



COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

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Hearing Date: December 7, 2017

To: Humboldt County Planning Commission

From: John Ford, Director of Planning and Building Department

Subject: **Zoning Ordinance Amendments to Allow Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils**

The attached staff report was prepared for your consideration of proposed modifications to the Zoning Ordinance pertaining to agricultural accessory structures on prime agricultural soils at the public hearing on December 7, 2017. The staff report includes the following:

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Please contact Mary Milner at (707) 268-3772, or by email at Mmilner1@co.humboldt.ca.us, if you have any questions about the scheduled public hearing item.

cc: Coastal Commission

AGENDA ITEM TRANSMITTAL

Meeting Date	Subject	Contact
December 7, 2017	Zoning Ordinance Amendments to Allow Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils	Mary Milner, 268-3772

Project Description: This item involves consideration of Amendments to the Zoning Ordinance and Local Coastal Program (LCP) to allow improved floors and footpaths in greenhouses on prime agricultural soils, and provides the criteria and conditions for those allowances with a Special Permit.

Zoning restrictions for greenhouses on prime agricultural soils are meant to protect the underlying soils for future agricultural use. The current zoning ordinance prohibits improved floors and footpaths in greenhouses on prime agricultural soils. This limits the types of greenhouses available, including greenhouses used for new commercial cannabis cultivation. Permits for cannabis cultivation currently require that it take place only on prime agricultural soils.

The attached proposed amendments modify the County zoning code to allow floored greenhouses on prime agricultural soils with a Special Permit, provided they are designed to protect the underlying soils for future agricultural use when the greenhouse is removed. The proposed zoning amendments will require these greenhouses to be engineered, meet building codes, and the applicant must post a bond to assure the affected soils are returned to their original condition.

The amendments would modify sections 314-43.1.3.2 and 314-69.1.1.2 of Title III, Division 1, Chapter 4 (Inland Zoning Regulations); and section 313-69.1.5 to Title III, Division I, Chapter 3 (Coastal Zoning Regulations) of the Humboldt County Code.

Project Location: The Ordinance and LCP Amendments apply to all areas of the County on which agricultural activities occur on prime agricultural soils.

Present Plan Land Use Designation: N/A

Present Zoning: N/A

Case Number: N/A

Assessor Parcel Number: N/A

Applicant N/A

Owner N/A

Agent N/A

Environmental Review: A Negative Declaration has been prepared pursuant to the CEQA Guidelines.

Major Issues: None.

State Appeal Status: The LCP amendments must be certified by the California Coastal Commission.

Zoning Ordinance Amendments to Allow Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils

RECOMMENDED COMMISSION ACTION:

1. Open the public hearing item and receive a staff report.
2. Receive public comment.
3. Close the public comment portion of the meeting and deliberate on the proposed ordinance amendments.
4. Make the following motion to approve the item.

"I move to make all the required findings based on evidence in the staff report, and recommend that the Board of Supervisors approve the proposed amendments relating to agricultural accessory structures on prime agricultural soils in Attachment 3 (subject to the following modifications....) by adopting the attached Resolution."

Executive Summary: The project before the Commission involves amendments to the Zoning Ordinance and Local Coastal Program (LCP) to accommodate improved floors and footpaths in greenhouses on prime agricultural soils, and provides criteria for those greenhouses to protect the underlying soil.

The Board of Supervisors received a letter from the Agricultural Commissioner at the meeting on April 11, 2017 that suggested a greenhouse design with an elevated floor using particular construction methods would adequately protect the underlying prime agricultural soils for future use. With that information, the Board of Supervisors directed staff to review current zoning and building codes related to construction of elevated greenhouses with an improved floor on prime agricultural soils, and return with recommendations for modifying the code, if appropriate.

The current zoning ordinance prohibits improved floors in greenhouses on prime agricultural soils. These restrictions seek to preserve and conserve those soils, and to maximize the extent to which they are used for agriculture. They are meant to protect the soils for future agricultural use by ensuring they are not excavated, removed, or altered in a way that would fundamentally change their native character.

However, the current Commercial Medical Marijuana Land Use Ordinance ("CMMLUO") 314-55.4.8.2.1 specifies that new outdoor or mixed-light commercial cannabis cultivation may be approved only on Prime Agricultural Soils. So the restrictions on accessory structures on prime agricultural soils in the zoning ordinance limit the types of greenhouses available for new commercial cannabis cultivation on the only areas where they can be located. Floored greenhouses would allow a more controlled climate for cannabis cultivation, which is important for quality assurance and quality control. Without flooring, cannabis cultivation in greenhouses in the cooler, more humid parts of the county is less viable.

The purpose of the amendments is to allow potential commercial cultivators more options to design greenhouses with improved climate, moisture, and contamination control, which would encourage development and design innovation, and potentially improve, quality, yield and efficiency for cultivators.

The proposed amendments to the Cannabis Ordinance currently being considered by the Planning Commission would eliminate the requirement that new cannabis cultivation be located on prime agricultural soils. If adopted, the amended Cannabis Ordinance would diminish the

need to ease restrictions contemplated by these floored greenhouse amendments. Even with the new Cannabis Ordinance, however, it is expected that some proposed new cannabis cultivation operations could benefit from these amendments. These greenhouse floor amendments may also benefit some of the cannabis cultivation applications currently under review.

There are pluses and minuses about the proposed greenhouse floor amendments. On the "plus" side, greenhouses designed according to the proposed specifications, that adhere to conditions and bond requirements, would arguably not damage prime agricultural soils so they will be available for future agricultural use. Greenhouses without floors are currently allowed on prime agricultural soils, and adding floors designed as proposed would not increase the greenhouse footprints, change the function or methods of use of greenhouses, or take more prime agricultural soil out of production. As proposed, the amendments would allow a number of growers who applied for permits under the current CMMLUO to go forward with their projects. The raised floor greenhouse design was supported by the Agricultural Commissioner in a letter, and brought before the Board of Supervisors. So allowing improved floors in greenhouses supports important local agriculture and encourages design innovation and economic growth.

On the other hand, the General Plan also cites preservation of prime agricultural soil for agricultural use as a primary objective. The point of the current prohibition of floored greenhouses is to reserve prime agricultural soils for soil dependent activities. A fully enclosed greenhouse is not a soil dependent activity, and arguably should therefore not be located on prime agricultural soil.

Further, an unintended effect of the Cannabis Ordinance requirement that new commercial cultivation take place on prime agricultural soil is increased competition for properties with these soils. If these greenhouse floor amendments result in an increase in the number of commercial grows on prime agricultural soils, this could put further upward pressure on land prices, decreasing its availability for other crop cultivation.

Also, the requirement that new commercial grows be located on prime agricultural soils is a primary motivator for these greenhouse floor amendments, but the prime agricultural soil requirement is absent from the new version of the Cannabis Ordinance now under consideration, so the proposed amendments may have a limited benefit to the County. Finally, those that have already expressed opposition, including the Farm Bureau, point out that the proposed greenhouse floor amendments would benefit few growers, but may set precedent for conversion of prime agricultural soils in many areas of the County where impacts are proportionally greater. Opponents of the amendments also point to possible negative outcomes if the proposed ordinance criteria are not followed and properly enforced.

In summary, the proposed changes to the ordinance would (1) allow improved floors and footpaths in greenhouses on prime agricultural soils via Special Permits; (2) provide design criteria that will serve as a basis for evaluation for permit approval; and (3) require a bond to cover restoration of prime agricultural soils to conditions as near as possible to their original state. The proposed amendments have so far been met with a mixed response by the community. While the original proponents of the amendments are supportive, others in the community are opposed. For the purposes of discussion, this staff report is oriented in favor of the proposed amendments.

ALTERNATIVES: The Planning Commission could recommend the Board of Supervisors not adopt the proposed amendments. That recommendation would need to include evidence the proposed amendments are not in the public interest. Or the Commission could modify the proposed ordinance to be more aligned with the public interest.

RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF HUMBOLDT
Resolution Number 17-___

**Recommending adoption by the Board of Supervisors of the Planning Commission Approved
Zoning Ordinance Amendments Relating to Agricultural Accessory Structures on Prime
Agricultural Soils**

WHEREAS, the Accessory Agricultural Uses and Structures Ordinance was adopted on February 9, 1999 in compliance with the requirements of state law; and

WHEREAS, the above Ordinance allows accessory agricultural uses and structures, including greenhouses, on agricultural lands with the exception that greenhouses with improved floors or footpaths which will preclude the use of the underlying soil are not allowed on prime agricultural soils; and

WHEREAS, the current Commercial Medical Marijuana Land Use Ordinance ("CMMLUO") specifies that new outdoor or mixed-light commercial cannabis cultivation may only be approved on Prime Agricultural Soils, which precludes the use of greenhouses with improved floors or footpaths for those operations; and

WHEREAS, a number of approved or viable permit applications involve greenhouses on prime agricultural soils; and

WHEREAS, the proposed amendments to the Ordinance allow improved floors or footpaths in greenhouses on prime agricultural soils with a Special Permit, conditioned on a set of design criteria that assures minimal loss of resource integrity, among other protective measures.

NOW, THEREFORE, be it resolved, determined, and ordered by the Humboldt County Planning Commission that:

1. All the above citations are true and correct; and
2. The proposed amendments are in the public interest because they enable better utilization of permitted lands for cannabis cultivation, allow improved environmental controls which will result in higher quality cannabis products, and support an important agricultural activity while limiting potential loss of prime agricultural soils through Special Permit conditions.
3. The proposed amendments are consistent with all other Elements of the General Plan as described in Exhibit A of this Resolution.
4. The proposed amendments are consistent with Chapter 3 of the Coastal Act as described in Exhibit A of this Resolution.
5. The proposed amendments are consistent with all the other sections of zoning ordinances, including Humboldt County Code §312-50.3 (Required Findings for All Amendments) as described in Exhibit A of this Resolution.
6. The Initial Study was completed as required by the California Environmental Quality Act (CEQA) Guidelines finds that the zoning ordinance amendment would have a less-than-significant effect on the environment, because the changes pertain only to greenhouse floor design, and potential environmental effects examined are projected to be below significance thresholds. Therefore, a NEGATIVE DECLARATION has been prepared.

7. The coastal zoning ordinance amendment is statutorily exempt from environmental review per Section 15265 of the California Environmental Quality Act (CEQA) Guidelines; Coastal Commission approval of those amendments is an equivalent form of environmental review.

BE IT FURTHER RESOLVED that this Commission recommends that the Board of Supervisors of the County of Humboldt:

1. Hold public hearings in the manner prescribed by law.
2. Adopt the Planning Commission's findings.
3. Certify compliance with the requirements of CEQA as required by state law.
4. Adopt the Planning Commission recommended Zoning Ordinance Amendments to Permit Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils.

Adopted after review and consideration of all the evidence on _____.

The motion was made by Commissioner _____ and seconded by Commissioner _____.

AYES: Commissioners:
NOES: Commissioners:
ABSTAIN: Commissioners:
ABSENT: Commissioners:
DECISION:

I, John Ford, Secretary to the Planning Commission of the County of Humboldt, do hereby certify the foregoing to be a true and correct record of the action taken on the above entitled matter by said Commission at a meeting held on the date noted above.

