supply and exhaust fans)	30	ACH
Filtration	Charcoal filters on exhaust; HEPA on supply	
Oscilating fans: per module, while lights on	1	
Water		
Application	151	liters/room-day
Heating	Electric submersible heaters	
Space conditioning		
Indoor setpoint — day	28	C
Indoor setpoint — night	20	C
AC efficiency	10	SEER
Dehumidification	7x24	hours
CO_2 production — target concentration (mostly natural gas combustion in space)	1500	ppm
Electric space heating	When lights off to maintain indoor setpoint	
Target indoor humidity conditions	40–50%	
Fraction of lighting system heat production removed by luminaire ventilation	30%	
Ballast location	Inside conditioned space	
Drying		
Space conditioning, oscillating fans, maintaining 50% RH, 70–80F	7	Days
Electricity supply		
grid	85%	
grid-independent generation (mix of diesel, propane, and gasoline)	15%	

[4] For observations from the building inspectors community, see http://www.nachi.org/marijuana-grow-operations.htm

Table A2
Assumptions and conversion factors.

Service levels		
Illuminance*	25–100	1000 lux
Airchange rates*	30	Changes per hour
Operations		
Cycle duration**	78	Days
Cycles/year**	4.7	Continuous production
Airflow**	96	Cubic feet per minute, per module
Lighting		
Leafing phase		
Lighting on-time*	18	hrs/day
Duration*	18	days/cycle
Flowering phase		
Lighting on-time*	12	hrs/day
Duration*	60	days/cycle
Drying		
Hours/day*	24	hrs
Duration*	7	days/cycle
Equipment		
Average air-conditioning age	5	Years
Air conditioner efficiency [Standards increased to SEER 13 on 1/23/2006]	10	SEER
Fraction of lighting system heat production removed by luminaire ventilation	0.3	
Diesel generator efficiency*	27%	55 kW
Propane generator efficiency*	25%	27 kW
Gasoline generator efficiency*	15%	5.5 kW
Fraction of total prod'n with generators*	15%	
Transportation: Production phase (10 modules)	25	Miles roundtrip
Daily service (1 vehicle)	78	Trips/cycle. Assume 20% live on site
Biweekly service (2 vehicles)	11.1	Trips/cycle
Harvest (2 vehicles)	10	Trips/cycle
Total vehicle miles**	2089	Vehicle miles/cycle
Transportation: Distribution		
Amount transported wholesale	5	kg per trip
Mileage (roundtrip)	1208	km/cycle
Retail (0.25oz × 5 miles roundtrip)	5668	Vehicle-km/cycle
Total**	6876	Vehicle-km/cycle
Fuel economy, typical car [a]	10.7	l/100 km
Annual emissions, typical car [a]	5195	$kgCO_2$
	0	$kgCO_2$/mile
Annual emissions, 44-mpg car**	2,598	$kgCO_2$
	0.208	$kgCO_2$/mile
Cross-country U.S. mileage	4493	km
Fuels		
Propane [b]	25	MJ/liter
Diesel [b]	38	MJ/liter
Gasoline [b]	34	MJ/liter
Electric generation mix*		
Grid	85%	share
Diesel generators	8%	share
Propane generators	5%	share
Gasoline generators	2%	share
Emissions factors		
Grid electricity — U.S. [c]	0.609	$kgCO_2$/kW/h
Grid electricity — CA [c]	0.384	$kgCO_2$/kW/h
Grid electricity — non-CA U.S. [c]	0.648	$kgCO_2$/kW/h
Diesel generator**	0.922	$kgCO_2$/kW/h
Propane generator**	0.877	$kgCO_2$/kW/h
Gasoline generator**	1.533	$kgCO_2$/kW/h
Blended generator mix**	0.989	$kgCO_2$/kW/h
Blended on/off-grid generation — CA**	0.475	$kgCO_2$/kW/h
Blended on/off-grid generation — U.S.**	0.666	$kgCO_2$/kW/h
Propane combustion	63.1	$kgCO_2$/MBTU
Prices		
Electricity price — grid (California — PG&E) [d]	0.390	per kW/h (Tier 5)
Electricity price — grid (U.S.) [e]	0.247	per kW/h
Electricity price — off-grid**	0.390	per kW/h
Electricity price — blended on/off — CA**	0.390	per kW/h
Electricity price — blended on/off — U.S.**	0.268	per kW/h
Propane price [f]	0.58	$/liter
Gasoline price — U.S. average [f]	0.97	$/liter
Diesel price — U.S. average [f]	1.05	$/liter

Table A2 (*continued*)

Wholesale price of Cannabis [g]	4,000	$/kg
Production		
Plants per production module*	4	
Net production per production module [h]	0.5	kg/cycle
U.S. production (2011) [i]	10,000	metric tonnes/y
California production (2011) [i]	3,902	metric tonnes/y
Fraction produced indoors [i]	33%	
U.S. indoor production modules**	1,570,399	
Calif indoor production modules**	612,741	
Cigarettes per kg**	3,000	
Other		
Average new U.S. refrigerator	450	kW/h/year
	173	$kgCO_2$/year (U.S. average)
Electricity use of a typical U.S. home — 2009 [j]	11,646	kW/h/year
Electricity use of a typical California home — 2009 [k]	6,961	kW/h/year

Notes:
* Trade and product literature; interviews with equipment vendors.
** Calculated from other values.
Notes for Table A2.
[a]. U.S. Environmental Protection Agency., 2011.
[b]. *Energy conversion factors,* U.S. Department of Energy, http://www.eia.doe.gov/energyexplained/index.cfm?page=about_energy_units, [Accessed February 5, 2011].
[c]. United States: (USDOE 2011); California (Marnay et al., 2002).
[d]. Average prices paid in California and other states with inverted-block tariffs are very high because virtually all consumption is in the most expensive tiers. Here the PG&E residential tariff as of 1/1/11, Tier 5 is used as a proxy for California http://www.pge.com/tariffs/ResElecCurrent.xls, (Accessed February 5, 2011). In practice a wide mix of tariffs apply, and in some states no tier structure is in place, or the proportionality of price to volume is nominal.
[e]. State-level residential prices, weighted by *Cannabis* production (from Gettman. 2006) with actual tariffs and U.S. Energy Information Administration, "Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State", http://www.eia.doe.gov/electricity/epm/table5_6_a.html, (Accessed February 7, 2011)
[f]. U.S. Energy Information Administration, Gasoline and Diesel Fuel Update (as of 2/14/2011) – see http://www.eia.gov/oog/info/gdu/gasdiesel.asp Propane prices – http://www.eia.gov/dnav/pet/pet_pri_prop_a_EPLLPA_PTA_dpgal_m.htm, (Accessed April 3, 2011).
[g]. Montgomery, 2010.
[h]. Toonen et al., 2006); Plecas et al., 2010.
[i]. *Total Production*: The lower value of 10,000 t per year is conservatively retained. Were this base adjusted to 2011 values using 10.9%/year net increase in number of consumers between 2007 and 2009 per U.S. Department of Health and Human Services (2010), the result would be approximately 17 million tonnes of total production annually (indoor and outdoor). *Indoor Share of Total Production*: The three-fold changes in potency over the past two decades, reported by federal sources, are attributed at least in part to the shift towards indoor cultivation See http://www.justice.gov/ndic/pubs37/37035/national.htm and (Hudson, 2003). A weighted-average potency of 10% THC (U.S. Office of Drug Control Policy, 2010) reconciled with assumed 7.5% potency for outdoor production and 15% for indoor production implies 33.3%::67.7% indoor::outdoor production shares. For reference, as of 2008, 6% of eradicated plants were from indoor operations, which are more difficult to detect than outdoor operations. A 33% indoor share, combined with per-plant yields from Table 2, would correspond to a 4% eradication success rate for the levels reported (415,000 indoor plants eradicated in 2009) by the U.S. Drug Enforcement Agency (http://www.justice.gov/dea/programs/marijuana.htm). Assuming 400,000 members of medical Cannabis dispensaries in California (each of which is permitted to cultivate), and 50% of these producing in the generic 10-module room assumed in this analysis, output would slightly exceed this study's estimate of total statewide production. In practice, the vast majority of indoor production is no doubt conducted outside of the medical marijuana system.
[j]. Total U.S. electricity sales: U.S. energy information administration, "retail sales of electricity to ultimate customers: Total by end-use sector" http://www.eia.gov/cneaf/electricity/epm/table5_1.html, (Accessed March 5, 2011)
[k]. California Energy Commission, 2009; 2011.

statistically significant, but unexplained, increase in the growth rate for residential electricity in California during the years when indoor *Cannabis* production grew as an industry (since the mid-1990s).

Table A3
Energy model.

ELECTRICITY	Energy type	Penetration	Rating (Watts or %)	Number of 4 × 4 × 8-ft production modules served	Input energy per module	Units	Hours/day (leaf phase)	Hours/day (flower phase)	Days/cycle (leaf phase)	Days/cycle (flower phase)	kW/h/cycle	kW/h/year per production module
Light												
Lamps (HPS)	elect	100%	1,000	1	1,000	W		12		60	720	3,369
Ballasts (losses)	elect	100%	13%	1	130	W		12		60	94	438
Lamps (MH)	elect	100%	600	1	600	W	18		18		194	910
Ballast (losses)	elect	100%	0	1	78	W	18		18		25	118
Motorized rail motion	elect	5%	6	1	0.3	W	18	12	18	60	0	1
Controllers	elect	50%	10	10	1	W	24	24	18	60	2	9
Ventilation and moisture control												
Luminare fans (sealed from conditioned space)	elect	100%	454	10	45	W	18	12	18	60	47	222
Main room fans — supply	elect	100%	242	8	30	W	18	12	18	60	31	145
Main room fans — exhaust	elect	100%	242	8	30	W	18	12	18	60	31	145
Circulating fans (18")	elect	100%	130	1	130	W	24	24	18	60	242	1,134
Dehumidification	elect	100%	1,035	4	259	W	24	24	18	60	484	2,267
Controllers	elect	50%	10	10	1	W	24	24	18	60	2	9
Spaceheat or cooling												
Resistance heat or AC [when lights off]		90%	1,850	10	167	W	6	12	18	60	138	645
Carbon dioxide Injected to Increase foliage												
Parasitic electricity	elect	50%	100	10	5	W	18	12	18	60	5	24
AC (see below)	elect	100%										
In-line heater	elect	5%	115	10	0.6	W	18	12	18	60	1	3
Dehumidification (10% adder)	elect	100%	104	0	26	W	18	12	18	60	27	126
Monitor/control	elect	100%	50	10	5	W	24	24	18	60	9	44
Other												
Irrigation water temperature control	elect	50%	300	10	15	W	18	12	18	60	19	89
Recirculating carbon filter [sealed room]	elect	20%	1,438	10	29	W	24	24	18	60	54	252
UV sterilization	Elect	90%	23	10	2.1	W	24	24	18	60	4	18
Irrigation pumping	elect	100%	100	10	10	W	2	2	18	60	2	7
Fumigation	elect	25%	20	10	1	W	24	24	18	60	1	4
Drying												
Dehumidification	elect	75%	1,035	10	78	W		24		7	13	61
Circulating fans	elect	100%	130	5	26	W		24		7	4	20
Heating	elect	75%	1,850	10	139	W		24		7	23	109
Electricity subtotal	elect										2,174	10,171
Air-conditioning				10	420	W					583	2,726
Lighting loads				10		W					259	1,212
Loads that can be remoted	elect	100%	1,277	10		W					239	1,119
Loads that can't be remoted	elect	100%	452	10		W					85	396
CO2-production heat removal	elect	45%	1,118	17		W	18	12	18	60	—	—
Electricity Total	elect				3,225	W					2,756	12,898

FUEL	Units	Technology Mix	Rating (BTU/h)	Number of 4 × 4 × 8-ft production modules served	Input energy per module		Hours/day (leaf phase)	Hours/day (flower phase)	Days/cycle (leaf phase)	Days/cycle (flower phase)	GJ or $kgCO_2$/cycle	GJ or $kgCO_2$/year
On-site CO_2 production												
Energy use	propane	45%	11,176	17	707	kJ/h	18	12	18	60	0.3	1.5
CO2 production –> emissions	kg/CO_2										20	93
Externally produced Industrial CO_2		5%		1	0.003	liters CO_2/hr	18	12	18	60	0.6	2.7
Weighted-average on-site/purchased	$kgCO_2$										2	10

For *Cannabis* producers, energy-related production costs have historically been acceptable given low energy prices and high product value. As energy prices have risen and wholesale commodity prices fallen, high energy costs (now 50% on average of wholesale value) are becoming untenable. Were product prices to fall as a result of legalization, indoor production could rapidly become unviable.