John Ford
Director, Planning and Building Department

Exhibit A - Findings

Statement of findings: The following table identifies the evidence that supports the finding that the proposed implementing ordinances are consistent with Section 312-50.3 of the Zoning Ordinance (Required Findings for All Amendments), and CEQA.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Consistency with Section 312-50.3 of the Zoning Ordinance: 1) Public Interest	The amendment is in the public interest.	Land use regulation seeks, among other goals, to provide for orderly development of rural lands consistent with the need to encourage sustained production without land degradation. The proposed ordinances meet this goal by supporting agricultural activities while assuring sustainable practices. By encouraging optimal use of permitted lands available for cannabis cultivation, while limiting damage to prime agricultural soils through Special Permits, the zoning amendments would allow cultivators to operate with greater flexibility and lessen the impact of restrictions on the uses allowed on prime agricultural land. At the same time, the amendments seek to protect that resource for future use. Such balancing of growers' needs and resource protection is in the public interest.
Consistency with Section 312-50.3 of the Zoning Ordinance: 2) Consistency with the General Plan Agricultural Resources Section 4.5 AG-P6. Agricultural Land Conversion - No Net Loss.	Zoning or the implementation of the plan is required to be consistent with the plan. Lands planned for agriculture shall not be converted to non-agricultural uses unless specific findings can be made	The amended ordinances are consistent with the general plan because they support an important local agricultural activity, but impose certain permit requirements to protect the prime agricultural soil resource. The proposed ordinance changes are expected to result in new development (improved floors) that is internal to the greenhouses currently allowed by the ordinance. The new allowances do not involve new structures beyond those already permitted. Performance standards in the ordinance ensure protection of the underlying prime agricultural soil, and will return the site to its natural condition when the greenhouse floor is no longer needed.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Conservation and Open Space Chapter 10 Open Space Section 10.2	Goals and policies contained in this Chapter relate to an Open Space and Conservation Program that is complimentary to other agencies' plans and that preserves the county's unique open spaces (CO-G1, CO-G3) Related policies: CO-P1, Conservation and Open Space Program; CO-P8, Development Review, CO-S1. Identification of Local Open Space Plan, and CO-S2. Identification of the Open Space Action Program	The proposed ordinances will affect land that is for agricultural uses. The proposed amendments can be found consistent with the Open Space Action Plan because the proposed modifications would encourage uses allowed by the agricultural Land Use Designations. For example, the proposed amendments will support cannabis cultivation - an agricultural product - within land planned for agricultural purposes, consistent with the use of Open Space land for managed production of resources. The proposed ordinance includes standards to return the agricultural soils to their natural conditions consistent with the preservation of natural resources within open space.
3) Consistency with the Coastal Act: Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	The proposed amendments must conform to the policies contained in Chapter 3 of the Coastal Act. Chapter 3 sets forth policies regarding all the following items: Access (including provisions for access with new development projects, public facilities, lower cost visitor facilities, and public access)	The proposed ordinance in the coastal zone does not contain any measures that will directly result in or otherwise encourage new development, but rather changes the parameters for uses already permitted. Furthermore, the proposed changes would not alter or impact the public's access to the sea.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Recreation (including protection of water-oriented activities, ocean-front land protection for recreational uses, aquacultural uses, and priority of development purposes)	Because the proposed changes affect the interiors of agricultural accessory structures only, they will not change the patterns, timing, or intensity of development in the unincorporated area. Water-oriented activities would not be impacted by changes made to the design criteria for greenhouses, except that air quality and runoff control may actually improve in greenhouses with improved floors and vapor barriers.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Marine Resources (including protecting biological productivity, prevent hazardous waste spills, diking, filling and dredging, fishing, revetments and breakwaters, and water supply and flood control)	Because the proposed changes affect the interiors of agricultural accessory structures only, they will not change the patterns, timing, or intensity of development in the unincorporated area. In addition, floored greenhouses with vapor barriers would better protect water quality in coastal waters, streams, wetlands, estuaries, and lakes, as runoff can be better contained for re—use. Therefore these ordinances will not negatively impact, and may enhance marine resources.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Land Resources (including environmentally sensitive habitats, agricultural lands, timberlands, and archaeological resources)	The proposed amendments would allow a certain amount of prime agricultural land to be covered by improved floors or footpaths, removing it from cultivation for as long as the floors remain intact. However, the amendments preserve the integrity of prime agricultural soils during this non-use period by requiring a Special Permit. Permit conditions include that the floor be permeable to air and water (i.e., elevated), among other protections. These changes to the interiors of greenhouses would not change the patterns, timing, or intensity of residential development in the unincorporated area. Therefore, with the exception of temporary, non-destructive coverage of some prime agricultural soils inside greenhouses, these changes will have no significant impact on land resources.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Development (including scenic resources, public works facilities, safety, and priority of coastal dependent developments)	The proposed changes in design for greenhouses pertain to floors only, and would not change the locations, function, or exterior appearance of structures, so they would have no impact on scenic resources, public works facilities, safety, and priority of coastal dependent developments.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Industrial Development including location and expansion, use of tanker facilities, oil and gas development and transport (both onshore and off), and power plants.	The changes to design criteria for greenhouses pertain only to the interior parts of already permitted structures, and therefore would have no impact on industrial development including location and expansion, use of tanker facilities, oil and gas development and transport (both onshore and off), and power plants.

Section(s)	Applicable Requirements	Evidence Supporting Finding
The LCP Amendment shall be carried out in accordance with the Coastal Act (Public Resources Code, § 30200).	The LCP Amendments will be carried out in accordance with the Coastal Act (pursuant to Section 30510(a) of the Act.	The ordinance amending the LCP is being carried out in accordance with the Coastal Act (pursuant to Section 30510(a) of the Act). This section of the coastal act identifies the procedural requirements of ordinance changes and other local coastal plan amendments.
4) Housing Element Residential Development Potential	The proposed amendment shall not reduce the residential density for any parcel below the mid- point of the density range specified in the plan designation unless certain site-specific findings are made.	The zoning code amendments propose changes to interior designs of agricultural accessory structures only. No residential structures are affected, so the proposed amendments will have no effect on the development potential of any site.

Environmental Impact: An Initial Study was performed for the proposed zoning code amendments pertaining to areas outside the coastal zone (314-43.1 and 314.69.1) as per Sections 15063 of the California Environmental Quality Act (CEQA) Guidelines. The Initial Study finds that the inland zoning ordinance amendment would have a less-than-significant effect on the environment, and a Negative Declaration was prepared. There is no evidence before the Department that these amendments would have an adverse effect, either individually or cumulatively, on the environment. The Initial Study and Negative Declaration are in Attachment 4.

ATTACHMENT 1

SUMMARY OF PROPOSED AMENDMENTS

Zoning Ordinance Amendments Relating to Agricultural Accessory Structures on Prime Agricultural Soils

The purpose of the Amendments to the Zoning Ordinance (§314-43.1.3.2 and §314-69.1.1.2 of Title III, Division 1, Chapter 4 (Inland Zoning Regulations)) and Local Coastal Program (LCP) (§313-69.1.5 to Title III, Division 1, Chapter 3 (Coastal Zoning Regulations)) is to better utilize the permitted lands available for cultivation of cannabis, and to improve environmental controls on cultivation by removing the prohibition of greenhouses with improved floors located on prime agricultural soils. The current restrictions limit the types of greenhouses available for new commercial cannabis cultivation on these sites, even though permits for such sites require that cultivation take place on prime agricultural soils. The amendments attempt to strike a balance between protecting an important resource and minimizing restrictions that negatively impact potential economic development.

The proposed changes amend the zoning regulations pertaining to agricultural accessory uses and structures, so that greenhouses with improved floors or footpaths that preclude agricultural use of the underlying soil are allowed under Special Permits, subject to certain conditions. Those conditions are that greenhouse floors must a) be permeable to air and moisture (an impermeable raised floor meets this requirement), (b) not result in significant compaction or erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with soil or concrete perimeter design.

Other permit conditions intended to protect and preserve soil integrity are (1) a requirement that imported spent soils must be spread over the site, tilled, and not concentrated; (2) the Special Permit application is to include a plan as to how imported soil is recycled, reused, or disposed of; and (3) posting of a performance bond by the applicant to ensure removal of all materials covering or contacting prime agricultural soils, and restoration of the soil to as near its original condition as possible.

The design criteria and permit conditions follow recommendations set forth in a letter from the Agricultural Commissioner, and consider comments from the Humboldt County Farm Bureau, the Williamson Act Committee chairperson, a soils consultant, a commercial cultivator, a commercial construction contractor, and a permit consultant. **Table 1** below summarizes the current Code compared with proposed for both Inland and Coastal Zoning Codes.

TABLE 1. EFFECT OF PROPOSED CHANGES			Effect of Proposed Change
Code Sec		Current Code	
Humboldt County Inland			
314-43.1.3 & 314-69.1.1	Greenhouses with an improved floor or footpath which precludes ag use of the underlying soil, on prime ag soil	Not allowed on prime agricultural soils	May be located on prime agricultural soils, Special Permit
	On non-prime agricultural soils	Special permit	Special permit
		No criteria	Special Permit criteria, Floors or footpaths in greenhouses on prime agricultural soils must: (a) be permeable to air and moisture (impermeable raised floor meets requirement), (b) not result in significant compaction and erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with soil or concrete perimeter design.
		NA	Imported spent soils must be spread over the site, filled, and not concentrated
		NA	Application shall include provisions to address how imported soil is recycled, reused, or disposed of
	Concrete, asphalt, and similar footpaths within a greenhouse on non-prime agricultural soils	NA	Performance bond
	On prime agricultural soils	Permitted	Permitted
		Special permit	Special permit
Humboldt County Coastal Areas			
313-69.1.5	Greenhouses with concrete slab floors	Not allowed on prime agricultural soils	May be located on prime agricultural soils, Special Permit
	On non-prime agricultural soils	Permitted	Permitted
		No criteria	Special Permit criteria, Floors or footpaths in greenhouses on prime agricultural soils must: (a) be permeable to air and moisture (impermeable raised floor meets requirement), (b) not result in significant compaction and erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with soil or concrete perimeter design.
		NA	Imported spent soils must be spread over the site, filled, and not concentrated
		NA	Application shall include provisions to address how soil used within the greenhouse is recycled, reused, or disposed of.
		NA	Performance bond
	Concrete, asphalt, and similar footpaths within a greenhouse on non-prime agricultural soils	Permitted	Permitted
	On prime agricultural soils	Special permit	Special permit

ATTACHMENT 2

Analysis of Evidence Supporting the Required Findings for the Zoning Ordinance Amendments

REQUIRED FINDINGS

To approve these zoning ordinance amendments, Section 312-50.3 of the Zoning Ordinance (Required Findings for All Amendments) requires the Planning Commission and Board of Supervisors make all of the following findings.

1. The amendment is in the public interest (Former Section INL#317-9; CZ#A316-9(a)); and
2. The amendment is consistent with the County General Plan (Former Section INL#317-9; CZ#A316-9(b)).
3. If the amendment requires a Local Coastal Plan Amendment, the amendment is in conformity with the policies of Chapter 3 (commencing with Section 30200) of the Coastal Act. (Added by Ord. 2214, 6/6/00)
4. The proposed amendment does not reduce the residential density for any parcel below that utilized by the Department of Housing and Community Development in determining compliance with housing element law (the midpoint of the density range specified in the plan designation) unless certain site-specific findings are made.

In addition, the California Environmental Quality Act (CEQA) states that one of the following findings must be made prior to approval of any development which is subject to the regulations of CEQA. The project either:

- a) is categorically or statutorily exempt; or
- b) will not have a significant effect on the environment and a negative declaration has been prepared; or
- c) has had an environmental impact report (EIR) prepared and all significant environmental effects have been eliminated or substantially lessened, or the required findings in Section 15091 of the CEQA Guidelines have been made.

STAFF ANALYSIS OF THE EVIDENCE SUPPORTING THE REQUIRED FINDINGS

Setting: The proposed Zoning Code Amendments would pertain to all property in unincorporated Humboldt County with a Prime Agricultural Soil classification and where commercial cultivation occurs in greenhouses. Areas with prime agricultural soils are zoned primarily as AE and AG. Property with this zoning designation is located both inland in Humboldt County and in the coastal zones, subject to coastal plans. Of the approximately 345,238 acres of land identified as agricultural lands by the Humboldt County GIS mapping system, approximately 12%, or 42,000 acres are identified as prime agricultural lands, primarily based upon soil type.¹ The majority of the County's prime agricultural lands that have been mapped are found in areas of highly productive soils along the Mad River, Redwood Creek, Eel River Deltas, and Humboldt Bay, as well as inland along major river courses.

¹ Humboldt County General Plan Revised Draft EIR, Chapter 3.2.

Background: The Accessory Agricultural Uses and Structures Ordinance was adopted on February 9, 1999 in compliance with the requirements of state law, and codified as Sections 314-43.1.3.2, 314-69.1, and 313- 69.1.5 of the Humboldt County Zoning Code.

Exclusion of Improved Floors in Greenhouses on Prime Agricultural Soils

The Ordinance permits accessory agricultural uses and structures, including greenhouses, on agricultural lands with the exception that greenhouses are not allowed on prime agricultural soils if they have improved floors or footpaths that would preclude agricultural use of the underlying soils. This type of greenhouse is currently allowed on non-prime agricultural soils with a Special Permit.

Limitation of New Commercial Cultivation on Parcels Greater than 5 Acres to Prime Agricultural Land

The current Commercial Medical Marijuana Land Use Ordinance ("CMMLUO") specifies that new outdoor or mixed-light commercial cannabis cultivation on parcels 5 acres or larger in size may only be approved on Prime Agricultural Soils. The use of greenhouses with improved floors or footpaths for those operations is precluded on account of the previously mentioned Ordinance.

Original Greenhouse Design Proposals

1. Northern Emeralds Elevated Floor Greenhouse

Northern Emeralds proposed a greenhouse design in March of 2017 which was reviewed by the Agricultural Commissioner, and which involved an elevated floor. The objective was protection of prime agricultural soils, among other design matters. No plan was submitted at that time; however a sketch was provided (Attachment 5). Also included in the Supplementary items are the email chain explaining Northern Emeralds' design concepts, and a letter of support from the Agricultural Commissioner.

2. Alchemy Temporary Greenhouse Plan

A plan proposing a greenhouse with a temporary floor supported by pilings was submitted to planning in March of 2017 by Alchemy Construction. Alchemy asked whether Planning would consider a temporary greenhouse permissible on prime agricultural land. The main motivator for the design was a desire to heat the greenhouse floor through lightweight, removable cast concrete. The plan included a drawing showing the greenhouse supported by helical pilings. Attachment 5 contains communications from Mr. Bohner of Alchemy Construction which include the following items:

- the Alchemy Construction emails and replies from Planning,
- a drawing of the greenhouse with temporary concrete slab floor,
- a copy of a fact sheet and advice from the New Jersey Department of Agriculture regarding temporary greenhouses, and
- emails between Alchemy and Planning in March of 2017.

Stephen Bohner said in a phone call on August 23, 2017 that he doubted that the helical piling foundation design in his drawing would work for an elevated floor due to cost and the weight of materials (dirt plus concrete, plus plants).

Although the temporary design submitted by Alchemy does not include an elevated floor, the exchange is included here as an example of the interplay between regulations and industry

design innovation. Alchemy borrowed a reasonable set of criteria (the New Jersey Admin Code section on greenhouses) and used it as a design guide.

3. Letter of Support from Jeff Dolf, Agricultural Commissioner

In his letter to Steve Werner of March 20, 2017, Mr. Dolf comments on Northern Emeralds' elevated floor design and enumerates the design features compatible with protection of prime agricultural soils:

- Permeability of floor covering to air and moisture,
- 1-2 ft clearance between soil and subfloor,
- No excavation, replacement, or significant alteration of native soils,
- Reduce compaction,
- Reduce potential for erosion, and
- If spent soils are disposed of on-site, they should be spread and tilled over a large area, and not concentrated in a limited area.

A draft of the proposed ordinance amendments was circulated on August 25, 2017 among parties who expressed, or who might have an interest in the amendments. These were Jeff Dolf, John LaBoyteaux, Katherine Ziemer, Lauren Sizemore, Jonathan Schultz, and Cliff Johnson. The responses received are summarized below and included in Attachment 5.

Discussion and Comments

1. Board of Supervisors Request for Review

The Agricultural Commissioner's submitted a request for review of the Ordinance to the Board of Supervisors on April 11, 2017 who directed staff to review current building codes related to construction of elevated greenhouses with an improved floor on agricultural soil.

2. Key Soil Protection Elements

In the Agricultural Commissioner's letter of support, he pointed out key elements for protection of the resource; most critically, that any soil surface covering be permeable, allowing water and air to pass through the covering. Other important provisions are 1-2 feet of clearance between the subfloor and the soil surface; and no excavation from the site, replacement, or significant alteration of native soils. John LaBoyteaux, Humboldt County Williamson Act Committee Chairperson, suggested as an additional safeguard for soil quality, that if spent imported soil is disposed of on-site, it should be spread and tilled into the native soil over a large area, and not concentrated.

3. Comments in Opposition

John LaBoyteaux, Williamson Act Committee Chairperson

In his letter, the Ag Commissioner mentions a consultation with John LaBoyteaux, a recognized authority on prime agricultural land and soils and Williamson Act Committee Chairperson. Mr. LaBoyteaux initially concurred that the elevated floor design would protect prime agricultural soils and suggested additional safeguards. A later email (C6) and a letter from the industry group Food, Fiber and Flowers (C8) express a change in opinion away from support of the greenhouse floor amendments. Arguments in opposition are that (1) the amendments to the ordinance are unnecessary, because the current and widely used hoophouse design is

adequate and does not require a concrete base, floor or pathways, or an elevated floor; (2) even with an elevated floor, the foundation pillars could cause soil damage; and (3) once built, the structures might be converted to another use, resulting in complete loss of productivity on the site.

Humboldt County Farm Bureau

Katherine Ziemer, Executive Director of the Humboldt County Farm Bureau stated in a phone call on September 28, 2017 that the land use board met to discuss the proposed amendments and it opposes the change to the ordinance allowing floored greenhouses on prime agricultural land. She drafted a letter with their observations and opinions, included in Supplemental No. 1, C7. The Bureau believes that cannabis cultivators will not adhere to conditions of the ordinance, resulting in damage to AE soils. Additional objections are that (1) their financial interests in prime ag properties will increase prices and prevent purchase by other agricultural producers; (2) cannabis cultivation as currently practiced in greenhouses is non-soil dependent, and therefore more suitable for sites zoned Commercial and Industrial; (3) the amendments increase regulation but do not actually protect prime ag soils; and (4) the regulation may be extended in the future to harm other agricultural producers.

California Coastal Commission

In informal personal conversations, staff from the North Coast District expressed concern that the Coastal Commission may not be able to make the finding that the proposed amendments are consistent with the Coastal Act. They mentioned concerns that the proposed protection measures may not be sufficient to ensure the long term viability of the underlying soil, and therefore may result in a conversion of prime agricultural soil to other uses, which is inconsistent with the Coastal Act.

Project Description:

Zoning Code and Local Coastal Plan Amendments

The purpose of the Amendments to the Zoning Ordinance and Local Coastal Program (LCP) is to remove the prohibition of greenhouses with improved floors located on prime agricultural soils, in order to enable utilization of lands available for cultivation of cannabis, and to allow potential commercial cultivators more options to design greenhouses with improved climate, moisture, and contamination control.

Factors motivating the proposed elevated floor design include better containment of water and nutrient runoff, a relatively sealed environment for water recapture and re-use, and better moisture and contaminant control, all of which would improve quality of the product and reduce environmental impacts. The proposed amendments would allow potential commercial cultivators more design options, encourage development and innovation, and could potentially increase employment in agricultural areas.

1. Design Criteria

The proposed amendments to the Ordinance allow improved floors or footpaths in greenhouses on prime agricultural soils with a Special Permit, conditioned on a set of design criteria that assures minimal loss of resource integrity, among other protective measures.

In order for a Special Permit to be issued for a greenhouse with an improved floor or footpath in prime agricultural soils, the floors or footpath must: (a) be permeable to air and moisture (impermeable raised floor meets requirement), (b) not result in significant compaction and erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with soil or concrete perimeter design. In addition, spent imported soils must be spread over the site, tilled, and not concentrated in any area. Applicants shall include provisions in the application to address how imported soil is recycled, reused, or disposed of.

2. Performance Bond

A performance bond is required in an amount sufficient to allow the County to contract to remove all materials covering or contacting prime agricultural soils, and restoration of the soil to as near its original condition as possible in the event that the permittee fails to do so.

Statement of findings: The following table identifies the evidence that supports the finding that the proposed implementing ordinances are consistent with Section 312-50.3 of the Zoning Ordinance (Required Findings for All Amendments), and CEQA.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Consistency with Section 312-50.3 of the Zoning Ordinance: 1) Public Interest	The amendment is in the public interest.	Land use regulation seeks, among other goals, to provide for orderly development of rural lands consistent with the need to encourage sustained production without land degradation. The proposed ordinances meet this goal by supporting agricultural activities while assuring sustainable practices. By encouraging optimal use of permitted lands available for cannabis cultivation, while limiting damage to prime agricultural soils through Special Permits, the zoning amendments would allow cultivators to operate with greater flexibility and lessen the impact of restrictions on the uses allowed on prime agricultural land. At the same time, the amendments seek to protect that resource for future use. Such balancing of growers' needs and resource protection is in the public interest.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Consistency with Section 312-50.3 of the Zoning Ordinance: 2) Consistency with the General Plan Agricultural Resources Section 4.5 AG-P6. Agricultural Land Conversion - No Net Loss.	Zoning or the implementation of the plan is required to be consistent with the plan. Lands planned for agriculture shall not be converted to non-agricultural uses unless specific findings can be made	The amended ordinances are consistent with the general plan because they support an important local agricultural activity, but impose certain permit requirements to protect the prime agricultural soil resource. The proposed ordinance changes are expected to result in new development (improved floors) that is internal to the greenhouses currently allowed by the ordinance. The new allowances do not involve new structures beyond those already permitted. Performance standards in the ordinance ensure protection of the underlying prime agricultural soil, and will return the site to its natural condition when the greenhouse floor is no longer needed.
Conservation and Open Space Chapter 10 Open Space Section 10.2	Goals and policies contained in this Chapter relate to an Open Space and Conservation Program that is complimentary to other agencies' plans and that preserves the county's unique open spaces (CO-G1,CO-G3) Related policies: CO-P1, Conservation and Open Space Program; CO-P8, Development Review, CO-S1. Identification of Local Open Space Plan, and CO-S2. Identification of the Open Space Action Program	The proposed ordinances will affect land that is for agricultural uses. The proposed amendments can be found consistent with the Open Space Action Plan because the proposed modifications would encourage uses allowed by the agricultural Land Use Designations. For example, the proposed amendments will support cannabis cultivation - an agricultural product - within land planned for agricultural purposes, consistent with the use of Open Space land for managed production of resources. The proposed ordinance includes standards to return the agricultural soils to their natural conditions consistent with the preservation of natural resources within open space.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Consistency with Section 312-50.3 of the Zoning Ordinance: 2) Consistency with the General Plan § 1330	Zoning or the implementation of the plan is required to be consistent with the plan.	Under the General Plan, zoning regulations exist to help develop a stable and diverse economic base and support long term local employment, as well as encourage both growth of local business and expansion of existing industries. Other objectives are to conserve the optimum amount of agricultural land for agricultural use, and to act with the fewest possible restrictions on freedom of citizen's use of their property and with minimum economic disruption. The amended ordinances and LCP are consistent with the general plan because they support an important local agricultural activity, but impose certain permit requirements to protect the resource. Commercial cultivators who wish to operate on prime agricultural lands would have fewer restrictions; the changes are internal to the greenhouses and do not involve new structures beyond those already permitted.
3) Consistency with the Coastal Act: Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	The proposed amendments must conform to the policies contained in Chapter 3 of the Coastal Act. Chapter 3 sets forth policies regarding all the following items: Access (including provisions for access with new development projects, public facilities, lower cost visitor facilities, and public access)	The proposed ordinance in the coastal zone does not contain any measures that will directly result in or otherwise encourage new development, but rather changes the parameters for uses already permitted. Furthermore, the proposed changes would not alter or impact the public's access to the sea.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Recreation (including protection of water-oriented activities, ocean-front land protection for recreational uses, aquacultural uses, and priority of development purposes)	Because the proposed changes affect the interiors of agricultural accessory structures only, they will not change the patterns, timing, or intensity of development in the unincorporated area. Water-oriented activities would not be impacted by changes made to the design criteria for greenhouses, except that air quality and runoff control may actually improve in greenhouses with improved floors and vapor barriers.

Section(s)	Applicable Requirements	Evidence Supporting Finding
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Marine Resources (including protecting biological productivity, prevent hazardous waste spills, diking, filling and dredging, fishing, revetments and breakwaters, and water supply and flood control)	Because the proposed changes affect the interiors of agricultural accessory structures only, they will not change the patterns, timing, or intensity of development in the unincorporated area. In addition, floored greenhouses with vapor barriers would better protect water quality in coastal waters, streams, wetlands, estuaries, and lakes, as runoff can be better contained for re—use. Therefore these ordinances will not negatively impact, and may enhance marine resources.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Land Resources (including environmentally sensitive habitats, agricultural lands, timberlands, and archaeological resources)	The proposed amendments would allow a certain amount of prime agricultural land to be covered by improved floors or footpaths, removing it from cultivation for as long as the floors remain intact. However, the amendments preserve the integrity of prime agricultural soils during this non-use period by requiring a Special Permit. Permit conditions include that the floor be permeable to air and water (i.e., elevated), among other protections. These changes to the interiors of greenhouses would not change the patterns, timing, or intensity of residential development in the unincorporated area. Therefore, with the exception of temporary, non-destructive coverage of some prime agricultural soils inside greenhouses, these changes will have no significant impact on land resources.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Development (including scenic resources, public works facilities, safety, and priority of coastal dependent developments)	The proposed changes in design for greenhouses pertain to floors only, and would not change the locations, function, or exterior appearance of structures, so they would have no impact on scenic resources, public works facilities, safety, and priority of coastal dependent developments.
Administrative Regulations – Title 14, § 13551 and Public Resources Code, § 30200	Industrial Development including location and expansion, use of tanker facilities, oil and gas development and transport (both onshore and off), and power plants.	The changes to design criteria for greenhouses pertain only to the interior parts of already permitted structures, and therefore would have no impact on industrial development including location and expansion, use of tanker facilities, oil and gas development and transport (both onshore and off), and power plants.

Section(s)	Applicable Requirements	Evidence Supporting Finding
The LCP Amendment shall be carried out in accordance with the Coastal Act (Public Resources Code, § 30200).	The LCP Amendments will be carried out in accordance with the Coastal Act (pursuant to Section 30510(a) of the Act.	The ordinance amending the LCP is being carried out in accordance with the Coastal Act (pursuant to Section 30510(a) of the Act). This section of the coastal act identifies the procedural requirements of ordinance changes and other local coastal plan amendments.
4) Housing Element Residential Development Potential	The proposed amendment shall not reduce the residential density for any parcel below the mid- point of the density range specified in the plan designation unless certain site-specific findings are made.	The zoning code amendments propose changes to interior designs of agricultural accessory structures only. No residential structures are affected, so the proposed amendments will have no effect on the development potential of any site.

Environmental Impact: An Initial Study was performed for the proposed zoning code amendments pertaining to areas outside the coastal zone (314-43.1 and 314.69.1) as per Sections 15063 of the California Environmental Quality Act (CEQA) Guidelines. The Initial Study finds that the inland zoning ordinance amendment would have a less-than-significant effect on the environment, and a Negative Declaration was prepared. There is no evidence before the Department that these amendments would have an adverse effect, either individually or cumulatively, on the environment. The Initial Study and Negative Declaration are in Attachment 4.

Attachment 3

Proposed Zoning Ordinance Amendments to Permit Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils

BOARD OF SUPERVISORS, COUNTY OF HUMBOLDT, STATE OF CALIFORNIA
Certified copy of portion of proceedings, Meeting of _____, 201_

ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF HUMBOLDT AMENDING TITLE III, DIVISION 1, CHAPTER 3, SECTION A: REGULATIONS THAT APPLY IN ALL OR SEVERAL ZONES, PART 2: STRUCTURES AND FACILITIES, SECTION 313-69.15; AND TITLE III, DIVISION 1, CHAPTER 4, SECTION A: REGULATIONS FOR THE ZONING DISTRICTS, PART 1: PRINCIPAL ZONES, SECTIONS 43.1 AND 69.1, OF THE HUMBOLDT COUNTY CODE.