For legally sanctioned operations, the application of energy performance standards, efficiency incentives and education, coupled with the enforcement of appropriate construction codes could lay a foundation for public-private partnerships to reduce undesirable impacts of indoor *Cannabis* cultivation.[5] There are early indications of efforts to address this.[6] Were such operations to receive some form of independent certification and product labeling, environmental impacts could be made visible to otherwise unaware consumers.

Acknowledgment

Two anonymous reviewers provided useful comments that improved the paper. Scott Zeramby offered particularly valuable insights into technology characteristics, equipment configurations, and market factors that influence energy utilization in this context and reviewed earlier drafts of the report.

Appendix A

See Tables A1–A3.

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UNODC, 2009. World Drug Report: 2009. United Nations Office on Drugs and Crime, p. 97. 〈http://www.unodc.org/unodc/en/data-and-analysis/WDR-2009.html〉 For U.S. conditions, indoor yields per unit area are estimated as up to 15-times greater than outdoor yields.

Energy Use by the Indoor Cannabis Industry:
Inconvenient Truths for Producers, Consumers, and Policymakers

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June 22, 2020

Forthcoming in *The Routledge Handbook of Interdisciplinary Cannabis Research*
Dominic Corva and Joshua Meisel (eds.)

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Abstract

Decades spent in the shadows of the black market precluded opportunities to understand the energy use of indoor cannabis cultivation and compel the industry to keep its environmental consequences in check. Although the impacts of outdoor cultivation on ecosystems have received considerable attention, those associated with vastly more energy-intensive indoor cultivation have rarely been evaluated and integrated into policy-making, even in the post-prohibition era. Indeed, indoor cannabis cultivators continue to be passed over by most energy policy instruments developed since the energy crises of the 1970s. Moreover, some cannabis regulations are inadvertently driving energy use upwards, while "financial incentives" for energy efficiency offered to indoor growers by utility companies subsidize and legitimize polluting activities that could be performed outdoors with virtually no energy use. These anti-competitive repercussions of ill-conceived and poorly evaluated policy demonstrate that cannabis legalization is necessary but not sufficient to address environmental issues. This chapter pinpoints blindspots in regulation, outlines research and analysis needs, argues for consumer information and protections against greenwashing and industry capture of regulatory and green-certification processes, and offers recommendations for incorporating energy considerations into the broader tapestry of cannabis policy. Even at ostensibly high energy efficiencies and use of renewable energy, indoor cultivation "optimizes the suboptimal" and cannibalizes renewable energy infrastructure developed for other purposes, which is untenable in a carbon-constrained world. Outdoor cultivation—which has sufficed for millennia—is the most technologically elegant, sustainable, ethical, and economically viable approach for minimizing the rising energy and environmental burden of cannabis production.

Introduction: Cannabis legalization is necessary but not sufficient for addressing energy waste

Decades spent in the shadows of the black market created few opportunities to understand the patterns of energy use associated with indoor cannabis cultivation, let alone compel the industry to manage consumption and thus keep its environmental consequences in check.[1] Cannabis production, distribution, and sale involve a myriad of energy uses, some of which are direct and others indirect (Figure 1). Drivers of energy demand include creating the inputs and energy used during production, processing, managing waste, downstream retail activities, and transportation. Key decision-makers and stakeholders include policymakers, planners, producers, investors, industry analysts, and consumers.

[1] This chapter expands on a presentation entitled "Policymakers' Primer on Addressing the Carbon Footprint of Cannabis Production" to the Council of State Governments annual meeting in December 2017 (Mills 2017).

Direct and indirect drivers of energy use and greenhouse-gas emissions from the cannabis industry

Inputs	• Energy (on-grid and off-grid)* • Industrial CO2* • Water production and supply • Soil and amendments • Artificial growing media • Fertilizer • Pesticides, herbicides, fungicides • Plastics (bagging, mulch, greenhouse sheeting, containers, irrigation, etc.)	
Production	• Outdoor • Small structure (windowless)* • Large structure (windowless) • Greenhouse • Energy use: lighting, cooling, heating, ventilation, odor control, CO2 generator, dehumidification, water heat, pumping, IT, plug loads*	
Processing	• Flower drying* or freezing • Energy for producing extracts; solvents (butane, propane, ethanol, isopropyl alcohol) • Cooking/baking • Packaging • Testing labs	
Waste	• Failed/interdicted crops; material not passing inspection • Single-use soil or artificial growing media • Plastics • Hydroponic water effluent to waste-treatment plant • Biomass	
Retail	• Facility construction • Lighting • Heating • Cooling • Ventilation • Refrigeration	
Transport	• Materials to jobsite • Workers to jobsite* • Product to intermediaries • Product to retail* • Consumer to retail* • Delivery services • Waste disposal	

** Items accounted for in energy-use estimates by Mills (2012).*

Figure 1. Modes of energy use associated with cannabis production, distribution, and sale.

Although the impacts of outdoor cultivation on ecosystems have received considerable attention (and do not primarily involve energy), those associated with far more energy-intensive indoor cultivation have only rarely been evaluated and integrated into policy-making, even in the post-prohibition era. Indeed, cannabis cultivators continue to be passed over by almost every energy policy instrument developed since the first modern energy crisis of nearly half a century ago. Moreover, there are many instances of post-prohibition cannabis policies that are inadvertently driving energy use upwards, while the "financial incentives" for energy efficiency being offered

to indoor cultivators by electric utility companies represent a counter-productive subsidy and legitimization of a polluting activity that could be done much more sustainably outdoors.

The sometimes anti-competitive repercussions of ill-conceived policy and scant evaluation of policy adequacy demonstrate that legalization is necessary—but not sufficient—to address the associated environmental issues. These considerations intersect with more prominent cannabis policy issues such as taxation, public health and safety, interstate commerce, testing and product labeling, broader agricultural policy, and solid waste management. Particularly vexing is that even the most basic analyses are impeded by lack of rigor and lingering uncertainties about the structure and drivers of energy use and how far energy-efficiency and renewable energy can realistically go towards mitigating the associated undesirable impacts. For example, stemming from fundamental data gaps, even baseline studies often omit key considerations, and unwittingly suffer from unquantified biases due to problems with data collection and verification.

This chapter pinpoints blindspots in regulation, outlines research and analysis needs, argues for consumer information and protections against greenwashing and industry capture of regulatory and green-certification processes, and offers recommendations for incorporating energy considerations into the broader tapestry of cannabis policy. The balance of evidence suggests that Even at ostensibly high energy efficiencies and intensive use of renewable energy, indoor cultivation "optimizes the suboptimal" and cannibalizes renewable resources previously developed for other purposes, which is untenable in a carbon-constrained world. Outdoor cultivation—which has sufficed for millennia—is the most technologically elegant, sustainable, ethical, and economically viable approach for minimizing the rising energy and environmental burden of cannabis production.

The cannabis conundrum: Drug policy is decoupled from environmental policy

Few public policy issues are as multifaceted as that of cannabis production and consumption. Quantifying the energy use and carbon footprint associated with producing cannabis and its derivative products is one of the primary and least explored policy-relevant questions. When confined to the black market, this sector could not readily access relevant analysis and information sharing. However, little progress has been made in the wake of legalization efforts.

Windowless cannabis factory farms constantly battle local weather conditions to maintain round-the-clock tropical temperatures and pump out acres of electric light brighter than the summer sun, day or night. Such industrialized cannabis cultivation facilities—whether in Fairbanks or Phoenix—must simulate and maintain artificially cloudless tropical environments while suppressing humidity year-round. Industrially manufactured carbon dioxide (an added energy-intensive input and greenhouse gas in its own right, increasing carbon footprint on the order of 5% -- more if and as energy efficiency improves), is often injected to artificially boost plant growth. Running the equipment[2] needed to create and maintain these artificial environments can

[2] The primary energy users are heating and cooling, dehumidification, and lighting. With conventional lighting, most of the input energy results in heat generation which needs to be immediately removed by air conditioning. Other miscellaneous energy loads

require as much energy as a similarly sized data center. Indoor cultivators cite multiple reasons for this practice: security, a more predictable product, buffering from weather and other crop hazards, maximized cash flow due to year-round production, the need for fewer employees, legislative restrictions, and multiple harvests per year.[3]

As with most other environmental issues, those associated with cannabis get "shaded out" by other seemingly more pressing concerns faced by policymakers (taxation, zoning, child safety, etc.). Together with the highly technical and complicated nature of how energy is used in the industry and how to quantify energy efficiency, few policymakers are even equipped to engage effectively. As a case-in-point, the IRS has been thwarted in pursuing tax-fraud cases since it cannot readily correlate reported sales volumes with utility bills.

Concern about the environmental footprint of cannabis production: Demonization or double standard?

Energy-intensive indoor cultivation has been conducted within the black market for decades. The original shift to the practice was, in part, a structural product of prohibition enforcement efforts that pushed growers indoors to avoid detection (Silvaggio in this Handbook). Legalization does not intrinsically address the energy issues, and can even compound them by encouraging the rapid scale-up of indoor facilities and otherwise altering patterns of energy use in unexpected ways, some of which are noted below.

Some industry advocates have complained that cannabis is singled out for scrutiny, while other sectors are left to their devices or otherwise pollute more. This argument is spurious (Mills 2016), as cannabis is in actuality one of the vanishingly few segments of the economy that has been largely overlooked in energy and environmental policy. Moreover, as is well established in the climate change mitigation field, there is no "silver-bullet" solution and a multitude of energy uses must be simultaneously addressed in order to meet society's important emissions-reduction targets. It is a false choice to argue that one energy use should be addressed in lieu of another. There is no one cause of climate change, and thus no one solution. Meanwhile, the cannabis sector is arguably decades behind the rest of the economy when it comes to energy efficiency. In any case, adequate technical fixes are unlikely to be available if the demand for extraordinary levels or artificial illumination persists.

A key starting point for establishing a context for good decision-making is quantifying the level of energy use and associated greenhouse-gas emissions, and how that compares to other activities. Until less than a decade ago, no peer-reviewed public-domain assessment of cannabis energy use had been published. Early work on this question included a national scoping estimate of the issue based on the largely pre-recreational-legalization policy environment, where virtually all large-scale cultivation was conducted outdoors and indoor cultivation was

can include irrigation pumps, water pre-heaters or coolers, air disinfection systems, motors to operate light-deprivation curtains, and crop dryers. Transportation (during and after production) and post-cultivation product manufacturing further contributes to energy use and carbon footprint.

[3] This latter argument is not material, as outdoor growers using light-deprivation methods also achieve multiple harvests per year. Moreover, reducing labor intensity is contrary to the job-creation objectives of some cannabis policy makers.

predominantly windowless (Mills 2012). That said, small indoor operations were (and still are) numerous and generally not driven by energy efficiency considerations.