ORDINANCE NO. _____

WHEREAS, the Accessory Agricultural Uses and Structures Ordinance was adopted on February 9, 1999 in compliance with the requirements of state law; and

WHEREAS, the above Ordinance allows accessory agricultural uses and structures, including greenhouses, on agricultural lands with the exception that greenhouses with improved floors or footpaths which will preclude the use of the underlying soil are not allowed on prime agricultural soils; and

WHEREAS, the current Commercial Medical Marijuana Land Use Ordinance (“CMMLUO”) specifies that new outdoor or mixed-light commercial cannabis cultivation on parcels 5 acres or larger in size may only be approved on Prime Agricultural Soils, which precludes the use of greenhouses with improved floors or footpaths for those operations; and

WHEREAS, a number of approved or viable permit applications, which involve greenhouses on prime agricultural soils, are impacted by the current prohibition; and

WHEREAS, the Board of Supervisors, having received a request to review the Accessory Agricultural Uses and Structures Ordinance in light of a proposed greenhouse design for preserving prime agricultural soils directed staff at its April 11, 2017 meeting to review current building codes and make recommendations for modifying the code, if appropriate; and

WHEREAS, the proposed amendments to the Ordinance were circulated for public comment on November 14, 2017; and

WHEREAS, the revisions were made to the amendments in response to public comments; and

WHEREAS, the proposed amendments to the Ordinance allow improved floors or footpaths in greenhouses on prime agricultural soils with a Special Permit, conditioned on a set of design criteria that assures minimal loss of resource integrity, among other protective measures.

NOW, THEREFORE, the Board of Supervisors of the County of Humboldt do ordain as follows:

SECTION 1. COASTAL ZONING REGULATIONS AMENDMENT. Title III, Division 1, Chapter 3, Section A, Part 1, Section 313-69.1 is hereby amended as follows:

313- 69.1.5 Permitted Agricultural Accessory Structures.

69.1.5.2 Greenhouses, except that greenhouses with improved ~~concrete slab~~ floors ~~shall not be~~ located on prime agricultural soils shall require a Special Permit. Concrete, asphalt, and similarly constructed footpaths within a greenhouse may be permitted on prime agricultural soils with a Special Permit (Former Section CZ#A314-2(G)(2));

69.1.5.2.1 Special Permit for improved floors or footpaths in greenhouses on prime agricultural soils. Improved floors or footpaths in greenhouses shall meet all the following criteria: (a) be permeable to air and moisture (~~impermeable raised floor meets this requirement~~), (b) not result in significant compaction and erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with the soil, or concrete perimeter design. In addition, conditions of approval shall require spent imported soils used in the greenhouse be spread over the site, tilled, and not concentrated in any area. The application for Special Permit shall include provisions to address how soil used within the greenhouse is recycled, reused, or disposed of.

69.1.5.2.2 Performance Bond for greenhouses with improved floors or footpaths on prime agricultural soils. Applications for Special Permit shall include a plan for removal of all materials covering or contacting prime agricultural soils, and restoration of the soil to as near its original condition as possible. Applicants shall post a bond in an amount sufficient to allow the County to contract to complete the work specified in the plan in the event that the permittee fails to do so.

SECTION 2. INLAND ZONING REGULATIONS AMENDMENT. Title III, Division 1, Chapter 4, Section A, Part 1, Section 314-43.1 is hereby amended as follows:

314-43.1 ACCESSORY USES

43.1.3.2 Greenhouses which do not result in lot coverage exceeding 5 acres on lots 20 acres or larger in size, or exceeding 25% of the lot coverage for lots less than 20 acres in size, either individually or collectively, with or without a perimeter foundation, and without an improved floor or footpath which will preclude the agricultural use of the underlying soil. Greenhouses with an improved floor ~~or footpath which will preclude the agricultural use of the underlying soil shall not be located on prime agricultural soils~~, but may be located on prime or non-prime agricultural soils with a Special Permit. Concrete, asphalt, and similarly constructed footpaths are permitted within a greenhouse located on non-prime

agricultural soils, and may be permitted on prime agricultural soils with a Special Permit. (Former Section INL#316-2.1(2); Added by Ord. 2189, Sec. 1, 2.9.99)

43.1.3.2.1 Special Permit for improved floors or footpaths in greenhouses on prime agricultural soils. Improved floors or footpaths in greenhouses shall meet all the following criteria: (a) be permeable to air and moisture (impermeable raised floor meets this requirement), (b) not result in significant compaction and erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with the soil, or concrete perimeter design. In addition, conditions of approval shall require spent imported soils used in the greenhouse be spread over the site, tilled, and not concentrated in any area. The application for Special Permit shall include provisions to address how soil used within the greenhouse is recycled, reused, or disposed of;

43.1.3.2.2 Performance Bond for greenhouses with improved floors or footpaths on prime agricultural soils. Applications for Special Permit shall include a plan for removal of all materials covering or contacting prime agricultural soils, and restoration of the soil to as near its original condition as possible. Applicants shall post a bond in an amount sufficient to allow the County to contract to complete the work specified in the plan in the event that the permittee fails to do so.

SECTION 3. INLAND ZONING REGULATIONS AMENDMENT. Title III, Division 1, Chapter 4, Section A, Part 1, Section 314-69.1 is hereby amended as follows:

314-69.1 ACCESSORY STRUCTURES

69.1.1.2 Greenhouses which do not result in lot coverage exceeding 5 acres on lots 20 acres or larger in size, or exceeding 25% of the lot coverage for lots less than 20 acres in size, either individually or collectively, with or without a perimeter foundation, and without an improved floor or footpath which will preclude the agricultural use of the underlying soil. ~~Greenhouses with an improved floor or footpath which will preclude the agricultural use of the underlying soil shall not be located on prime agricultural soils, but~~ may be located on prime or non-prime agricultural soils with a Special Permit. Concrete, asphalt, and similarly constructed footpaths are permitted within a greenhouse located on non-prime agricultural soils, and may be permitted on prime agricultural soils with a Special Permit; (Former Section INL#316-2.1(2); Added by Ord. 2189, Sec. 1, 2.9.99)

69.1.1.3 Conditions and criteria applicable to Special Permits for improved floors or footpaths in greenhouses on prime agricultural soils apply as specified in 314-43.1.3.2.1 through 43.1.3.2.2.

SECTION 4. EFFECTIVE DATE. The amendments to the Inland Zoning Code shall become effective thirty (30) days from the date of adoption.

SECTION 5. EFFECTIVE DATE. The amendment to the Coastal Zoning Code shall become effective immediately upon certification of the proposed amendment to the Local Coastal Program by the California Coastal Commission.

PASSED, APPROVED, AND ADOPTED this ____ day of _____, 201__, on the following vote, to wit:

AYES: Supervisors:
NOES: Supervisors:
ABSENT: Supervisors:
ABSTAIN: Supervisors:

Humboldt

Virginia Bass, Chair
Board of Supervisors of the County of

State of California

(SEAL)

ATTEST:
Kathy Hayes
Clerk of the Board of Supervisors
Of the County of Humboldt, State of California

By: _____
Ryan Sharp, Deputy

ATTACHMENT 4

CEQA Initial Study and Mitigated Negative Declaration

HUMBOLDT COUNTY PLANNING AND BUILDING DEPARTMENT



INITIAL STUDY/NEGATIVE DECLARATION

Zoning Ordinance Amendments to Allow Improved Floors and Footpaths in Greenhouses On Prime Agricultural Soils

ATTACHMENT 4

CEQA Initial Study and Negative Declaration

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A. BACKGROUND AND PROJECT DESCRIPTION

1. Project Title: Zoning Ordinance Amendments to Allow Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils
2. Lead Agency Name and Address: Humboldt County
Planning and Building Dept.
3015 H Street
Eureka, CA 95501-4484
3. Contact Person and Phone Number: Mary Milner
(707) 268-3772
4. Project Location: Humboldt County
5. Project Sponsor's Name & Address: N/A
6. Existing General Plan Designation: N/A
8. Existing Zoning Designation: N/A
10. Project Description:

The zoning ordinance amendments propose removal of the prohibition of improved floors and footpaths in greenhouses on prime agricultural soils. Potential project sites comprise areas of Humboldt County with soils designated as prime agricultural soils, approximately 42,000 acres, or 12% of the agricultural lands in the County.¹

The current zoning ordinance and Local Coastal Program (LCP) prohibit improved floors and footpaths in greenhouses on prime agricultural soils in order to preserve and conserve those soils, and to maximize the extent to which they are used for agriculture. The Commercial Medical Marijuana Land Use Ordinance ("CMMLUO") specifies that new outdoor or mixed-light commercial cannabis cultivation on parcels 5 acres or larger in size may be approved only on Prime Agricultural Soils. The location restrictions in the ordinance limit the types of greenhouses available for new commercial cannabis cultivation on these sites.

The purpose of the amendments is to allow potential commercial cultivators more options to design greenhouses with improved climate, moisture, and contamination control, which would encourage development and design innovation, and potentially increase yield and efficiency for cultivators.

The Initial Study finds potential, less-than-significant effects to the environment pertaining to agricultural resources, geology/soils, air quality, and greenhouse gas emission as detailed in the Environmental Checklist below. The proposed amendments are intended to minimize impacts in these areas, and as a result, the effects would be below thresholds of significance should the

¹ Humboldt County. *Humboldt County General Plan, Revised Draft EIR*, Chapter 3.2, Agricultural and Timber Resources. Available at: <http://humboldt.gov/DocumentCenter/Home/View/58831>.

amendments be adopted. There is no substantial evidence in light of the whole record that the revised amendments would have a significant effect on the environment.

B. SOURCES

The following documents are referenced information sources utilized by this analysis:

1. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
2. California Department of Transportation. *California Scenic Highway Mapping System*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed on October 2, 2017.
3. Federal Emergency Management Agency. FEMA Flood Map Service Center. Available at: <https://msc.fema.gov/portal>. Accessed October 2017.
4. Humboldt County. Humboldt County Code Zoning Regulations. Available at: <http://www.humboldt.gov/DocumentCenter/View/4029>. Accessed October 2017.
5. Humboldt County. *Humboldt County General Plan Update*, Natural Resources and Hazards, Chapter 2, Table 2-16: CNDDDB Non-Listed Species in Humboldt County. Available at: <https://humboldt.gov/DocumentCenter/Home/View/1367>. Accessed October 2017.
6. Humboldt County. *Humboldt County General Plan, Revised Draft EIR*, Chapter 3.2, Agricultural and Timber Resources. Available at: <http://humboldt.gov/DocumentCenter/Home/View/58831>. Accessed October 2017.
7. Humboldt County. *Humboldt County General Plan, Revised Draft EIR*, 3.11-2, Table 3.11-2. Listed Threatened or Endangered Species in Humboldt County. Available at: <https://humboldt.gov/626/Draft-Environmental-Impact-Report-EIR>. Accessed October 2017.
8. Humboldt County. *Humboldt GIS Portal*. Available at: <http://gis.co.humboldt.ca.us>. Accessed October 2017.
9. Humboldt County Planning & Building Staff Report, *Honeydew Farms Medical Marijuana Cultivation, Initial Study/Mitigated Negative Declaration*, May 2016.
10. North Coast Unified Air Quality Management District. *Air Quality Planning & CEQA*. Available at: <http://www.ncuaqmd.org/index.php?page=aqplanning.ceqa>. Accessed October 2017.
11. North Coast Unified Air Quality Management District. *District Rules & Regulations*. Available at: <http://www.ncuaqmd.org/index.php?page=rules.regulations>. Accessed October 2017.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is “Less Than Significant” as indicated by the checklist on the following pages.

■ Aesthetics	✗ Agriculture Resources	✗ Air Quality
■ Biological Resources	■ Cultural Resources	✗ Geology and Soils
✗ Greenhouse Gas Emissions	■ Hazards	■ Hydrology and Water Quality
■ Land Use and Planning	■ Mineral Resources	■ Noise
■ Population and Housing	■ Public Services	■ Recreation
■ Transportation and Circulation	■ Utilities and Service Systems	■ Mandatory Findings of Significance

OR 17-005 INITIAL STUDY ENVIRONMENTAL SUMMARY

	ENVIRONMENTAL CATEGORY	FACTORS	EFFECTS OF PROPOSED CHANGES	RESULT
I	Aesthetics	a) Scenic vistas? b) Damage scenic resources? c) Site character or quality degraded? d) Light or glare?	No change from current permitted activity	No Impact
II	Agriculture and Forestry Resources	a) Convert prime ag land? b) Ag or Williamson zoning conflict? c) Forest or timber zoning conflict? d) Loss/conversion of forest? e) Indirect cause of conversion?	a) Although prime ag soil is affected, no conversion would occur since the proposed greenhouse floors would be elevated and temporary, as assured by a bond. b) no c) no d) no e) no	Less than Significant
III	Air Quality	a) Air quality plan conflict? b) Violate AQ standards? c) Cumulatively considerable pollutant increase? d) Expose sensitive receptors? e) Substantial odors?	Incidental dust, PM10 from construction phase, below NCUAQMD significance thresholds.	Less than Significant
IV	Biological Resources	a) Listed, sensitive, special status species? b) Riparian or sensitive habitat effect? c) Federal wetlands affected? d) Interference with resident or migratory corridors? e) Local policy/ordinance conflict? f) Conflict with adopted policy/ordinance?	No change from current permitted activity	No Impact
V	Cultural Resources	a) Change historical resources? b) Change archaeological resource? c) Destroy unique paleontological/geological feature? d) Disturb human remains?	No change from current permitted activity	No Impact
VI	Geology/Soils	a) Expose people/structures to risk from i) Fault rupture? ii) Seismic shaking? iii) Failure or liquefaction? iv) Landslides? b) Soil erosion or topsoil loss? c) Unstable geologic unit or soil? d) Expansive soil? e) Soils inadequate for waste disposal?	State building codes, permit & inspection apply to greenhouses with engineered floors and foundations.	Less than Significant