Based on best-available information at the time, a "bottom-up" model was created based on interviews with practitioners, equipment retailers, and published guidelines for growers (e.g. Rosenthal 2010) (Mills 2012). The boundary conditions (inputs and activities resulting in energy use and greenhouse-gas emissions) represented only a subset of those depicted in Figure 1. The per-facility results compared favorably to measured data available for indoor growing operations and the prevailing aggregate (e.g., state-level) energy demand estimates compared well with subsequent estimates by others, including the long-range planning authorities for the Northwest power system (Northwest Power and Conservation Council 2016).

From a national vantage point, Mills (2012) found that indoor cannabis consumed 20 billion kilowatt-hours of electricity annually, with additional amounts from direct fuel use, together corresponding to 15 million metric tonnes of CO_2 released into the atmosphere each year.[4] This in turn corresponded to an expenditure of $6 billion per year on energy, nationally, which amounted to 9% of California household electricity use, 3% of total statewide electricity use (all sectors), and 1% of electricity use nationally. Other independent estimates have found similar economy-level results. For example, indoor cultivation is estimated to require 0.6% of statewide electricity use (all sectors) in Colorado and 4% in the city of Denver (Hood 2018).[5] Washington State also reports that indoor cultivation is responsible for one percent of the state's overall electricity consumption (Jourabchi 2014), a number that has probably risen in the intervening years. As early as 2004, it was reported that indoor cannabis cultivation was responsible for 1% of electricity use in British Columbia (Easton 2004), which was long before the recreational legalization decision in Canada.

For context, the aforementioned national estimate was equivalent to the emissions of two million average U.S. homes or three million cars, and is more than four-times the aggregate U.S. pharmaceutical industry energy expenditure.[6] While part of this difference arises from the lower energy prices paid by industrial users compared to residentially-based cannabis producers of the time, it is noteworthy that the average energy intensity of pharmaceutical facilities(approximately 3,600 kBTU/sf-y) is well below that of indoor cannabis cultivation facilities (Capparella 2013) at around 5,500 kBTU/sf-y.[7]

An additional key finding was that the "energy intensity" (energy use per unit of floor area) in indoor cultivation facilities was vastly higher than that of other common building types (Figure 2).

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[4] This analysis represented the typical small- to mid-scale indoor cultivation practices of the time.

[5] The City of Denver reports that 45% of its total growth in electricity demand stems from cannabis (Walton 2015).

[6] Note that the original study (Mills 2012) put this at six-times, but the value noted here is adjusted for approximately 25% of pharmaceuticals being consumed by Americans that are produced off-shore (Altstedter 2017).

[7] This cautiously assumes that the source is reporting in "site" energy units, i.e., not including the losses due to the inefficiencies of electricity production in power plants. The source's estimate of 1,210 kBTU/sf-year translates to approximately 3,600 kBTU/sf-year when adjusting for this conversion factor.

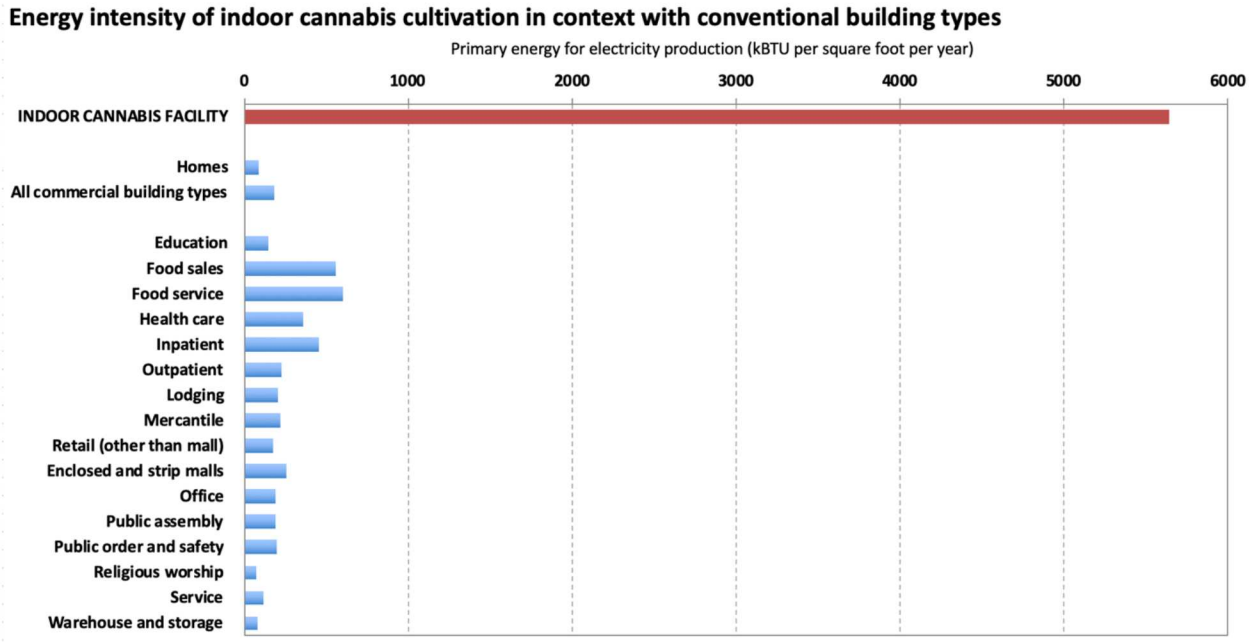


Figure 2. Cannabis energy intensity from Mills (2012). Reference data from U.S. Energy Information Administration. Homes (https://www.eia.gov/consumption/residential/). Commercial Buildings (https://www.eia.gov/consumption/commercial/)

From a regional vantage point, energy use can also be put in context by estimating how it contributes to per-person carbon emissions in economies where cannabis production is significant. While cannabis has been referred to as the largest cash crop in the U.S. in dollars (Gettman 2006), it is particularly significant in California. The implied per-person carbon footprint for the small populations in many of the producing areas is far above the averages in a state otherwise known for its energy efficiency—closer to that of the most carbon-intensive "coal" states, despite California's being known as one of the least carbon-intensive states.

From a consumer vantage point, the energy use for growing one 1-gram "joint" creates 10 pounds of carbon dioxide pollution, equivalent to running ten 10-watt LED light bulbs (or one 100-watt incandescent bulb) for 76 hours (Mills 2012). That's as much as driving 22 miles in a 44-mpg Prius. Embedded in each average indoor-grown plant is the energy equivalent of 70 gallons of oil. This means that a small "grow house" with ten grow lights consumes approximately as much electricity as ten average U.S. homes.

From a producer's vantage point, the cost of energy use varies widely depending on energy prices and efficiency, while the importance of the cost depends on the prevailing wholesale price of the finished product. Other factors such as strain choice also have a large effect as well (Arnold 2011). Circa 2012, the average energy expenditure for indoor cultivation equated to approximately one-quarter to one-half of the wholesale price. As energy prices rise and wholesale prices drop (post-legalization) this ratio will become increasingly unfavorable and could even become a factor in the solvency of some producers. Indoor producers have a far more energy-sensitive business model than outdoor producers.

Widespread cultivation in large-scale greenhouses is a relatively recent development. A subsequent analysis of industrial-scale greenhouses found that they, too, are highly energy

intensive (Mills 2018), especially if poorly designed and operated. While these "hyper greenhouses" use less energy than windowless facilities per unit floor area, they still require prodigious amounts of lighting, cooling, heating, and dehumidification in most climates. As evidence of the issue, cannabis greenhouses are one reason cited for the need to update high-voltage electricity transmission lines in Canada (CBC 2019a). Data published by NFD (2018) found greenhouses in the U.S. to use half the electricity of windowless facilities on a per-square-foot basis, yet, due to their lower yields, they actually required only 25% less energy per unit weight.[8] An important caveat is that the values reported in that study do not include natural gas, which is a common heating fuel for greenhouses while heating in windowless facilities is often provided with electric heat pumps. When including natural gas, an assessment in Canada found that greenhouses used only about one-third less energy than windowless facilities (Posterity Group 2019). The data thus suggest that these greenhouses are anything but "green", as their energy use per unit floor area still tends to be greater than that of virtually any other commercial building type.

A more recent attempt to estimate national energy consumption demonstrated many of the challenges in deepening the analysis (NFD 2018). Of note, the energy used for outdoor as well as greenhouse operations was usefully contrasted with that of windowless indoor facilities, and that of legal and black-market production estimated separately. The report admirably brought forward more measured data on specific facilities than previously available in the public domain, although the sample was small (only two dozen sites with energy and yield data), self-selected, and self-reported. Almost one third of the sites used LED lights for energy savings, likely far higher than the proportion of sites adopting this technology in the overall marketplace. The analytical scope had narrower boundary conditions (excluding energy sources other than electricity within the facility as well as transportation energy, and cultivation in perhaps more energy-intensive non-industrial settings such as homes and other informal "small-scale" facilities), did not include operations with on-site generators, and was based on a non-randomized sample weighted towards milder climates in the United States. The energy intensity of black-market operations was presumably equated with that of legal operations, embodying an assumption of equivalent efficiencies not verified with actual data. Meaningful direct comparisons to the Mills (2012) study are thus not possible given the narrower boundary conditions and non-representativeness of the sample. The study indicated that some energy-intensity metrics may be improving with the passage of time, as would be expected, although more definitive surveys are sorely needed. Of particular note, the NFD study found roughly a factor of ten variation in key energy intensity metrics (electricity per square foot and per unit of flower yield), indicating enormous non-standardization of existing practices and a correspondingly large potential for energy savings irrespective of historical trends. It is not yet known whether the energy intensity of contemporary legal production facilities is lower or higher than that of black-market operations.

* * *

While it is encouraging to observe a variety of organizations developing environmental product labeling for cannabis, the methodologies often lack transparency and there is little or no direct

[8] Average reported values were 0.79 grams of dried flower yield per kWh for indoor facilities and 1.07 grams/kWh for greenhouses. Values elsewhere in the NFD report suggest the greenhouses were even less favorable.

recognition of excellence or penalties for underachievement. Organizational factors create real or perceived conflicts of interest (financial dependence on the industry and users of the product being evaluated, lack of an independent watchdog, and a chronic tension between profit or market share and rigor which can result in the dilution of standards). It has been reported that growers will "shop" for certifications that put their product in the best light (Bennett 2019).

Consumers are largely unaware of the energy and environmental impacts of indoor cultivation. It is notable that the "ethical purchasing" movement (consumers seeking to vote with their dollar, e.g., to promote sustainable products) has barely emerged in the cannabis marketplace and, perhaps fearing stigmatization, environmental organizations have conspicuously sidestepped the issue (Bennett 2019). Moreover, cannabis dispensaries have been found to be unreliable sources of information on environmental issues associated with the products they sell and existing sustainability certifications for cannabis are underdeveloped, vulnerable, and lack credibility (Bennett 2017; Bennett 2020, in this volume). Consumers thus operate in an information environment that impedes good purchase decisions.

All told, the CO_2 emissions of the *average* cannabis user ranges from 16% of their total household carbon footprint in Rhode Island (the state with the nation's lowest consumption rate) where cannabis availability is highly limited to 59% in Colorado (the nation's highest consumption rate) where it is pervasive. Put differently, the per-capita emissions are equivalent to that from powering two high-efficiency refrigerators in Rhode Island and nine in Colorado.[9]

Many externalities add to the social and environmental costs of indoor cultivation

In addition to the policy community's need to better understand facility-scale energy use cannabis operations are various externalities (side effects not reflected in the prices of goods sold) that are not often considered or quantified.

These include moisture damage to buildings, nighttime light pollution, power plant emissions and other environmental impacts, power theft, and power outages and other constraints on the broader grid caused by unchecked electrical load growth. As an example of this latter issue, the city of Portland Oregon associated seven power outages over a period of five months with indoor cannabis operations (Pacific Power 2015) and Portland General Electric traced 85% of its residential transformer problems to indoor cannabis growing (Borrud 2015).