	ENVIRONMENTAL CATEGORY	FACTORS	EFFECTS OF PROPOSED CHANGES	RESULT
VII	Greenhouse Gas Emission	a) Generate GHG Emissions? b) Conflict with plan, policy or reg?	Incidental emissions from construction phase	Less than Significant
VIII	Hazards & Hazardous Materials	a) Transport hazard to public or environment? b) Foreseeable upset and accident by release? c) Hazardous emission within .25 mile school zone? d) Located on listed hazardous site? e) Safety hazard in airport area? f) Safety hazard in private airstrip area? g) Impair or interfere with emergency response? h) Expose people to wildland fires?	No change from current permitted activity	No Impact
IX	Hydrology/Water Quality	a) Violate water quality standards? b) Deplete groundwater? c) Substantially alter drainage, on/off-site erosion? d) Substantially alter drainage, on/off-site runoff? e) Cause runoff beyond capacity, substantial increase? f) Degrade water quality? g) Place housing within 100 yr flood? h) Redirect flow within 100 yr flood? i) Expose people to flooding? j) Seiche, tsunami or mudflow?	No change from current permitted activity	No Impact
X	Land Use/Planning	a) Divide established community? b) Conflict with land use plan? c) Conflict with conservation plan?	No change from current permitted activity	No Impact
XI	Mineral Resources	a) Loss of mineral resource? b) Loss of mineral resource recovery site?	No change from current permitted activity	No Impact
XII	Noise	a) Noise exposure in excess of standards? b) Excessive ground vibration? c) Substantial permanent increase in ambient noise? d) Substantial temp/periodic noise increase? e) Near airport, exposure to excessive noise? f) Near private airstrip, exposure to excessive noise?	No change from current permitted activity	No Impact
XIII	Population/Housing	a) Induce substantial population growth? b) Displace existing housing that must be replaced? c) Displace people who must move elsewhere?	No change from current permitted activity	No Impact

	ENVIRONMENTAL CATEGORY	FACTORS	EFFECTS OF PROPOSED CHANGES	RESULT
XIV	Public Services	a) New or altered government facilities required? Fire? Police? Schools? Parks? Other?	No change from current permitted activity	No Impact
XV	Recreation	a) Substantial use, accelerated deterioration of park? b) New park with adverse effect on environment?	No change from current permitted activity	No Impact
XVI	Transportation/Traffic	a) Conflict with existing mass transportation plan or policy? b) Conflict with existing congestion mgmt. program? c) Change air traffic or add safety risk? d) Design feature increases safety risk? e) Inadequate emergency access results? f) Conflict with public transit, bike or pedestrian facilities?	No change from current permitted activity	No Impact
XVII	Utilities/Service Systems	a) Exceed wastewater treatment requirements? b) Require or cause new or expanded wastewater facilities? c) Require or cause new or expanded stormwater facilities? d) Sufficient water entitlements to serve project? e) Inadequate capacity of wastewater treatment provider? f) Sufficient landfill capacity? g) Comply with Fed, state, local solid waste regulations?	No change from current permitted activity	No Impact
XVIII	Mandatory Findings of Significance	a) Substantial habitat loss, species population loss? b) Cumulatively considerable impacts? c) Substantial direct/indirect adverse effects on humans?	No change from current permitted activity	No Impact

D. DETERMINATION

On the basis of this initial study:

- ☒ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

ENVIRONMENTAL CHECKLIST

The following Checklist contains the checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed changes to the Zoning Ordinance Modification to Permit Improved Floors and Footpaths in Greenhouses on Prime Agricultural Soils. A discussion follows each environmental issue identified in the checklist. Included in the discussions are specific Special Permit conditions and other factors that reduce potential impacts.

The environmental setting and impact discussion for each section of this IS/ND are based on existing information contained in the Humboldt County General Plan and associated Environmental Impact Report (EIR), and other reports listed in Section B, Sources.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared

Less-Than-Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. AESTHETICS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	✗
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	✗
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	✗
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	✗

Discussion:

a,b. Important scenic vistas and resources discussed in the Humboldt County General Plan are typically associated with public views of the ocean, mountains, hills, lakes, rivers, agricultural areas, canyons, open spaces and other natural features or historic features. Scenic vistas or scenic resource areas exist throughout Humboldt County on agricultural and resource lands that include prime agricultural soils, and where cultivation in greenhouses is currently permitted. In addition, U.S. Highway 101, State Route (SR) 299, SR 36, and SR 96 are all eligible for State Scenic Highway designation.¹ Because changes to greenhouse floor design are not visible from outside, views of a particular greenhouse with a scenic vista or scenic resource within a State scenic highway would not be affected. No adverse effect on scenic vistas, and no damage to scenic resources would occur as a result of the proposed ordinance changes, therefore ***no impact*** would occur.

c. The proposed ordinance changes would involve design changes to the structures not visible from the outside. Therefore, the proposed changes would not alter or degrade the existing visual character or quality of the site; and ***no impact*** would occur.

d. The proposed changes would not alter the lighting inside greenhouses, and light sources would not vary from those allowed under the existing ordinance. Therefore, the proposed changes would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, resulting in ***no impact***.

¹ California Department of Transportation. California Scenic Highway Mapping System. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed on October 2, 2017.

II. AGRICULTURE AND FOREST RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	☐	☐	☐	☒

Discussion

The proposed ordinance amendments remove the prohibition on improved floors and footpaths in greenhouses on prime agricultural lands. Greenhouses are arguably a continuation of an agricultural use, although the soil beneath, if covered, would temporarily be removed from agricultural production. In order to mitigate potential damage to those soils, and to prevent Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use, a Special Permit is required for greenhouse floor construction, subject to certain conditions.

Those conditions are that greenhouse floors must a) be permeable to air and moisture (an impermeable raised floor meets this requirement), (b) not result in significant compaction or erosion of the soils, (c) not involve significant excavation, replacement, or alteration of the soils, and (d) not involve a concrete slab in contact with soil or concrete perimeter design. Other permit conditions intended to protect and preserve soil integrity are (1) a requirement that imported spent soils must be spread over the site, tilled, and not concentrated; (2) the Special Permit application is to include a plan as to how imported soil is recycled, reused, or disposed of; and (3) a performance bond is to be posted by the applicant to cover removal of any abandoned structures.

As a result of the permit conditions, the proposed amendments would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, nor would they involve changes to the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural uses, and a *less-than-significant* impact would occur.

b. The California Land Conservation Act of 1965, better known as the Williamson Act, created a

program for counties to protect viable agricultural land by offering a tax incentive to property owners to keep their land in agricultural production. The Act provides for private landowners to voluntarily restrict their land to agricultural and compatible open space uses under a contract with the County, known as a land conservation contract, or Williamson Act contract, in exchange for property tax relief. Prime soils under Williamson Act contracts in the county encompass about 6,200 acres (0.3 percent of the county; DOC 2015). The non-prime soils that are also under Williamson Act contract encompass approximately 268,000 acres (12 percent of the county).²

Since the proposed ordinance changes pertain to interior designs of greenhouses already permitted on prime agricultural soils, the net areas under cultivation would not be affected. Cannabis is defined under the proposed ordinance and by the state as an agricultural product and as such, even if net greenhouse area was increased, the ordinance amendments would not result in conversion of farmland to nonagricultural uses nor conflict with existing zoning for agricultural use or a Williamson Act contract. The County has determined that cannabis cultivation is a compatible use on lands under Williamson Act contracts. There would be **no impact** on conversion of farmland to nonagricultural use or conflict with zoning for agricultural use or a Williamson Act contract.

c,d. No forest land, timberland, or timberland zoned Timberland Production is involved in the proposed ordinance amendments; nor is there a potential for the loss of forest land or conversion of forest land to non-forest use. The involved lands are primarily zoned AE or AG. Therefore, the proposed project would not conflict with existing zoning for, or cause re-zoning of, forest land, timberland, or timberland zoned Timberland Production, or result in the loss of forest land or the conversion of forest land to non-forest use. Thus **no impact** to forest and timberland resources would occur.

e. Because allowing improved floors in greenhouses involves no discernible changes in the existing environment, and because greenhouses are an agricultural use, such structures would not individually or cumulatively result in loss of Farmland to non-agricultural use. Thus **no impact** would occur in the form of lost farmland.

² Humboldt County. *Humboldt County General Plan, Revised Draft EIR*, Chapter 3.2, Agricultural and Timber Resources. Available at: <http://humboldt.gov.org/DocumentCenter/Home/View/58831>.

III. AIR QUALITY. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	✗	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	✗	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	✗	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	✗
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	✗

Discussion

a-c. According to the Humboldt County General Plan, air quality in Humboldt County is better than other parts of the state. Local measurements by the North Coast Unified Air Quality Management District (NCAQMD) reveal that the county currently meets all federal standards for air quality and all state standards except for one pollutant – airborne particles that are 10 microns in diameter. Based on the above, the major pollutant of concern for the area is PM₁₀. Thus, if the proposed changes would result in substantial PM₁₀ emissions, they could be considered to conflict with or obstruct implementation of the applicable air quality plan (i.e., PM₁₀ Attainment Plan), violate AAQS or contribute to the existing air quality violation, and/or result in a cumulatively considerable net increase a criteria pollutant for which the project region is nonattainment under an applicable AAQS.

The NCUAQMD has not formally adopted significance thresholds, but rather utilizes the Best Available Control Technology (BACT) emission rates for stationary sources, as defined in the NCUAQMD Rule 110, New Source Review (NSR) and Prevention of Significant Deterioration (PSD), Section E.1, BACT (see Table 2). As shown in Table 2, the BACT emission rates for PM₁₀ for stationary sources are 80.0 pounds per day (lbs/day) and 15.0 tons per year.

Table 2		
NCUAQMD Significance Thresholds		
Pollutant	Daily (lbs/day)	Annual (tons/yr)
Carbon Monoxide (CO)	500.0	100.0
Fluorides	15.0	3.0
Hydrogen Sulfide	50.0	10.0
Lead	3.2	0.6
Nitrogen Oxides (NO _x)	50.0	40.0
Particulate Matter (PM ₁₀)	80.0	15.0
Fine Particulate Matter (PM _{2.5})	50.0	10.0
Reactive Organic Compounds (ROG)	50.0	40.0
Reduced Sulfur Compounds	50.0	10.0
Sulfur Oxides	80.0	40.0
Sulfuric Acid Mist	35.0	7.0
Total Reduced Sulfur Compounds	50.0	10.0
<i>Source: NCUAQMD, 2010.</i>		

Area-wide sources, in which emissions originate from many points over a wide area, include emissions from construction and demolition, road dust, and agricultural operations. Road dust is a significant source during dry months. In addition, mobile sources including “on-road sources” such as automobiles, and “off-road sources,” such as farm and construction equipment are locally significant sources of PM₁₀.

The activities associated with the operation of floored greenhouses would remain consistent with routine agricultural operations characteristic of structures currently permitted on agricultural lands. Other than floor construction, the proposed changes would not involve any operations that would result in the generation of any air pollutant emissions substantially different or greater than what is currently allowable and anticipated to occur on the site by the County. However, potential additions to PM₁₀ could occur, related to the construction phase of greenhouse floor installation, resulting from the use of self-propelled mobile construction equipment during the construction phase of floor installation. NCUAQMD Rule 102 exempts such equipment, as well as most equipment used in agriculture, from the requirement of a Permit to Operate.

For purposes of estimation, emissions calculations for construction of a 4,500-sf greenhouse are used here, including building pad placement, building construction, and painting, presumably representative of a typical greenhouse under the proposed ordinance changes.³ The emissions associated with the project’s minor construction activities were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data should be input into the model. Default values within CalEEMod were assumed for the construction emissions analysis, based on the proposed building area and anticipated phases of construction (i.e., paving, building construction,

³ Humboldt County Planning & Building Staff Report, Honeydew Farms Medical Marijuana Cultivation, Initial Study/Mitigated Negative Declaration, May 2016.

and architectural coating).

According to the CalEEMod results, the construction emissions related to the proposed building expansion are presented in Table 3 in comparison to the BACT emission rates for PM₁₀, as well as for other criteria air pollutants for disclosure purposes. As shown in the table, the emissions would be well below the BACT emission rates for PM₁₀, as well as for the other criteria air pollutants presented. At the 0.05 tons/year PM₁₀ emissions estimated by the model for a representative greenhouse project, approximately 300 floored greenhouse permits per year could be issued before the NCUAQMD Significance Threshold would be exceeded. Based on records maintained by the Planning and Building Department, fewer than 300 greenhouses have historically been constructed each year.

Table 3				
Representative Greenhouse Building				
Pollutant	Project Emissions		Thresholds	
	(lbs/day)	(tons/yr)	Daily (lbs/day)	Annual (tons/yr)
Carbon Monoxide (CO)	8.85	0.45	500.0	100.0
Nitrogen Oxides (NO _x)	12.79	0.67	50.0	40.0
Particulate Matter (PM ₁₀)	0.89	0.05	80.0	15.0
Fine Particulate Matter (PM _{2.5})	0.80	0.04	50.0	10.0
Reactive Organic Compounds (ROG)	21.19	0.12	50.0	40.0
Sulfur Oxides ¹	0.01	<0.01	80.0	40.0
Notes:				
¹ Represented by SO ₂ emissions from CalEEMod.				
<i>Source: CalEEMod, May 2016.</i>				

All construction activities are required to comply with all applicable NCUAQMD rules and regulations, including Rule 104 described in further detail below, which are intended to help minimize construction-related emissions. Furthermore, all construction equipment and operation thereof would be regulated per the statewide In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment. For the aforementioned reasons, construction-related emissions associated with the proposed ordinance changes would not obstruct implementation of any of the potential control measures for PM₁₀ described in the PM₁₀ Attainment Plan, would not violate any AAQS, and would not contribute substantially to the area's nonattainment status of the State PM₁₀ AAQS.

In addition to the construction activities discussed above, emissions of fugitive PM₁₀ (i.e., fugitive dust) could also occur associated with vehicle travel along unpaved roadways during daily operations. However, NCUAQMD Regulation I, Rule 104, requires reasonable precautions to be taken in order to prevent fugitive dust emissions. Compliance with NCUAQMD rules and regulations would help to minimize fugitive dust emissions associated with the proposed project.

Overall, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan, violate any air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be *less than significant*.

d. Some land uses are considered more sensitive to air pollution than others, due to the types of

population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are facilities where sensitive receptor population groups (i.e., children, the elderly, the ill, etc.) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics.

The projects affected by the proposed ordinance changes occur primarily on agricultural and forested properties (AE, AG), but may occur in other zones where prime agricultural land exists. The proximity to sensitive receptors depends on the individual site location. However, since the addition of improved floors is not expected to create new emissions substantially different or greater than what is currently allowable and anticipated in any given greenhouse, no increased risk of exposure is anticipated.

Typically, the major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and toxic air contaminant (TAC) emissions. Except for emissions generated by the initial installation of improved floors, the proposed changes would not result in a localized increase in the levels of traffic and congestion, nor would they increase the number of vehicle trips associated with a site, both major contributing factors to localized CO concentrations.

The California Air Resources Board (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The California Air Resources Board (CARB) has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

The proposed changes to greenhouse design would be consistent with routine agricultural operations characteristic of structures currently permitted on agricultural lands, and would not involve modifications that have the potential to generate new TAC emissions. Thus, the changes would not result in an increase in TAC emissions. In conclusion, no exposure of sensitive receptors to substantial pollutant concentrations would occur, resulting in *no impact*.

e. Odors are generally regarded as an annoyance rather than a health hazard. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. According to the CARB's Handbook, some of the most common sources of odor complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, autobody shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed changes do not involve any of the aforementioned uses, and are

not likely to be located in the vicinity of any such uses.

While any objectionable odors associated with currently permitted greenhouse operations could continue to occur, the inclusion of improved floors or footpaths would not create any new types of odors. Furthermore, one of the purposes of improved floors is to allow growing areas to be better enclosed, which would have the effect of lessening any potential odors. The addition of improved floors to greenhouses would not create objectionable odors affecting a substantial number of people. Therefore, overall, the proposed ordinance changes would not create objectionable odors, and **no impact** related to objectionable odors would result.

IV. BIOLOGICAL RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	✗
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	✗
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	✗
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☐	✗
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	✗
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	✗

Discussion

a-f. The Humboldt coastal area is rich in natural resources. Humboldt Bay, one of California's largest coastal estuaries, is an important habitat for many invertebrates, fish, birds, and mammals. The inland area of Humboldt County is home to a wealth of fish and wildlife, and the relative lack of development and human disturbance in the area enhances the opportunity for wildlife species to live and reproduce

without disturbance. According to the California Natural Diversity Database (CNDDDB), January 2017 memo, there are 26 federally listed or State listed⁴, and 17 special-status plant and wildlife species identified within County boundaries.⁵ Many of the plant and wildlife species occur in specialized habitats, such as riparian, wetlands, marshes, ponds, and other aquatic habitats, as well as coniferous forest and coastal scrub.

Impact on habitat is a function of the area disturbed, as well as the activity carried out. Because the effect on plant and wildlife habitat would be the same for greenhouses with or without improved floors or footpaths, their addition would not result in disturbance or negative impacts *beyond that of the structures permitted under current zoning codes.*

Therefore, allowing improved floors or footpaths in greenhouses on prime agricultural soils would have no substantial adverse effect on candidates, sensitive, or special status species, nor would it adversely affect riparian habitat or other sensitive natural communities identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service. In addition, no substantial adverse effect would be expected on federally protected wetlands as defined by Section 404 of the Clean Water Act. The change in greenhouse design would not affect the movement of any resident or migratory fish or wildlife species, or established resident or migratory wildlife corridor, or impede the use of wildlife nursery sites. Finally, the proposed changes create no conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the proposed ordinance changes have ***no impact*** on biological resources.

V. CULTURAL RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	✗
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	☐	☐	✗
c. Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	☐	☐	☐	✗
d. Disturb any human remains, including those interred outside of formal cemeteries.	☐	☐	☐	✗

Discussion

a-d, Although greenhouses on prime agricultural soils may be located on lands that contain or are nearby historic resources, unique archaeological resources pursuant to Section 15064.5, unique paleontological resources, unique geologic features, or human remains, including those interred outside of formal cemeteries, the proposed amendments represent design changes to already permitted structures. Therefore, the proposed changes do not represent a change from current code, and create no

⁴ Humboldt County General Plan, Revised Draft EIR, 3.11-2, Table 3.11-2. Listed Threatened or Endangered Species in Humboldt County.

⁵ Humboldt County General Plan Update Natural Resources and Hazards, Chapter 2, Table 2-16: CNDDDB Non-Listed Species in Humboldt County.

additional risk in disturbance to the above resources, beyond those currently allowed. The result is ***no impact***.

VI. GEOLOGY AND SOILS.

Would the project:

- a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault?
 - ii. Strong seismic ground shaking?
 - iii. Seismic-related ground failure, including liquefaction?
 - iv. Landslides?
- b. Result in substantial soil erosion or the loss of topsoil?
- c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off- site landslide, lateral spreading, subsidence, liquefaction or collapse?
- d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
☐	☐	✗	☐
☐	☐	✗	☐
☐	☐	✗	☐
☐	☐	✗	☐
☐	☐	☐	✗
☐	☐	✗	☐
☐	☐	✗	☐
☐	☐	☐	✗

Discussion

ai-iv, There is a possibility that greenhouses with improved floors could be located in active seismic zones or on unstable soils, subject to ground shaking, failure or liquefaction. The Humboldt County General Plan identifies Humboldt County as being located within a seismically active area of California, within the two highest seismic risk zones of the California Uniform Building Code. Seismic hazards in the County include earthquake ground shaking, surface fault rupture, liquefaction, and tsunami potential in the coastal zone areas. Geologic hazards that are not specifically related to earthquakes include landslides and unstable soils.

Greenhouses with engineered, improved floors are subject Humboldt County Building Codes, and California Building Standards. These regulations would require that siting and stability standards be met for greenhouse structures, thereby lessening potential hazards. The uses of the structures, operation, and number of employees would remain unchanged from those allowed by the current ordinance. Therefore, the proposed ordinance would not expose additional people or structures to adverse effects including the risk of loss, injury, or death involving the rupture of a known

Alquist-Priolo Earthquake Fault, strong seismic ground shaking, seismic-related ground failure, liquefaction, or landslides, resulting in a *less-than-significant* impact.

b,e. The proposed amendments preclude excavation, removal, or erosion of topsoil, so that no substantial soil erosion or loss of topsoil would occur. Furthermore, greenhouses do not use septic tanks or alternative wastewater disposal systems, so non-draining soils would not be an issue. As a result, the amendments would have *no impact* related to erosion, topsoil loss, or improper placement of septic tanks in soils incapable of adequately supporting their use.

c,d. There is a possibility that greenhouses with improved floors could be located on a geologic unit or soil that is unstable, or on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994). Greenhouses with improved floors on prime agricultural soils, as considered in the proposed amendments, are subject to State and County building codes. Therefore, although the proposed ordinance would allow foundations under structures where none are currently allowed, compliance with these codes would limit any potential adverse effects. For these reasons, the amendments would have a *less-than-significant* in regards to building on unstable or expandable soils.

VII. GREENHOUSE GAS EMISSIONS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	✗	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✗	☐

Discussion

a,b. Emissions of greenhouse gases (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

All past, present, and reasonably foreseeable future projects contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO₂) and, to a lesser extent, other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O) associated with area sources (e.g., hearths, consumer product use, architectural coatings, and landscape maintenance equipment), mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste.

As discussed in Section III, Air Quality, the activities associated with the operation of floored greenhouses would remain consistent with routine agricultural operations characteristic of structures

currently permitted on agricultural lands. However, potential additions to greenhouse gases could occur during the construction phase of greenhouse floor installation, resulting from the use of self-propelled mobile construction equipment during the construction phase of floor installation.

Construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. Nonetheless, as an estimate for construction-related emissions, the same emissions calculations were used as in Section III above for construction of a 4,500-sf project including building pad placement, building construction, and painting, which is presumably representative of a typical greenhouse under the proposed ordinance changes.⁶ Default values within CalEEMod were assumed for the construction-related GHG emissions analysis, based on the proposed building area and anticipated phases of construction (i.e., paving, building construction, and architectural coating). According to the CalEEMod results, the construction GHG emissions related to such a building were estimated to be 58.49 metric tons CO_{2e} per year (MTCO_{2e}/yr), or 64.47 tons CO_{2e}/yr, which is well below the 75,000 tons CO_{2e}/yr threshold for stationary sources identified in NCUAQMD Rule 111.

Although the NCUAQMD or the County has not adopted GHG emissions thresholds for land use development projects for CEQA analysis purposes, a number of other air districts in the State have adopted GHG emissions thresholds. The most prominent in the northern California region would be the thresholds of significance adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SMAQMD threshold of significance for construction and operational GHG emissions is 1,100 MTCO_{2e}/yr. According to SMAQMD, their adopted threshold of significance is indicative of whether a project's individual GHG emissions would be considered to result in a cumulatively considerable contribution to global climate change and could be considered to conflict with the intent and/or implementation of the State's GHG emission reductions goals. For informational purposes, the proposed project's estimated construction GHG emissions would be well below the SMAQMD's threshold of significance.

Based on the anticipated minimal increase in GHG emissions associated with building activities, the proposed changes would not be considered to generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment or conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, impacts would be considered *less-than-significant*.

⁶ Humboldt County Planning & Building Staff Report, Honeydew Farms Medical Marijuana Cultivation, Initial Study/Mitigated Negative Declaration, May 2016.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	✗
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☐	☐	✗
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	✗
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	✗
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	✗
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	✗
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	✗
h. Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	✗

Discussion

a-c. The proposed ordinance changes would involve no hazardous materials or emissions, and therefore no risk is present related to the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; nor would the changes create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment the disposal or release of hazardous materials. Since no hazardous substances or emissions are involved, there is no risk of hazardous emissions or hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, ***no impact*** related to hazardous materials or emissions would result from the proposed ordinance changes.

d-f. Although an individual greenhouse project may be located on a hazardous materials site included on a list of hazardous materials compiled pursuant to Government Code §65962.5, or located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or located within the vicinity of a private airstrip, the proposed ordinance changes apply only to the greenhouse design and do not involve hazardous materials. As such, they add no risks beyond those associated with the already permitted activities. Therefore, ***no impact*** related to these site-specific conditions would result from implementation of the ordinance changes.

g. The proposed changes modify greenhouse design only, and therefore do not impede or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, interference with any adopted emergency response plan or emergency evacuation plan would not occur, and the changes would result in ***no impact***.

h. Because the proposed changes to the ordinance pertain to the floors of already permitted structures, no increased risk of loss, injury or death involving wildland fires would result from implementation, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Therefore, the changes would result in ***no impact*** to the above risks.

IX. HYDROLOGY AND WATER QUALITY. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than Significant Impact
a. Violate any water quality standards or waste discharge requirements?	☐	☐	✗
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	✗
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	✗
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?	☐	☐	✗
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	✗
f. Otherwise substantially degrade water quality?	☐	☐	✗
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	✗
h. Place within a 100-year floodplain structures which would impede or redirect flood flows?	☐	☐	✗
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	☐	☐	✗
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	✗

Discussion

a-f. Cultivation in greenhouses involves irrigation maintained inside the greenhouse and runoff is not allowed to escape. Soil erosion is prevented by targeted watering and capture of runoff. The proposed modifications to greenhouse floor designs would not require additions or changes to existing water quality standards or waste discharge requirements; would not alter groundwater usage or substantially alter the existing drainage pattern of a site; would not create or contribute additional runoff water, or add sources of polluted runoff. Changes to floor design would not affect or degrade water quality. Since the proposed changes call for greenhouse floors that are permeable to air and water, water quality and flow would remain unaltered as a result of implementation. Therefore, the

proposed changes would result in **no impact** with regard to these water quality issues.

g-j. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) overlain on Humboldt County⁷, lands with prime agricultural soils in coastal and low-lying areas may fall within 100-year flood zones. The proposed ordinance changes do not involve housing, nor are greenhouses typically placed where they would impede or redirect flood flows. Likewise, the proposed changes to greenhouse floor design do not affect a project's proximity to levees or dams, or its likelihood to experience Inundation by seiches, tsunamis, or mudflows. Therefore, the proposed changes would not cause potential exposure of people or structures to a significant risk of loss, injury or death due to flood, seiche, tsunami, or mudflow, and **no impact** would result from the changes.

X. LAND USE AND PLANNING. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	✗
b. Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?	☐	☐	☐	✗
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	✗

Discussion

a. The proposed changes concern the inside design of already permitted structures, so that no changes to established communities, including physical division, would occur through their implementation. Therefore, the proposed ordinance would have **no impact** beyond that associated with already permitted structures.

b. Existing cultivation activities and those already permitted on prime agricultural lands under the current ordinance are presumed to be in full compliance with State law and County codes. Allowing floors in greenhouses on prime agricultural lands, subject to conditions and Special Permits, would not conflict with overall compliance. Therefore, greenhouses with approved Special Permits would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects, and the result of the changes would be **no impact**.