In 2010, British Columbia reported that power theft by two thirds of cannabis producers was costing the utility $100 million per year (BC Hydro 2016). At that time cannabis was legal only for medical purposes, and most of the offending facilities were serving the black market.

Unpermitted or uninspected electrical wiring has been the source of a disproportionate number of fires in some localities, and the building stock has been damaged by mold and other

[9] Per-capita cannabis consumption from *MJ Business Daily* (https://mjbizdaily.com/chart-of-the-week-average-annual-mmj-purchases-by-state-vary-widely/). State-specific household emissions from U.S. Department of Energy, Energy Information Administration. Assuming cultivation carbon footprint per Mills (2012).

consequences of raising humidity in buildings not intended for agricultural operations (Fire Chiefs Association of British Columbia 2008; Mills 2012). Massive fires have occurred even in legal facilities (Reuters 2015).

Cultivating cannabis in areas based on hydro power is often touted as an environmentally benign alternative to carbon-based power. However, attention has recently been given to the likely linkages between hydroelectric power production, reduced salmon populations, and starvation issues facing salmon-eating killer whales (*orcas*) in the Pacific Northwest (Mapes 2018; University of Massachusetts 2017). Hydroelectric power also results in more water evaporation than other forms of electricity production.

Adverse public-health considerations and waste-generation from cannabis cultivation merit more analysis

Another form of externality—public health impacts related to energy-intensive cultivation practices—merit close analysis. Cannabis has been widely demonstrated to offer medical benefits under the appropriate circumstances. However, the countervailing health-related dimensions of indoor cultivation—for workers and the general public—have not received much attention, although it is treated elsewhere (Schenker and Langer in this Handbook).

Indoor environmental conditions can be an issue for workers and consumers. For example, while mold is a common risk to product viability for indoor and outdoor cultivators alike, indoor environments can be particularly prone to mold growth that can destroy an entire crop. The risk is especially high during power outages or equipment failures when ventilation and dehumidification processes are interrupted. In another example, doubling or quadrupling of current background carbon-dioxide levels (up to 1500 ppm, to push growth) was once believed to be safe for humans but has subsequently been found to result in CO_2 levels found to significantly reduce nine distinct measures of cognitive and decision-making functioning (Fisk *et al.,* 2013; Allen *et al.,* 2015). Combustion products, such as carbon monoxide, from unvented on-site CO_2 production can also pose health hazards.

Concerns have been raised about the effect of large concentrations of plants in urban areas adversely impacting air quality through their emissions of volatile organic compounds (VOCs). A recent investigation focused on the potential that 600 cultivation facilities within the city of Denver Colorado could double the prevailing levels of VOCs, while air pollution in that city already periodically violates federal limits (Plautz 2019).

More broadly, energy production itself has well-known health consequences, and of course is the primary source of human-generated greenhouse gases which bring their own health impacts. Mills (2012) estimated national greenhouse-gas emissions of 15 metric tons of CO_2 each year from indoor cannabis cultivation across the United States. Outdoor practices can also result in greenhouse-gas emissions from land-use change and use of chemical fertilizers.

Hazardous wastes associated with indoor cultivation are also understudied. The “high-intensity discharge” lamps used for most cultivation contain significant amounts of mercury. The extent of recycling/recovery of this mercury is unknown, and broken lamps introduce mercury into the

growing facility in an uncontrolled fashion. More costly LED lights do not contain mercury. However, recycling programs for LED fixtures are not yet in place.

Indoor practices involving hydroponics (or even traditional irrigation) yield contaminated wastewater that may be introduced into or circumvent wastewater systems. Moreover, non-degrading growing media, such as mineral wool that is saturated with nutrient-laden water, is typically sent to landfill after each harvest. We estimate that an operation with 100,000 square feet of canopy requires 14,000 to 34,000 cubic feet of mineral wool per cycle, which would result in the generation of approximately to 85,000 to 200,000 cubic feet of solid waste to landfill over a year with six growing cycles. This results in waste generation of 5- to 11-times the weight of the processed flowers.[10] Recycling of agricultural mineral wool is not currently available in the U.S. Indoor operations also tend not to re-use soils after each growth cycle, which is yet another large source of solid waste.

Energy efficiency and renewable energy are not enough to mitigate the problem

A key challenge intrinsic to the indoor cultivation process, and compounded by seemingly unrelated local ordinances or needs, is that these facilities tend to embody a number of counterproductive design and operational features that make energy use even higher than need be. For example, CO_2 injection requires facilities to be sealed and all air recirculated, which, in turn, boosts energy use significantly. Another example is the sometimes-mandated use of tall opaque walls in front of greenhouses in the name of security which can also block useful sunlight and thus require added electric lighting energy input. Location of these facilities in or near population centers requires high-resistance air filtration to control odor, which, in-turn requires increased ventilation energy to counteract the backpressure caused by the dense filter media. Heat is often run at the same time as air conditioning in an effort to control humidity that can otherwise lead to mold growth. Lastly, local light-pollution ordinances may require that light-deprivation covers be drawn over greenhouses at night (light may be on during that time, e.g., when the days are short or to capitalize on cheaper power rates), which can trap heat and thus require additional cooling energy. Lastly are a host of energy-using technologies to remove mold with UV, treat polluted water, recapture and purify waste water, etc., that are ironically used to improve the "sustainability" of indoor cultivation.

Despite these challenges, the industry has begun to look for efficiencies, likely driven more by the squeeze between falling wholesale prices and rising energy costs than by environmental concerns (Pols 2017). Aside from efficiencies (e.g., energy used per given weight of finished product), it is critical to maintain focus on trends in *aggregate* demand, especially for a growing industry. For example, Colorado reports a startling year-over-year increase of 23% in overall production (Hood 2018) and electricity use increased by 36% annually between 2012 and 2016 (Denver Public Health and Environment 2018). Energy efficiencies cannot improve rapidly enough to offset such growth, and the preceding numbers suggest that energy intensity has actually been increasing. The energy forecasting authority in the Pacific Northwest projects an 82% increase in energy demand despite improving energy efficiency (Jourabchi 2014). A large-

[10] See assumptions below in the discussion of mineral wool embodied energy.

scale energy savings study for the province of Ontario, Canada, found a *maximum technical* potential of only 16% for indoor facilities and 21% for greenhouses (*without* accounting for limited uptake rates or cost-effectiveness) (Posterity Group 2019).

Sleek images of energy-saving LED lights and greenhouses look "green" on the surface, but the devil is in the details. These lighting systems are still quite energy intensive.[11] One experiment found that 780 Watts of LED were needed to replace 1000-1100 watts of traditional lighting (Massoud 2014) in order to maintain yields. Peer-reviewed research dating from the time these alternative lighting sources first started being manufactured suggested that cannabis grown under LEDs may actually take longer to mature and have lower yield and/or potency (Pocock 2015), thus saving little if any energy on a per-weight basis (Nelson and Bugbee 2014). LED performance in these applications appears to be improving, although even more recent studies obtained mixed results (Leichliter *et al.,* 2018). However, product attributes (flower appearance) may be adversely affected by LEDs, which is a palpable market risk for producers. The up-front cost of LED lighting is also vastly higher than conventional lighting, the recovery of which requires a long time-horizon for the facility developer. Although the vast majority of indoor cultivation facility space has been constructed since LED fixtures have been available in the market, adoption rates are probably in the low single-digit percentage range. An in-depth analysis for Canada found that the technical potential energy savings for LED lighting (without regard for cost-effectiveness or limited adoption rates) was only 7% of entire facility-level energy use (Posterity Group 2019).

These barriers notwithstanding, it is certainly possible to construct cultivation facilities with far higher energy efficiencies than is done at present. Indications of these opportunities as applied to the facility envelope and daylighting are provided by Kinney *et al.* (2012).

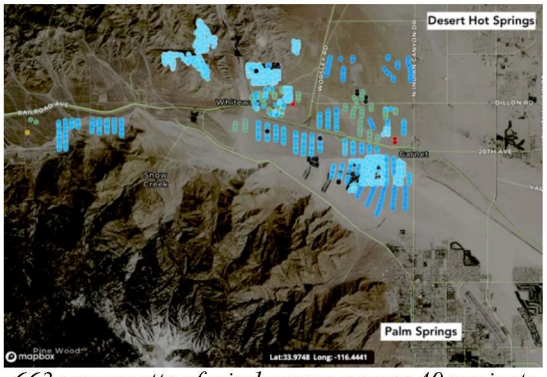
That said, there is a degree of naïve optimism and hubris that cultivators need only "go solar" to solve the problem of any remaining energy requirements after efficiencies have been captured. The feasibility of this has not been demonstrated at scale, probably because the required solar array would need to be many times larger than the roof of the facility, and could not be on the roof at all if a traditional greenhouse design is used. Even in areas with excellent solar availability, only about 5% of a facility's electricity needs could be generated on the roof (Mills 2018). This is even the case for one very large greenhouse-style facility in Southern California. One noted large-scale facility aiming to be as sustainable as possible achieved a solar contribution of about 30% (Daniels 2019), which presumably required using a very large area of land beyond the building footprint. A state-of-the-art facility in Canada is expecting to offset only 8% to 10% of its electricity use by covering its entire roof (CBC 2019b), emitting approximately 9,000 tons of CO_2 per year instead of 10,000 tons without the solar.

While it can be argued that cannabis industry as a whole can, in principle, be powered with centralized renewable energy, the amounts required are prodigious and for practical purposes (e.g., land-use constraints) often limited. Although California's Coachella Valley is one of the largest wind-energy production areas in that state, cannabis production there (assuming business-

[11] One advantage of less-efficient high-intensity discharge lamps is that the heat-producing ballasts can be remoted outside the conditioned space, thereby reducing air-conditioning needs. LED ballasts are integral to the fixture and cannot be remotely located.

as-usual energy efficiencies) will soon eclipse the entire output of all 40 wind-power projects located in the area (Figure 3). Our "bottom-up" estimate is that projects already in operation consume 13% as much as wind energy in the area produces, although other estimates (Daniels 2019) suggest cannabis facilities in the "west side" of Coachella Valley consume 235 megawatts, which is fully 35% the rated capacity of all wind projects in the area. Full build-out of existing cannabis facility entitlements would consume far more: 11-times as much electricity as can be produced by all existing wind systems in the area, and more than all the wind power generated across California. It has taken decades and the dedication of vast land areas to build up this level of wind-generation capacity. From a broader public-policy vantage point, there is an acute shortage of investment in renewable energy infrastructure to offset even existing carbon emissions, let alone emissions growth from new energy-intensive development. This comparison serves as a poignant illustration of the broader problematic tension between advances in renewable energy supply and unbridled growth in energy demand.

2,229 wind turbines in Coachella Valley, CA



663 megawatts of wind power across 40 projects

Large-scale indoor cannabis cultivation

Indoor cannabis cultivation facility, Cathedral City, CA

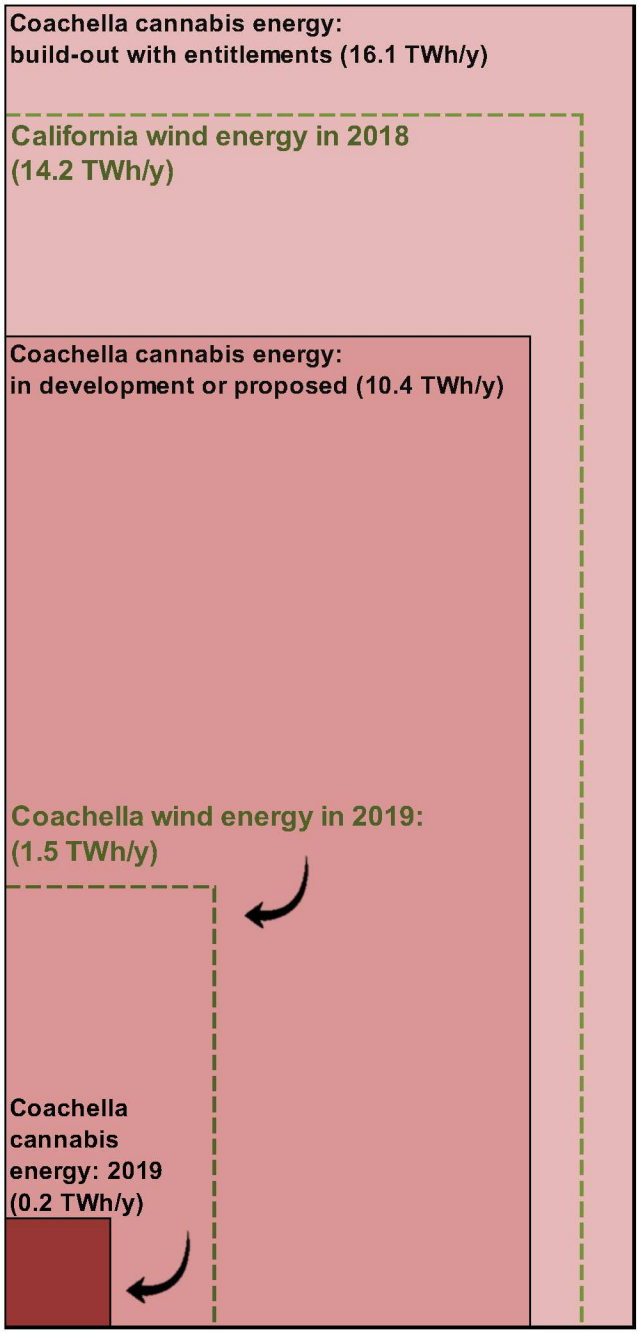


Figure 3. California's Coachella Valley is the site of 10% of the State's wind energy production. Cannabis cultivation facilities already in operation in five cities within the Coachella Valley require 13% of the entire electricity production of the 40 wind energy projects (2,229 turbines) located throughout the valley. This will grow to more than 70% of the area's total wind energy output upon completion of cannabis-facility projects proposed or under development. Full build-out per existing entitlements will consume eleven-times as much power, significantly exceeding the 14 TWh/year generated by wind power in all of California. Sources: photo of turbines from ecoflight.com, with permission; satellite view from USGS (2019); interior of cultivation facility from systemsnspace.com, with permission; Rendering of Venlo-type glasshouse by Sunniva (under construction), with permission.[12]

[12] Calculation notes: Estimated cultivated area development status in five Coachella Valley cities, based on Simmons (2019), with 350,000 square feet of "canopy" as of April 2019, 19.4 million square feet proposed or under development, and 30 million

Market distortions bolster environmentally detrimental cannabis production practices

Among the fundamental preconditions for "perfect functioning" of markets is a vibrant information environment for all actors. Unfortunately, energy-relevant information in the cannabis industry is incomplete and often incorrect. One long-standing "myth" is that indoor-cultivated cannabis is superior to its outdoor counterpart. This is a commonly held view in the popular culture, and dispensaries are notorious for "bottom-shelfing" outdoor-grown products as inferior and otherwise favoring and steering customers towards indoor-grown products. Industry experts have argued to the contrary (*San Francisco Bay Guardian* 2011).

Economic signals can also distort markets. Energy utilities receive billions of dollars per year from cannabis cultivators. While utilities play a key role in improving energy efficiency in the economy at large (assuming that policymakers ensure that investing in new energy supply is not more profitable than investing in efficient use), utilities benefit far less from outdoor cannabis cultivation and have not been observed to encourage it.

In some areas, indoor cultivators receive the historically low, subsidized electricity prices enjoyed by traditional outdoor farmers (PG&E 2017). Many agricultural customers also receive industrial rates,[13] which are lower than those paid by occupants of other types of buildings (warehouses, data centers, offices, etc.). Subsidies of this sort to indoor growers make them more competitive against outdoor growers while reducing the profitability of making energy efficiency improvements or investment in renewable energy supply.

Conversely, in order to discourage indoor cultivation, some well-intended policymakers have sought to impose extreme electricity surcharges (*The Arcata Eye* 2012). In practice, however, the expected effect could be to merely force relocation. This may "solve" the locality's problem, but does not address global energy concerns and can even push cultivators off-grid and onto even more polluting diesel generators for power.

In other contexts, good public policy has often included financial incentives for energy efficiency (rebates, tax credits, etc.). However, in this context, the greatest possible energy savings can be obtained by shifting to outdoor cultivation. A perspective must be maintained that even super-efficient indoor facilities are highly energy intensive when compared to other building types (imagine the values in Figure 2 being reduced by, say, 75%). Outdoor producers are disadvantaged when their well-funded indoor competitors are subsidized with efficiency incentives such as rebates that are, in turn, paid by consumers through utility tariff "adders" (the traditional way of financing utility rebate programs). Such incentives arguably disrupt market forces that could otherwise lead to reduced energy use.

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square feet entitled. Energy intensity is that calculated by Mills (2012). Note that while NFD (2018) cites lower average electricity intensity for some states, their value for the adjacent desert state (Nevada) in their sample is virtually identical to that used here for a California desert location. Wind energy generating capacity values are from USGS (2019) and associated energy production from California Energy Commission (2019a). Average wind energy production rates for 26 projects (475 MW) in the area (2.23 GWh/MW) are applied to the total installed 663 MW for the area to estimate total electricity production.

[13] See https://www.eia.gov/todayinenergy/detail.php?id=16231

Investor roles in indoor operations also have an impact. Enormous cash infusions following initial public offerings of stock can disincentivize efficiency, particularly if investors are unaware of best practices or unequipped to evaluate the adequacy of cultivation practices. Losses arising from inefficiency of energy use (or other inputs) can be camouflaged by lack of transparency, investor ignorance of energy engineering, and the willingness of investors to infuse more capital if there are shortfalls. An example of this is Canopy Growth Corporation, who, despite shrinking gross margins and being unable to post a profit from their primarily indoor-cultivation-based business was still able to attract a $4 billion investment from Constellation Brands (Alpert 2019). Compounding these problems, cultivation-facility investors tend not to have the time horizons needed to amortize energy efficiency or renewable energy investments.

The current policy environment increases the energy use of cannabis cultivation

Prohibition was previously blamed for the environmental impacts of cannabis cultivation, but the reality is far more complicated (Vitiello 2016). Indeed, owing to the lack of coordination between cannabis policy and environmental policy, decisions are inadvertently being made in the post-prohibition era that are compounding the energy problem.

That said, there are ample reasons to pursue regulation. For example, historically, some black-market growers have been rumored to leverage the fact of their undocumented income to take advantage of low-income electricity tariffs. This not only created an unintended cross-subsidy from other ratepayers, but the low rates also reduced their incentive to invest in energy efficiency or shift cultivation outdoors.

Local control of cannabis market regulation (e.g., at the city or county level) can lead to perverse outcomes that distort broader market conditions. For example, as noted above, the Coachella Valley in southern California has become a major hub of production due to the absence of caps on facility size, local efforts to promote the industry, and a generally permissive regulatory environment. Conversely, local ordinances set a very large minimum size for facilities at five acres (over 200,000 square feet) (Maschke 2018). As a result, very large-scale indoor cultivation is taking place in this extremely hot region, requiring far more air conditioning and ventilation than in climates more naturally suited for cultivation. An engineer working in the area is quoted as estimating that cannabis cultivation facilities use about 25-times as much energy as a "standard industrial" development (Daniels 2019).

Perversely, there are many reports of localities banning outdoor cultivation as part of their legalization process, examples of which are Nevada County, California (Riquelmy 2016) and the entire state of Illinois (Thill 2019). Regulations also require all production to occur indoors in Canada (CBC 2019b). These measures are presumably taken with security in mind. Yet, if giant internationally sanctioned opium poppy plantations for pain-management drugs can be secured outdoors (Bradsher 2014), surely cannabis farms can do so as well. Other localities stipulate equal limits to the allowable cultivation area for indoor and outdoor cultivation, thus strongly biasing choices towards energy intensive indoor operations where more crops can be produced each year.

Local officials and others have cited the odors arising from outdoor cultivation as a significant problem, and suggest the activity be restricted to indoor facilities (Johnson 2019). This of course also entails the implementation of high-resistance air filters for odor control which, as noted above, increase ventilation energy needs.

Once indoor cultivation is endorsed (or mandated), it becomes incumbent on policymakers to ensure that the resultant energy use is not excessive. Virtually all building types and the equipment in them are subject to energy codes and standards in the United States, yet comprehensive ones appropriate for cannabis cultivation facilities have not been promulgated and the supporting research essential for standards analysis has not been conducted. Massachusetts is among the early states to grapple with this. The state has determined that a single (massive) indoor cultivation facility could result in an increase in lighting demand equal to the energy saved over many years by the state's effort to convert over 130,000 streetlights from conventional high-intensity lamps to LEDs.[14] However, the state's efforts at setting energy standards have been clumsy, e.g., seeking to specify wattage limits on individual light fixtures, which could easily result in operators installing more fixtures than would otherwise be the case (Davis 2019a).

In another example of unintended energy consequences, mandatory product testing--which is certainly a potentially appropriate policy intervention—can uncover long-standing practices that yield unacceptable contamination levels in the final product. Tainted cannabis products must be destroyed, thus entailing all associated energy to be reallocated to materials that pass testing. The safety thresholds stipulated by the regulations are not necessarily based on scientific study, and nor are they consistent with standards for other consumer products. For example, there are no standards or testing for heavy metals in tobacco, despite it being known to contain them, yet testing is done at the parts-per-billion level for cannabis. Researchers have described the lack of studies on the health risks of heavy metals in tobacco (Caruso *et al.,* 2014).

Some previously black-market cultivators have found the new permitting processes under legalization to be onerous and so time-consuming that they cannot transition their businesses to the regulated market. This already appears to be having the effect of driving some legal producers back to the black market, and thus away from access to policy inducements for environmentally improved practices. As of April 16, 2019, roughly 3,000 temporary cultivation permits had expired and the California Department of Food and Agriculture (CDFA) had issued only 62 annual licenses and 564 provisional permits. Reports indicated that less cannabis was sold (legally) in the year after recreational laws went into effect than before (Fuller 2019). As an indicator of the size of the black market, the most recent official estimates of California's cannabis production, a report published in 2018 by the California Department of Food and Agriculture, showed the state producing as much as 15.5 million pounds of cannabis and consuming just 2.5 million pounds (ERA Economics LLC 2017). The balance is presumably illegal export to areas where prevailing retail prices are higher.

Even where states legalize cannabis cultivation, localities can thwart implementation, further reinforcing black-market activity. For example, there are many counties in California where a

[14] Cannabis Energy Overview and Recommendations, MA Department of Energy Resources Energy and Environmental Affairs, 2/23/18, slide 6.

public majority voted to legalize cannabis yet local government has banned most if not all cannabis-related business activities. According to Schroyer and McVey (2019) only 161 of California's 482 municipalities and 24 of the 58 counties allow commercial cannabis businesses.

A key example of the consequences of a resurgent black market are that off-grid cultivation using diesel generators results in an even higher "carbon footprint" (carbon per unit of electricity produced and consumed) than the electric grids in many areas -- e.g. 2.5-times higher in the case of California (Mills 2012).

Relevant to indoor and outdoor cultivation alike, cannabis regulatory practices also counterproductively influence transportation energy use. In the California regime, for example the product is typically transported at least four times between the point of cultivation and the point of consumption. Regulations require farmers to transport their product to processors, who then transport to distributors, who then transport to dispensaries. Retail consumers then transport the final product from the dispensary. Shipments of only 25 to 40 pounds between farmer and processor are not atypical. The amounts transported become progressively smaller along the supply chain, which multiplies the numbers of trips.