⁷ Humboldt County, *Humboldt County General Plan, Revised Draft EIR*, Exhibit 3.8-9 Amendments to Humboldt County Code Regulating Commercial Cannabis Activities Project Draft EIR.

c. The proposed ordinance changes affect the floor design of greenhouses, and do not change their areal extent, uses, or other characteristics in a way that would affect habitat or natural communities, beyond the effects of activities already permitted. Therefore, the proposed ordinance changes would not create conflict with the provisions of any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, and ***no impact*** would occur as result of their implementation.

XI. MINERAL RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	✗
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	✗

Discussion

a,b. The Humboldt County General Plan identifies the extraction of mineral resources as an important base for the economic well-being of the County. Current mineral resource production in the County is primarily focused on sand, gravel, and rock extraction. The materials extracted are used for road construction, streambank protection, erosion control, and engineering fill, among other uses throughout the County. Although a proposed greenhouse could result in the conversion or loss of availability of a known mineral resource of local, regional, or statewide importance, such a conflict is not related to the interior design of the greenhouse, and would not be a result of the proposed ordinance changes. Therefore, ***no impact*** would occur as to mineral resource availability.

XII. NOISE. <i>Would the project result in:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	✗
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	✗
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	✗
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	✗
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	✗
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	✗

Discussion

a-d. The proposed changes to greenhouse floor design pertain to structural elements only and have no effect on the generation of noise or vibration, which are instead a product of the already permitted activities associated with current greenhouse uses. As a result, no increase in noise or vibration levels would occur, including ambient, temporary, or periodic noise levels, and therefore ***no impact*** would result from implementation of the proposed changes.

e,f. For the reasons listed above in a-d, the proposed changes would not expose people residing or working in the vicinity of a permitted greenhouse within an airport land use plan, or near a private airstrip, to excessive noise levels. Therefore, the proposed changes would not increase exposure to excessive noise, and ***no impact*** would occur.

XIII. POPULATION AND HOUSING.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	☐	✗
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	✗
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	✗

Discussion

a-c. The typical greenhouse subject to the proposed ordinance changes is used agricultural cultivation. Changes in the floor design will not directly or indirectly induce substantial population growth in an area. Agricultural lands have limited if any existing housing that is subject to displacement. Likewise, because of limited housing on these sites, there is no potential for displacement of substantial numbers of people who would need replacement housing. Because the proposed changes would not result in substantial population growth in the area, do not involve the creation of, or necessity for, new housing, and would not displace existing housing or people, **no impact** related to population and housing would occur.

XIV. PUBLIC SERVICES.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Fire protection?	☐	☐	☐	✗
b. Police protection?	☐	☐	☐	✗
c. Schools?	☐	☐	☐	✗
d. Parks?	☐	☐	☐	✗
e. Other Public Facilities?	☐	☐	☐	✗

Discussion

a-e. The proposed changes would not differ from the already permitted uses on-site for any individual greenhouse cultivation site, and do not involve elements likely to increase the population or generate a substantial amount of new employees. As such, the demand for fire and police protection services at the project site would not increase upon implementation of the proposed

ordinance. For the same reasons, any increase in demand for schools, parks, or other local public facilities would not occur as a result of the proposed changes. As a result, existing services would be adequate to serve the proposed project, and ***no impact*** related to public services would occur.

XV. RECREATION. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	✗
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	✗

Discussion

a,b. As stated previously, the proposed changes involve design modifications to already permitted structures, and do not involve the creation of new housing and would not result in population growth in the area. Similarly, new recreational facilities are not proposed, and the demand for such facilities would not increase with implementation of the project. Therefore, because the ordinance changes would not result in any increase in the use of, or demand for, parks or recreation facilities, ***no impact*** related to recreation would occur.

XVI. TRANSPORTATION/CIRCULATION.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	✗
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	✗
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	✗
d. Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	✗
e. Result in inadequate emergency access?	☐	☐	☐	✗
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	✗

Discussion

a-f. The proposed changes involve design modifications to already permitted structures. The uses, number of employees, and associated number of trips remain unaffected. No additional traffic or congestion will result from the proposed changes. Neither will the proposed changes affect air traffic patterns, change emergency access, or conflict with adopted alternative transportation policies. Therefore, because the ordinance changes would not affect transportation or circulation, ***no impact*** related to those characteristics would occur.

XVII. UTILITIES AND SERVICE SYSTEMS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	✗
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	✗
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	✗
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	✗
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	✗
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	✗
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	✗

Discussion

a,b. The proposed changes pertain to agricultural structures in cultivation areas. Greenhouses on prime agricultural lands are located in rural locations and would not be connected to wastewater or public water services. Any such projects which include existing bathrooms and leach fields would remain unaffected by the ordinance changes. Therefore, no potential exists to exceed wastewater treatment requirements, and no new treatment facilities would be required, resulting in **no impact** to those systems.

c. Changes in interior greenhouse design would not affect the footprints of structures, or the amount of impervious surfaces on the site so that no change in stormwater runoff would occur, resulting in **no impact** to storm water drainage facilities.

d. Water is normally supplied by wells or stream diversions, or is stored on-site. Sufficiency of the water supply is part of any cultivation permit, and therefore presumed adequate. Water usage is

independent of greenhouse floor design, and therefore, **no impact** to water requirements would occur with adoption of the changes.

e.f. Agricultural cultivation sites are typically not served by wastewater treatment providers, but in the case of such service, the proposed changes would not affect or increase the amount of wastewater produced. Solid waste disposal requirements are separate and unrelated to greenhouse design, and would remain unaffected by the proposed changes. Therefore, implementation of the changes would have **no impact** on wastewater treatment or solid waste disposal.

g. Because the proposed changes pertain to greenhouse floor design only, solid waste disposal requirements would be unaffected. Therefore, if a currently permitted greenhouse complies with federal, state, and local statutes and regulations related to solid waste, implementation of the proposed changes would not affect such compliance. As a result, implementation of the changes would have **no impact** on compliance with regulations related to solid waste.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Discussion

a. Based on this Initial Study, the implementation of the zoning ordinance amendments herein considered would have **no impact** on Aesthetics, Biological Resources, Cultural Resources, Hazards, Hydrology and Water Quality, Land Use Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Circulation, or Utilities and Service Systems. The amendments would have a **less-than-significant** impact on Geology/Soils, Air Quality, and Greenhouse Gas Emissions because the engineered structures

would be subject to building codes and inspection; and the CalEEMod model predicts short-term PM₁₀ and greenhouse gas emissions for a typical greenhouse project well below the NCUAQMD Significance Thresholds. Impacts on Agricultural Resources (covering of prime agricultural soils by greenhouse floors) would be less than significant because (1) the proposed amendments set conditions for soil preservation, like elevation of the greenhouse floor and permeability to air and water, among other measures; and (2) no permanent conversion of prime agricultural soils would occur, as assured by the permittee's bond. Therefore, impacts to agricultural resources would be *less-than-significant*.

In conclusion, the proposed ordinance changes would not degrade the environment, and no habitat, wildlife populations, or plant and animal communities would be impacted. All environmental topics are considered to have either *no impact*, or *less-than-significant impact*.

b. The proposed amendments contemplate changes to the interior design of already permitted agricultural structures. Of the topics identified in this initial study, only Air Quality and Greenhouse Gases have the potential for cumulative impacts if the changes are implemented. Short-term construction of greenhouse floors could contribute incrementally to increased PM₁₀ and CO₂ emissions, depending on the number of such projects. Since the number of permits issued controls these emissions, this contribution is not "cumulatively considerable" if the number of permits remains consistent with the level of development contemplated in the Humboldt County General Plan. Therefore, incremental effects of the ordinance changes, when viewed in connection with past projects, other current projects, and the probable future projects would be *less-than-significant* in their cumulative impacts.

c. With the proposed changes, the footprints of greenhouses, the nature of operation and usage of the structures, water and chemicals used, and numbers of employees remain unchanged from that of already permitted greenhouses, any direct or indirect adverse effects on human beings would also remain unchanged. Implementation would not be expected to result in any new environmental effects, risks, or exposures to hazards that would cause adverse effects on human beings. Therefore, no new adverse effects on human beings would occur, either directly or indirectly, resulting in a *no impact*.

ATTACHMENT 5
Public Comments



G1

**DEPARTMENT OF AGRICULTURE
COUNTY OF HUMBOLDT**
5630 SOUTH BROADWAY EUREKA, CALIFORNIA 95503
PHONE (707) 441-5260

March 20, 2017

Steve Werner
Supervising Planner
Cannabis Services Division
Humboldt County Planning Department
3015 H St.
Eureka, CA 95501

Subject: Request for Review of Greenhouse Design for Preserving Prime Agricultural Soils

Mr. Werner,

This correspondence is in response to an inquiry from Miles Raymer (Norther Emeralds) and pertains to a mixed light permit application (#10566) submitted to the Planning Department's Cannabis Services Division. Mr. Raymer contacted the Agricultural Commissioner's Office seeking an opinion on greenhouse design and construction methods that would protect prime agricultural soils. Specifically, Mr. Raymer is proposing to construct a greenhouse structure with an elevated floor which would provide 1 to 2 feet of clearance between the subfloor and soil surface. The most important practice for protecting prime agriculture soils is that any soil surface covering applied as the floor of a greenhouse be permeable and allow for air and moisture to pass through the covering. Also important is that the native soils not be excavated from the site, replaced or significantly altered in a way which would fundamentally change the character of the existing native soils.

If constructed as proposed, the raised greenhouse would protect the on-site prime agricultural soils by allowing air and moisture to move into and out of the soil surface. The raised design would reduce compaction and the potential for erosion created by disturbance. My review also included a consultation with John Laboyteaux, Humboldt County Williamson Act Committee Chairperson, who is a recognized authority on prime agricultural land and soils. Mr. Laboyteaux agreed that raising the greenhouse floor would offer the above described benefits for maintaining the quality of the prime agricultural soils on the site. Spent soils if disposed on-site should be spread and tilled into the soil surface over a large area and not concentrated in any limited area.

In the future should the agricultural use of the land be used for a different agricultural commodity, the prime agricultural soils can recover and provide the same or similar productive potential that existed prior to construction of the greenhouse structure on the site. Please let me know if you have any questions or would like additional information, 441-5260.

Regards,

Jeff M. Dolf
Agricultural Commissioner/
Sealer of Weights & Measures
CC: John Laboyteaux

Milner, Mary

From: Richardson, Michael
Sent: Tuesday, August 15, 2017 9:17 AM
To: Mary Milner
Subject: FW: Greenhouses on prime ag soils
Attachments: Support Letter from Ag Commissioner.pdf; Mixed-Light Presentation.pptx

Hi Mary,

No plans yet...

Still working on it.

- Michael R.
 (707) 268-3723
 mrichardson@co.humboldt.ca.us

From: Miles Raymer [mailto:miles@northernemeralds.com]
Sent: Tuesday, August 15, 2017 8:22 AM
To: Richardson, Michael
Cc: Edith; Cody Stross; Tyler Simmons
Subject: Re: Greenhouses on prime ag soils

Hi Michael,

Thanks very much for your message, and sorry for the late reply. I am traveling this week and have limited Internet access.

Very excited to hear this is moving forward. The short answer to your question is that we do not have any plans to share with you. We did have plans for greenhouses that included concrete flooring, but since scrapping those we haven't had a chance or the funding available to re-do them. But what I can do is give you some information about our proposed model:

- We want to cultivate cannabis in greenhouses (1,200 square feet in size, with 1,000 square feet dedicated to canopy), but do not want to plant directly in the ground. Having greenhouses with improved floors and a vapor barrier will allow us to keep any nutrient runoff out of the watershed, and will also provide a relatively sealed environment where we can capture water for re-use. The vapor barrier will also be necessary to properly cultivate cannabis on properties that are near the coast or in the Coastal Zone, where excessive moisture in the atmosphere will significantly compromise the quality of the product and lead to contamination for cultivators without sufficient environmental control.
- We would like to elevate the greenhouses 1-2 feet off the ground, which means the only direct contact with soil would be the platforms/posts we will use to mount/anchor them. There are a few different ventilation options we could explore as well to prevent soil degradation. According to Jeff Dolf, this greenhouse model will not significantly degrade agricultural soils over time (Dolf's letter of support is attached).
- These greenhouses will only occupy a small fraction of any parcel of agricultural land on which they are built. The 2B permits max out at 10,000 square feet of cultivation space. Our greenhouses will have an extra 200 square feet for maintenance/storage space, so that gives us 1,200 square feet/greenhouse x 10 greenhouses = 12,000 square feet, or 0.275 acres total. That is not very much space even on a small agricultural plot, which needs to be at least 5 acres to qualify for a permit (at least in Humboldt).
- We believe this model will help give an equal opportunity in the new cannabis economy to rural communities that don't have a lot of industrial zoning. The model is compatible with other traditional forms of agriculture, and could be implemented on sites that also cultivate livestock, vegetables, and/or fruit.
- For further reference, I am attaching a copy of the slides we used to present to the California Coastal Commission on 6/7/17. Those slides contain a rough sketch that Cody made of what the greenhouses might look like (basically a rectangular building elevated off the ground with a transparent roof).

- Tyler, one of our Head Cultivators, and Cody are both copied to this email. Feel free to reach out to them for questions if you need more detail on what the technical aspects of these proposed greenhouses.

Thanks, and hope this is helpful

On Mon, Aug 14, 2017 at 1:02 PM, Richardson, Michael <MRichardson@co.humboldt.ca.us> wrote:

Hi Miles and Edie,

I have been tasked with developing ordinance changes that will allow greenhouses on agricultural soils asap. I remember you guys were developing building plans that would be useful in doing that because they protected the underlying soil so the greenhouse could be removed, and the soil could be used again as it was before the greenhouse was placed there. Are those plans available to us to help craft the ordinance? If so, can you email them to me?