Transport energy notwithstanding, one fundamental policy barrier to reducing energy use is restrictions on interstate commerce. A comparison of electricity use per unit yield in seven states found a variation of 3.4-fold and that for greenhouse-gas emissions of 26-fold, and this did not include the full range of climate severity or power plant emissions factors seen across the whole country (NFD 2018). Were the nation's supply of cannabis grown in climatically benign locations, energy use would be vastly reduced as would pressures to grow indoors.

The case of California: A cannabis-climate train wreck driven by ill-informed policymaking

California is a beacon of progressive environmental thought and has long been an engine for innovative environmental technologies and policies. State legislators have passed some of the most far-reaching climate change policies and targets in the world, notably the California Global Warming Solutions Act of 2006 (SB-32), designed to reduce statewide greenhouse-gas emissions to a level 40% below 1990 levels by the year 2030.[15]

Yet, the regulatory structure established for the cannabis industry now works at cross-purposes to these overriding goals (Mills 2019). Seemingly prior to any rigorous analysis of energy impacts, the state dictated that indoor cultivation was integral to the broader goal of legalization, creating a preordained legal "purpose" that cannot be questioned by subsequent environmental considerations. This binding purpose led to the explicit rejection of "environmentally superior" outdoor cultivation alternatives identified in the official Environmental Impact Report (EIR), despite a recognized lack of data that precluded more than cursory quantitative environmental impact analysis.

The EIR takes several leaps of faith to conclude that the legalization program will be "beneficial" to attaining the State's greenhouse-gas emission reduction goals. They achieve this

[15] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

feat by assuming, remarkably, that overall cannabis production levels will not rise materially following legalization, while the legal fraction of production will increase from approximately 5% to 10% of statewide totals (the rest remaining in the black market) and that this increment will automagically conform with the state's SB-32 emissions-reduction target thus rendering aggregate emissions slightly lower than without legalization.

The net effect of these machinations—juxtaposed with the market and policy failures outlined earlier in this chapter, particularly the forcing of indoor cultivation in many local jurisdictions—is that California has thus far failed to grasp a rapidly closing window of opportunity to manage energy use and greenhouse-gas emissions from the cannabis industry. Few localities have made efforts to manage energy use and emissions (California Department of Food and Agriculture 2017). A limited building energy standards-setting process is slowly being explored, but the earliest date for possible implementation will be 2022 – a full 25 years after the state's initial legalization of cannabis for medical use (California Energy Commission 2019b).

A large research vacuum remains

Although it has been many years since the energy issues of cannabis cultivation were first identified (Mills 2012), very little subsequent research has been conducted and thus policymaking proceeds in an information vacuum. Contributing to this problem, the cannabis industry and energy suppliers are not always forthcoming with information about current practices, and are selective about what they do release. Early work pointed out the need for open-source energy benchmarking using measured data (Mills 2012). Some studies have come forward with information of this sort, often with small samples limited to a certain region or type of cultivation (e.g., County of Boulder 2017) while other efforts are pooling and standardize the information, although based on self-selected participants and limited public access to the data.[16] Also needed are improved estimates of market-scale drivers (numbers and types of cultivation facilities, consumption trends, etc.) Much more data (and modeling) are needed to get a strong handle on trends in national energy use associated with indoor cannabis production, and to understand the potential for improved energy efficiency and greenhouse-gas reductions. More broadly, measured data alone does not help improve efficiency unless it compels the adoption of improved practices and technologies.

Among the critical technical questions remaining unanswered:

Are newer large industrial-scale facilities more or less energy efficient than traditionally smaller indoor cultivation practices?

> No definitive data have been presented in answer to this question. On the one hand, more efficient heating and cooling systems can be expected, but on the other hand higher ceilings and wider lanes for vehicles and equipment result in far greater volumes of air needing to be space-conditioned. Pressure for maximum yields, which includes six or more crops per year, may also entail greater aggregate energy inputs but less per final unit weight.

[16] See https://powerscore.resourceinnovation.org

How much energy is used in manufacturing extracts and other derivative products?

These processes can be energy intensive, involving equipment that creates high pressures and temperatures, post-processing, etc. In some cases, raw materials are frozen and stored prior to extraction, using added energy. Freezing becomes more likely when there is oversupply or inertia in bringing fresh product to market due to over-production or policy obstacles.

What is the added water burden of indoor cultivation?

Conventional wisdom is that less direct irrigation water is needed for indoor cultivation, thanks to reduced evaporation. However—and of particular relevance to the many drought-stricken parts of the country—the massive amounts of water steadily evaporated from dams and cooling towers while producing the electricity destined for indoor cultivation facilities vastly exceeds the direct agricultural water needed to grow outdoors. Based on a rule-of-thumb of one gallon of water per plant per day and the water intensity of US average electricity production at the electricity intensities of Mills (2012) and seven liters of cooling water per kilowatt-hour (per Torcellini *et al.,* 2003), indoor cultivation indirectly consumes about 18-times as much water (~1300 gallons per plant) as the amount used for direct irrigation. Amounts will vary locally depending on practices and electric generation mix in the grid. Ironically, the most water-intensive mode of electricity production is otherwise environmentally lower-impact hydroelectric power. Meanwhile, the greenhouse-gas emissions associated with the electricity used to power indoor grows are fueling future droughts.

How much energy and emissions are embodied in inputs, equipment, and facilities used for cultivation?

The energy use in making soils (or single-use growing media), soil amendments, and pesticides for cannabis production has not been quantified. Nor has that for constructing facilities and the mechanical equipment that goes into them. Soils or other growing media are typically discarded after each indoor growing cycle, making this an ongoing stream of solid waste and embodied energy. As an illustration, we estimate that the mineral wool often used as a growing media in hydroponic indoor cannabis-cultivation operations increases the overall carbon footprint of the final cannabis product by approximately 5 to 11%, depending on cultivation practices (and likely more given that it is manufactured in areas with substantially higher electricity-related greenhouse-gas emissions than those assumed here).[17] In another example, peat that is mined as a soil amendment destroys an important carbon sink in the environment. Meanwhile, agricultural activities of all kinds consume about a billion pounds of plastic, a petrochemical product, annually in the United States alone (Grossman 2015).

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[17] Per Mills (2012), the grid-based electricity related emissions of CO_2 are 8.1 kg CO_2 per square foot for each indoor cannabis growth cycle. Per Bribian *et al.,* (2010), the lifecycle emissions of mineral wool are 1.511 kg CO_2 per kilogram for average European conditions. This emissions factor depends heavily on electricity generation mix. A value of 2.736 was determined by Aivazidou (2013) for conditions in Greece (where the electric system is heavily dependent on lignite coal). Much U.S. manufacturing occurs in Mississippi and West Virginia, where electricity-related CO_2 emissions are much higher than U.S. averages, which, in turn, are substantially higher than European-average emissions upon which Bribian *et al's* analysis is based. Mineral wool usage calculations are based on specific weight of 1.8 kg per cubic foot of mineral wool (per Grodan manufacturer's specs) and a range of material use in cultivation of 0.14 to 0.34 cubic feet (0.26 to 0.61kg) per square foot of growing area per growing cycle. This yields 0.38 to 0.92 kgCO_2/sf-cycle, or 5 to 11% of the energy-related emissions. This analysis generously assumes that yields are two pounds per light per cycle in industrial grow operations.

How much transportation energy is involved, and how can that be minimized?

The smaller the quantity of cannabis transported the greater the per-unit transportation emissions. In the original 2012 study (Mills 2012), transportation energy amounted to about 15% of the total carbon footprint. Vertically integrated operations (with co-located production, processing, and retail) may well reduce transportation energy requirements.

What is the ongoing role of black-market cultivation, which escapes statistical records?

There is a tendency to assume that with legalization "all" production shifts to a new footing. In practice black-market cultivation persists, and may well have a distinctly different energy and carbon profile than industrialized operations. Misdirected policy measures appear to be *enlarging* the black-market share of total production, which escapes regulation altogether. In California, for example, permitting has resulted in large amounts of paperwork and long periods of suspended operations. Fees in that state for a "medium" indoor facility (10,001-22,000 square feet) can be $80,000 per year, which can discourage participation in the regulated market. NFD (2012) estimates that black-market operations are still responsible for three-quarters of the energy used nationally. Non-uniform policy among the states is a significant driver of the black market, which fosters illegal transportation to states without legalization.

How much energy is embodied in producing cannabis products that never reach market?

The cannabis industry has been engaging in overproduction. Recent reports from Canada indicate extraordinary levels of overproduction, with only 4% of cannabis produced there reaching the market (McBride 2019). Technical problems during cultivation cycles (temperature excursions and mold outbreaks) can result in crop losses, and, for black market actors, interdiction also results in product not reaching the market. Product failing quality testing must be destroyed. The additional energy consumption associated with these factors has yet to be estimated but could be very significant.

Policy solutions

Previously, most policymakers' focus on the environmental impact of cannabis has been centered on outdoor cultivation, and even those efforts have been deemed highly inadequate by some observers (Carah *et al.,* 2015). The past California Lieutenant Governor's 2015 report on the topic doesn't once mention energy considerations (Blue Ribbon Commission on Marijuana Policy 2015).

Solutions to the problems of indoor cultivation must begin with earnest policymaker engagement. Sadly, as leading promulgators of energy R&D and policy at the national level, the U.S. Department of Energy and the U.S. Environmental Protection Agency, federal entities with decades of jurisdiction and creative work on energy efficiency through all segments of the economy, remain silent on the topic. Due to absence of legalization at the federal level, these agencies even back away from research on issues that could have significant public health and welfare implications (Plautz 2019). Moreover, vanishingly few policymakers at the state level, even in states with varying degrees of legalization, have embraced the issue. Notable exceptions

are Massachusetts and Illinois, which have taken initial steps, although the quality of the outcomes is uncertain.

Following are some key research needs in the policy sphere.

Gather and publish more representative and useful energy data. A start has been made on collecting measured data for actual facilities, but it is far from being representative of the market or having the resolution necessary to evaluate specific regions, cultivation practices, or facility types. It is essential to have third-party quality control and to ensure that these data are unbiased. An acute challenge here is that energy data in this industry—as for any energy-intensive industry—is regarded as highly proprietary. Producers as well as utilities are reluctant to disclose information. Lessons may be taken from the IT sector, in which there is now ample transparency of energy use in data centers and other high-tech facilities, despite prior concerns about the sensitivity of this information. In any case, raw data on energy use doesn't in and of itself identify rates of adoption of efficient technologies, best practices, or help facilities know how to improve. Action-oriented benchmarking can achieve these latter objectives (Mills 2015).

Improve transparency. Mandatory disclosure of total energy use as well as efficiency metrics for many types of non-residential buildings is becoming widespread nationally,[18] but the cannabis industry has thus far been passed over by these initiatives. Disclosure of this information could fill information voids that currently impede sound decision-making on the part of investors, energy companies, local authorities, cultivators, and consumers. More transparency regarding the role of energy expenses in business cost structures can help identify inefficiencies that foster energy waste, as well as help to develop best practices. Cultivators are typically required to report plant counts, the number of cropping cycles and the total amount harvested from each crop. Requiring cultivators to report the facility type and equipment deployed during each cropping cycle along with the aggregate energy used as well as energy per unit crop finished weight could provide additional valuable data for policy analysts.

Create an improved consumer information environment. Policy attention should be placed on consumer education and improved credible product labeling to enable more informed consumer choice and guard against the greenwashing that is today prevalent. Prior to distribution, producers are generally required to submit their products for testing and to make some of that information available to consumers through product labels. It would be a benefit to consumers to also have information regarding the methods used to produce the products and the associated carbon footprint. Dispensaries have a key role to play in this process and can help encourage energy efficiency by educating customers and promoting products that are produced using the most environmentally benign methods.

Eliminate anti-competitive market distortions. Subsidies to indoor cultivators (grants, tax credits, energy rebates, etc.) mask price signals intended to help markets function correctly. Awarding preferential electricity tariffs or cash incentives for new equipment disadvantages outdoor growers who have a vastly lower carbon footprint. Subsidies of all forms should be eliminated when they result in added energy use. Alternatively, it has been proposed that instead

[18] See https://database.aceee.org/state/building-energy-disclosure

of utilities providing financial incentives to "efficient" indoor growers, that they incentivize outdoor cultivators, which achieves the greatest energy savings (Davis 2019b).

Allocate a portion of licensing fees to help address externalities. Licensing fees for indoor operations are often higher than those for outdoor operations. This "signal" could be further improved by incorporating some fee-proportionality to energy intensity, with an appropriate portion of resulting fees reinvested in improving energy efficiency. Note that there is a tremendous loophole in the current California license fee structure: greenhouses regardless of how many supplemental lights they incorporate, are virtually exempt from indoor cultivation fees, yet, as noted above, their energy use is prodigious.

Develop science-based product-testing standards. To minimize unnecessary destruction of energy-intensive finished products, more effort is needed to ensure that required residue levels are realistic and in line with other consumer products such as tobacco and alcohol. Rather than requiring immediate destruction of products, quarantined products should be remediated where possible. Methods such as advanced distillation and micro-filtration have been used to remove pesticides, heavy metals and mold contaminants.

Conduct market-relevant publicly funded R&D. Public-sector R&D has a long and successful track record of compensating for market failures where private industry does not independently pursue technological pathways that are in the broader public interest (Mills 1995). Where there is lack of political will to mandate that all production be conducted outdoors, R&D can inform strenuous interventions to address the damage of any compromise position. These include better engineering and design tools for designers, labeling of energy using componentry, mandatory disclosure of energy use, and mandatory efficiency standards. Other promising avenues include plant genetics to minimize energy (and water) requirements, development of large-scale energy benchmarking and disclosure initiatives, impartial technology assessments, and peer-reviewed best-practice guidelines.

Where policymakers insist on subsidizing indoor growers – to the anticompetitive disadvantage of outdoor growers – the thresholds for eligibility should be uncompromising. Arguably, only "Net Zero" facilities, i.e., those that generate all energy on-site with zero-carbon methods (typically solar photovoltaic cells) should be allowed. Hundreds of net-zero non-residential buildings have been constructed around the country (NBI 2018), but there is no evidence that this has been done for cannabis production.

Conclusions

Cannabis policy and environmental policy must be harmonized. Until then, some of the nation's hardest-earned progress towards climate change solutions is at risk as regulators continue to ignore this industry's mushrooming carbon footprint. Thanks to this inattention, producers have enjoyed a climate-change double standard (and lack of support) while being passed over by a host of policies and programs successfully improving energy efficiency and deploying renewable energy into virtually every other segment of the economy.

Those citing climate pollution as a reason not to legalize cannabis are missing the point: legalization is necessary—but not sufficient—for addressing the problem. Yet, if done poorly, legalization can make the problem worse. Indeed, history may judge today's cannabis policymakers as betraying the public trust by enabling an industry with such a large carbon footprint.

Many are eager to see an industry more forthcoming about its carbon footprint and one that signals more hands-on interest in managing it and raising consumer awareness. A key factor in this process is individual consumer choice and expectations, which sends signals back to the market that ultimately help shape production choices and processes.

The continuation of indoor cultivation does not appear to be defensible on energy and environmental grounds. It can be argued that energy use can be reduced with large investments in energy efficiency or offset with renewable energy generation. However, this is an optimization of a suboptimal activity. These resources could be used more productively in other arenas where essentially zero-energy methods (e.g., outdoor cultivation, which has met humankind's needs for thousands of years) are not available. Even with zero-net-energy indoor practices, other issues such as mercury in lighting, embodied energy in buildings and equipment, water use, and solid waste production remain concerns. Meanwhile, zero-net-energy cannabis production facilities have not been demonstrated, presumably because of the enormous area (and cost) of the required solar arrays.

Proficiency in accomplishing the unnecessary will not yield true sustainability. Myopic optimization of an activity that does not have to be conducted in the first place is not a legitimate response to the very real risks society faces from climate change. The ethical integrity of indoor cultivation—even at the greatest imaginable "stretch" levels of energy efficiency and renewable propulsion—is in question. This is a pressing issue for producers, policymakers, and consumers alike.

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Text File

File Number: 20-874

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Business

In Control: City Council **File Type:** Resolution

Agenda Number: 8B.

Receive Report and Consider Adoption of Joint City Council/Municipal Improvement District Resolution Approving Budget Amendment 2021-05 Adjusting Selected Expenditures and Revenue Budgets

AGENCY:	**City Council**
MEETING DATE:	**October 13, 2020**
DEPARTMENT:	**City Manager**
PRESENTED BY:	**Tabatha Miller**
EMAIL ADDRESS:	**TMiller@fortbragg.com**

AGENDA ITEM SUMMARY

TITLE:
Receive Report and Consider Adoption of Joint City Council/Municipal Improvement District Resolution Approving Budget Amendment 2021-05 Adjusting Selected Expenditures and Revenue Budgets

ISSUE:
The COVID-19 pandemic, along with staff reductions and layoffs interrupted the normal FY 2020-21 annual budget process. On June 29, 2020, the Fort Bragg City Council adopted a budget with the understanding that it would be updated and revised as the year progressed and as the longer term impacts from the pandemic were better understood.

The Council has already adopted four budget amendments for FY 2020-21 and staff is recommending adoption of a fifth budget amendment.

ANALYSIS:
On April 6, 2020, staff presented a COVID-19 emergency financial report. The report provided three big picture scenarios: best case, middle of the road, and worst case. The City Council provided feedback to staff to take a more conservative approach to the FY 19-20 financial projections and the FY 20-21 budget and to return with a plan to reduce the operating budget and staffing levels.

The budget adopted by City Council on June 29, 2020 included the requested reductions but lacked the details and effort of prior years. The diversion of resources to COVID-19, including interim reporting and projections, and staff reductions resulted in a condensed budget document with many unknowns as the country and the world continued into a unique economic scenario, with little or no guidance. Staff agreed to provide regular financial updates to City Council as more information about Transient Occupancy Tax (TOT) and Sales Tax developed. TOT and Sales Tax revenues account for approximately 48% of General Fund revenues and were projected to be most vulnerable to the pandemic and economic shutdown.

In March, the City agreed to allow hotels and lodging establishments to postpone payment and reporting of the TOT until July 1st without penalties or interest, in an effort to help support those businesses. The State of California extended similar accommodations to businesses paying sales and use taxes. As a result, information on the financial impacts of the pandemic was limited through the end of the fiscal year. Adding to the challenges of predicting revenue in Fort Bragg was the uncertainty surrounding when businesses such as the hotels would be allowed to accommodate tourists and not just essential workers, under the Shelter-in-Place Orders. As provided in the September 14, 2020 Financial Update, TOT for July was well above the projections but still 10% below the prior year. TOT revenue for August has

both exceeded projections and last year's revenue by 14%.

	Fiscal Year 19/20 Actuals	Fiscal Year 20/21 Actuals	Change in %
July	386,779	348,760	-10%
August	337,695	384,534	14%
	724,474	733,294	4%

As a result of the better than expected results for July and August, and the clear evidence that there are more people in town and hotels are busy this fall, revenue estimates have been revised upward. In total, TOT projections have been increased by $133,293 since the September 14, 2020 projections and $563,230 above the original adopted budget based on the April 20, 2020 worst case scenerios.

	4-20-20 Projections	10-5-20 Actual and Revised Projections	Change in $	Change in %
January	$ 119,630	$ 119,630	$ -	0%
February	107,000	161,216	54,216	51%
March	69,000	95,244	26,244	38%
April	14,000	19,551	5,551	40%
May	23,000	34,812	11,812	51%
June	115,000	182,941	67,941	59%
July	174,000	348,760	174,760	100%
August	152,000	384,116	232,116	153%
September	153,000	250,000	97,000	63%
October	126,000	185,000	59,000	47%
November	121,000	150,000	29,000	24%
December	103,000	103,000	-	0%

Note: The chart reflects a calendar year, which includes the last six months of FY 19-20 and the first six months of FY 20-21.

Less information is available for the City's Sales Tax Revenues. For the FY 20-21 year, the City has only received revenue payment for the month of July and no detail is available. The other challenge with the state payments is that they are preliminary and subject to adjustments. Cities receive monthly payments. However, the regular monthly payments are an estimated advance plus current distributions processed during that month, many times from prior months. At the end of each quarter, the third monthly payment is a "true up" payment for the quarter. This means that monthly data may show trends but only quarterly data will truly reflect changes from period to period.

This is why we receive quarterly and not monthly updates from MuniServices, the City's sales tax consultant. As such, without that detail it is hard to draw conclusions or even project final revenue figures. The good news is that at the statewide level, prepayments from larger

taxpayers due August 24th from July sales were actually up 2% compared to the prior year.

The City's three separate sales tax payments are presented below. While staff is not proposing any changes to the current conservative projections, for the reasons stated above, these preliminary figures are encouraging and generally reflective of the positive statewide prepayment figures.

Sales Tax	FY 18-19 July	FY 19-20 July	FY 20-21 July	$ Change	% Change
General Fund	$ 170,395	$ 150,263	$ 144,623	$ (5,640)	-4%
Street Fund	$ 89,545	$ 81,768	$ 76,743	$ (5,025)	-7%
CV Starr Fund	$ 89,444	$ 81,767	$ 76,686	$ (5,081)	-7%

General Fund Expenditure Requests

Staff is requesting two increases to the General Fund Expenditure budget. The first is $15,000 to complete a study establishing the estimated reasonable cost of maintaining and updating the City's Planning Documents, including the Inland and Coastal General Plans. This request is tied to the resolution included on the consent calendar to temporarily waive the General Plan Maintenance Fee. This expenditure will be offset by a transfer from the General Plan Maintenance Fund.

The second increase is $28,000 to hire a work crew in the late fall and in the spring to remove the invasive weeds and plants on the Coastal Trail property. In the past, this was work was completed inexpensively by hiring Parlin Forks crews and utilizing City Hall and Public Works staff. However, for the past year and a half, those crews have been unavailable because of wild fires, forest fuel clean ups and COVID. This expense would be offset by a transfer from the Parkland Monitoring Fund, established with a payment from Georgia Pacific as part of the original purchase and transfer of the land for the Coastal Trail.

Wastewater Budget Updates

Budget Amendment 2021-05 includes two additional budget items for the Wastewater Fund. An increase of $120,000 for the additional costs of transporting and disposing of biosolids. At times over the last couple of months there has been a manure smell in town and more specifically around the City's Wastewater Treatment Plant (WWTP) near the mid-section of the Coastal Trail. The smell comes from drying biosolids produced at the WWTP. Biosolids are a treated organic product, which meets established criteria for beneficial use (fertilizer). The new WWTP is more effective at pulling biosolids from the waste stream. This means the treated effluent water is cleaner when released into the ocean, a plus. It also means that more biosolids need to be disposed of, a negative. The biosolids contain about 80% water and therefore need to be dried before transporting for agricultural disposal. The originally adopted FY 20-21 grossly underestimated the volume that the new plant would produce. As mentioned before, a drying system that removed more water from the biosolids would reduce the transportation cost, since biosolids transportation is based on weight. Options for a

longer term solution will be presented to the Public Works Committee in November.

The second expenditure budget request is a carryforward for additional projects at the Wastewater Treatment Plant that will spend the remaining USDA funding. These were not completed in FY19-20 and will be offset by the remaining USDA grant funding.

Council Requests

These amounts propose: 1) an increase in Visit Fort Bragg Campaign of $50,000, 2) Contribution to the Noyo Center for Marine Science of $25,000, and 3) Assistance of $5,000 for the Community Garden. These adjustments were suggested by individual Councilmembers. The City Council may modify these requests or add to them as they deem appropriate.

Future Considerations

Two positions that are not currently funded but staff recommends that the City Council consider for a future Budget Amendment is funding the position of Administrative Services/Finance Director and a Police Department Captain in place of one of the existing Sergeant positions. Both positions provide for a level of succession planning that does not exist with the current staffing. An Administrative Services/Finance Director would replace two director positions with one and provide a position that could serve as Acting City Manager and potentially with time, provide a succession plan for the City Manager position. The Captain position provides a higher level of support to the Interim Police Chief and, similar to the Administrative Services/Finance Director, could provide an in-house candidate when a recruitment is necessary to permanently fill the Chief position.

RECOMMENDED ACTION:
Adopt Resolution approving Budget Amendment No. 2021-05.

ALTERNATIVE ACTION(S):
1. Do not adopt Resolution.
2. Adopt Resolution with City Council directed modifications.
3. Provide staff further direction.

FISCAL IMPACT:
The net effect from the budget amendment to the General Fund, including the “Council Requests” will be a net increase to fund balance of $53,293. This will increase the prior projected surplus of $307,540 on September 28, to a current projected surplus of $360,833.

	Projected Fund Balance 06/30/2020	Revenue	Expenditures	Projected Fund Balance 06/30/21
General Fund Adopted 06/29/20	$ 1,935,643	$ 7,933,643	$ 8,282,469	$ 1,586,816
TOT Above Estimates	165,764	563,293		729,057
Sales Tax Above Estimates	283,661	179,500		463,161
CARES Act Allocation		91,702		91,702
Prior Net Expenditure			(68,416)	68,416
Leave Accrual Cashouts			57,612	(57,612)
Add. Grant Reim. Staff Time		115,226		115,226
Return Furloughed Staff 100%			67,642	(67,642)
Reinstate Police Premium Pays			66,750	(66,750)
Reinstate Frozen Planner		25,000	61,474	(36,474)
Park Monitoring Fees		28,000	28,000	
Contribution to Noyo Center			25,000	
Visit Fort Bragg Campaign			50,000	
General Plan Maintenance Fee Study		15,000	15,000	
Community Garden Contribution			5,000	
Updated Financial Projections	$ 2,385,068	$ 8,951,364	$ 8,590,531	$ 2,825,900
Fiscal Year 20-21 Projected Surplus/(Deficit)			**$ 360,833**	

The net impact to Waste Water Fund is an increase in expenditures of $120,000 and a decrease in the same amount to fund balance.

GREENHOUSE GAS EMISSIONS IMPACT:
Adoption of the budget amendment by itself will not impact greenhouse gas emissions.

CONSISTENCY:
The proposed budget amendment is consistent with City Council direction to maintain an operating surplus in the General Fund, pursue grant funding when available and to focus on development policies that support economic development, diversification of the local economy, and recovery from the recession.

IMPLEMENTATION/TIMEFRAMES:
Budget amendments will be effective on adoption.

ATTACHMENTS:
1. Resolution
2. Exhibit A to Resolution

NOTIFICATION:
N/A

RESOLUTION NO. ____-2020

RESOLUTION OF THE FORT BRAGG CITY COUNCIL

and

RESOLUTION NO. ID ____-2020

RESOLUTION OF THE FORT BRAGG MUNICIPAL IMPROVEMENT DISTRICT BOARD

ADOPTING BUDGET AMENDMENT 2021-05
AMENDING FY 2020/21 BUDGET

WHEREAS, on June 29, 2020, the Fort Bragg City Council and the Fort Bragg Municipal Improvement District No. 1 District Board adopted the Fiscal Year (FY) 2020-21 Budget; and

WHEREAS, the impacts of the COVID-19 pandemic, including reduced staff levels implemented through furloughs and layoffs, have interrupted the normal annual budget process; and

WHEREAS, the City Manager continues to review and revise the budget as the impacts from the COVID-19 pandemic and economic downturn are better understood; and

WHEREAS, the City Manager has identified updated revenue projections, additional expenditure adjustments and corrections to the FY 2020-21 budget as adopted by the City Council on June 29, 2020; and

WHEREAS, the adjustments and updates are identified in Exhibit A attached hereto; and

WHEREAS, there is sufficient revenue and adequate fund balance to fund the allocations; and

WHEREAS, based on all the evidence presented, the City Council/District Board finds as follows:

1. Certain adjustments to the FY 2020-21 Budget are necessary as shown in Exhibit A.
2. There are sufficient funds to fund the allocations.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Fort Bragg/District Board of the Fort Bragg Municipal Improvement District No. 1 does hereby amend the previously adopted FY 2020-21 Budget to incorporate the changes enumerated in Exhibit A.

The above and foregoing Resolution was introduced by Council/Board Member _____, seconded by Council/Board Member _____, and passed and adopted at a regular meeting of the City Council of the City of Fort Bragg/District Board of the Fort Bragg Municipal Improvement District No. 1 held on the 13th day of October, 2020, by the following vote:

AYES:
NOES:

ABSENT:
ABSTAIN:
RECUSED:

_____

WILLIAM V. LEE,
Mayor/Chair

ATTEST:

_____

June Lemos, CMC
City/District Clerk

Exhibit A

BUDGET AMENDMENT

Budget Adjustment #: **2021-05**

Budget FY: **FY 2020/21**

Account Description	Account #			FY 20/21 Current Budget	Increase (+) Budget Amt	Decrease (-) Budget Amt	Revised Total Budget Amt
Revenues							
Transient Occupancy Tax	110	0000	3137	$ 1,990,833	$ 445,460		$ 2,436,293
TOT AB01 Promotions	110	0000	3145	$ 156,083		$ 156,083	$ -
TOT AB02 Coastal Trail	110	0000	3146	$ 78,042		$ 78,042	$ -
TOT AB03 Noyo Center	110	0000	3147	$ 39,021		$ 39,021	$ -
TOT AB04 Special Projects	110	0000	3148	$ 39,021		$ 39,021	$ -
Xfer Park Monitor Fees (Coastal Trail Weed)	110	7999	7999	$ -	$ 28,000		$ 28,000
Xfer from General Plan Maintenance Fund	110	7999	7999		$ 15,000		$ 15,000
Expenditures							
Professional Services (Biosolids)	710	4712	0319	$ 6,500	$ 120,000		$ 126,500
CIP Treatment Facility (Final Projects)	716	7001	0731	$ -	$ 151,079		$ 151,079
General Plan Maintenance Fee Study	110	4130	0319	$ -	$ 15,000		$ 15,000
Xfer Park Monitor Fees (Coastal Trail Weed)	125	7999	0799	$ -	$ 28,000		$ 28,000
Professional Services (Coastal Trail Weed)	110	4392	0319	$ 8,400	$ 28,000		$ 36,400
Council Requests							$ -
Professional Services (Visit FB Campaign)	110	4321	0319	$ 10,000	$ 50,000		$ 60,000
Misc. Community Contrib. (Noyo)	110	4390	0619	$ 10,500	$ 25,000		$ 35,500
Professional Fees (Community Garden)	110	4110	0319	$ 16,000	$ 5,000		$ 21,000
							$ -
							$ -
							$ -
							$ -
							$ -
				$ 2,354,400	**$ 910,539**	**$ 312,167**	**$ 2,952,772**

Lemos, June

From: noreply@granicusideas.com
Sent: Monday, October 12, 2020 11:31 AM
To: Lemos, June
Subject: New eComment for City Council - Via Video Conference

New eComment for City Council - Via Video Conference

Jacob Patterson submitted a new eComment.

Meeting: City Council - Via Video Conference

Item: 8B. 20-874 Receive Report and Consider Adoption of Joint City Council/Municipal Improvement District Resolution Approving Budget Amendment 2021-05 Adjusting Selected Expenditures and Revenue Budgets

eComment: See attached

View and Analyze eComments

This email was sent from https://granicusideas.com.

Unsubscribe from future mailings

I will reserve comments on the propriety of the rest of the proposed budget amendments (and potential future budget amendments) and note that it is inappropriate in my opinion to use existing General Plan Maintenance Fee funds to prepare a study for the fee itself. The proposed $15,000 expenditure for a fee study should be funded by the General Fund instead as the proper source of the funding for this prudent effort. The General Plan Maintenance Fee is explicitly supposed to be used only for projects and programs that revise or implement the General Plan, including adopting ordinances and revising codes that are necessary to advance the goals and policies set out in the General Plan. Studying the projected costs that are used to calculate and justify the rate and basis for the General Plan Maintenance Fee has a tenuous connection to that explicit purpose and is not what permit applicants paid to have happen when they were assessed the fee as part of the building permit process. It can hardly be considered a "benefit" to a property to be subjected to a financial exaction, the General Plan Maintenance Fee, in the same way that actually updating the City's General Plan or land use regulations that determine how the property can be developed has a clear connection to the fee paid (albeit historically lacking a clear proportionate nexus).

Had this fee study been conducted when the General Plan Maintenance Fee was first adopted, as is required for all development impact fees, the City would not have bee able to pay for the work using General Plan Maintenance Fee funds because they did not exist yet. Simply shifting this required project into the future when the City was caught for not originally following the proper adoption procedure does not change the nature of the expense and does not magically transform it into an appropriate use of General Plan Maintenance Fee funds. Likewise, the City has not charged the staff time associated with preparing the annual and five-year reporting about the General Plan Maintenance Fee to the funds generated by that fee because basic accounting and reporting about fee itself does not advance the purpose of the fee to implement the General Plan. This shouldn't be any different just because we are suddenly facing more budget constraints and this special funding is an attractive alternative way to pay for normal administrative overhead.

This is not a case of no one is looking and no one cares, this is an apparent case of the City organization taking other people's money that is supposed to be used for limited purposes and trying to repurpose it to something else. Do none of you recall the $3,000,000 cost allocation plan shenanigans? Smaller amounts don't make proper fund accounting any less important.

Lemos, June

From: Norvell, Bernie
Sent: Tuesday, October 13, 2020 3:14 PM
To: Lemos, June
Subject: Fwd: 2020-2021 Budget Amendment

For tonight

B.

Bernie Norvell Vice Mayor City of Fort Bragg

Begin forwarded message:

From: William Bennett <fawn2@sbcglobal.net>
Date: October 13, 2020 at 3:12:23 PM PDT
To: "Norvell, Bernie" <Bnorvell2@fortbragg.com>
Subject: 2020-2021 Budget Amendment

Good afternoon, Vice Mayor Norvell:

I am writing you today in regards to the proposed amendment to our City's budget. I am happy to hear that our TOT and Sales tax dollars are up over projections and last year actuals. I do believe this speaks volumes about the direction our City Manager, staff and CC have taken to navigate our community as safely as possible through these very difficult times.

I would like to see continued funding to our Visit Fort Bragg campaign. Tourism has become vital to our community. Many of our businesses are working very hard to ensure we can still keep our tourism going and keep our community safe.

I would also like to express my support to the proposed "future considerations" of funding the positions of Administrative Services/Finance Director and PD Captain. The reasons listed for adding and funding these positions are very logical and prudent.

Sincerely,
Nancy Bennett

Virus-free. www.avast.com

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Text File

File Number: 20-875

Agenda Date: 10/13/2020 **Version:** 1 **Status:** Closed Session

In Control: City Council **File Type:** Report

Agenda Number: 9A.

CONFERENCE WITH REAL PROPERTY NEGOTIATORS FOR POSSIBLE ACQUISITION OF REAL PROPERTY, Pursuant to Government Code Section §54956.8: Real Property: APN 018-430-22-00, 90 W Redwood Ave., Fort Bragg, CA 95437; City Negotiator: Tabatha Miller, City Manager; Negotiating Party: Dave Massengill, Environmental Affairs, Georgia Pacific Corporation; Under Negotiation: Terms of Acquisition, Price