Thanks for your help!

- Michael R.

(707) 268-3723

mrichardson@co.humboldt.ca.us

From: Miles Raymer [mailto:miles@northernemeralds.com]

Sent: Thursday, January 26, 2017 4:08 PM

To: Edith; Richardson, Michael

Subject: Emails

Hi Edie and Michael,

Here are the email addresses:

Edie: femmevanill@yahoo.com

Michael: mrichardson@co.humboldt.ca.us

Thanks for a great meeting today!

Miles Raymer

Communications and Special Projects Manager

Northern Emeralds

707.499.9157

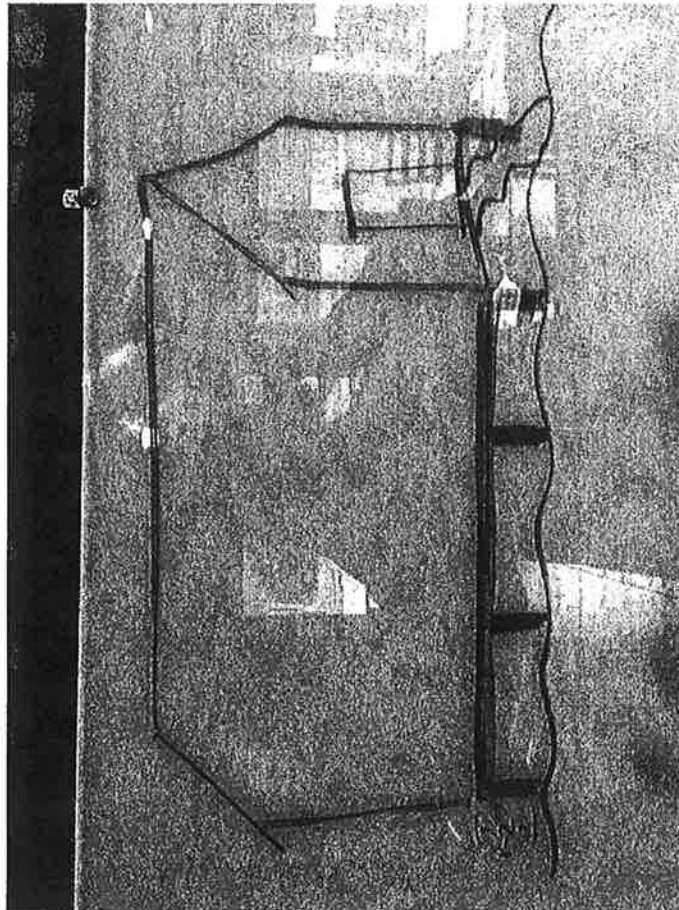
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Miles Raymer

Communications and Special Projects Manager

Northern Emeralds

707.499.9157

A work in progress...



An idea that
needs a
chance to
prove itself

C2

From: Amy Bohner [mailto:amy@alchemyinc.com]
Sent: Thursday, March 23, 2017 10:05 AM
To: Sobolik, Todd; Werner, Steve
Cc: Alchemy Construction
Subject: RE: Heated Greenhouses on Prime Ag

Hello Todd and Steve.
Just checking in on this email from March 8th.
We are anxious to hear back.
Thank you!
Sincerely,

Amy Bohner

Alchemy Construction Inc.

www.alchemyinc.com 707-822-8013

Green Building/Net Zero Radiant Heat
Solar/Foundations & Excavation/Concrete Polishing

----- Forwarded Message -----

Subject: RE: Heated Greenhouses on Prime Ag

Date: Wed, 8 Mar 2017 22:24:42 +0000

From: TSobolik@co.humboldt.ca.us

To: info@alchemyinc.com

CC: SWerner@co.humboldt.ca.us

As far as the Building Division approving the construction method for the greenhouse, Ag Exempt, I have no issues. What you are asking about a "Temporary Structure" on prime Ag Soils is not a Building question, that one is for Planning. I have cc Steve Werner on this e-mail, he is the one you want to talk to. If the greenhouse is heated it would not qualify for an Ag Exemption status; therefore, the structure would have to comply with all of the relative codes. FYI, the greenhouse as designed would need engineering if you went with this type of a permit.

Todd

Todd Sobolik
 Chief Building Official
 County of Humboldt
 Building Inspection Division
 Planning and Building Department
 3015 H Street | Eureka, CA 95501
 Phone: 707-445-7245 | Fax: 707-445-7446
 Email: tsobolik@co.humboldt.ca.us

-----Original Message-----

From: Alchemy Construction [<mailto:info@alchemyinc.com>]

Sent: Tuesday, March 07, 2017 2:46 PM

To: Sobolik, Todd

Subject: Heated Greenhouses on Prime Ag

Hello Todd, We have been getting some inquiries into heated Greenhouses on Prime Ag Soil. As I understand it, a greenhouse with a foundation is not allowed on Prime Ag Soil. We have designed a system where the only concrete would be a 3" Slab over insulation. See attachment.

The Greenhouse itself would be tied to the ground via removable Helical Piles. See our design attached and a Document I found from the New Jersey Department of Agriculture where they state the following:

"Can a concrete pad be poured inside a temporary greenhouse? Yes, however, concrete cannot wrap around the hoophouse frame. If the frame is embedded in the concrete pad, the frame becomes permanent and a building subcode permit is required. A concrete pad, in and of itself, does not make a temporary greenhouse a permanent structure."

I'm wondering if the county would approve our design?

Warmly,

Stephen Bohner

Alchemy Construction Inc.

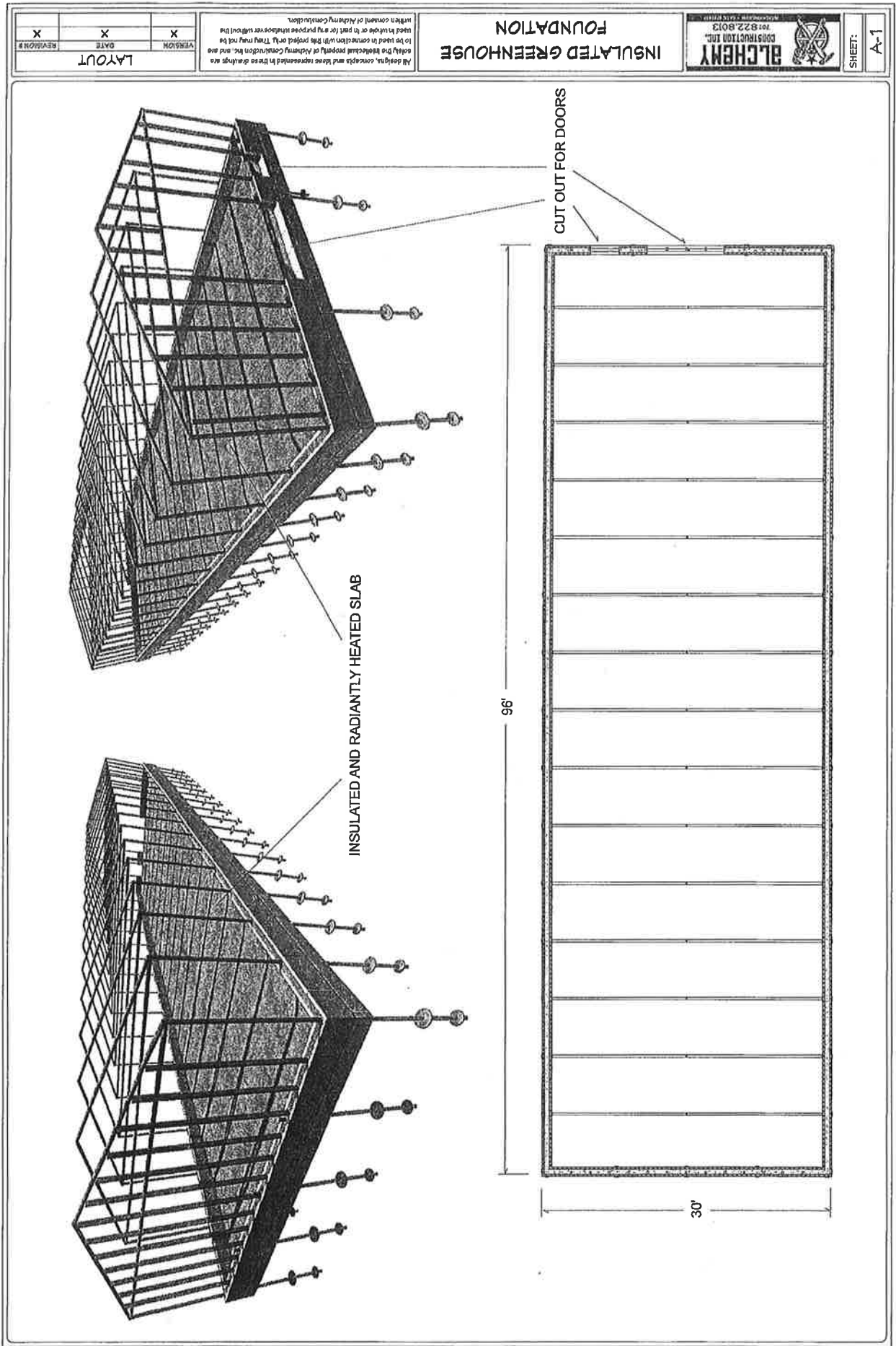
www.alchemyinc.com 707-822-8013

Green Building/Radiant Heat

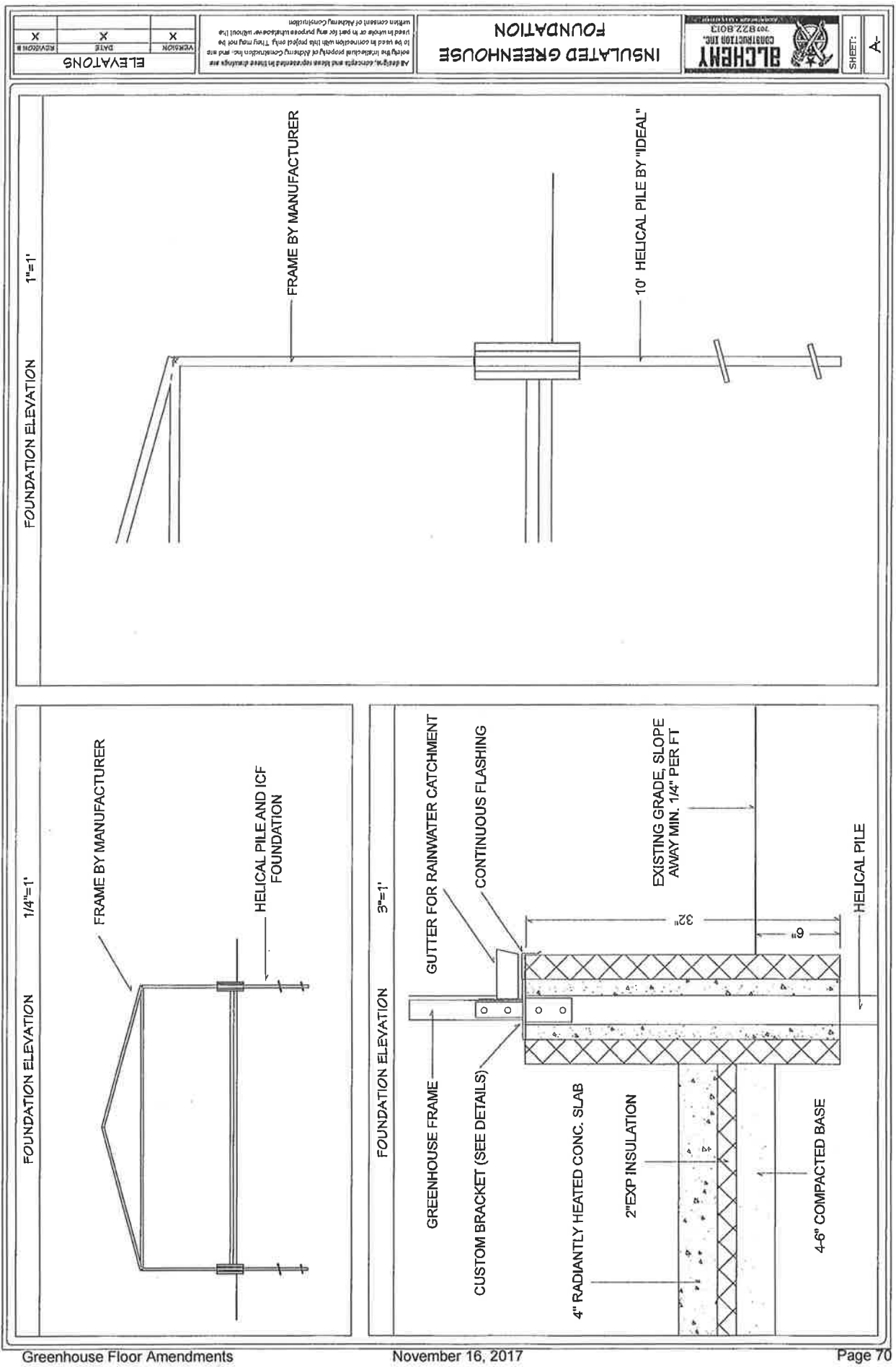
Distillery Design+Build & Consulting

Foundations/Concrete Polishing/Foxblock ICF Solar Elec & Hot H2O/ Helical Piles

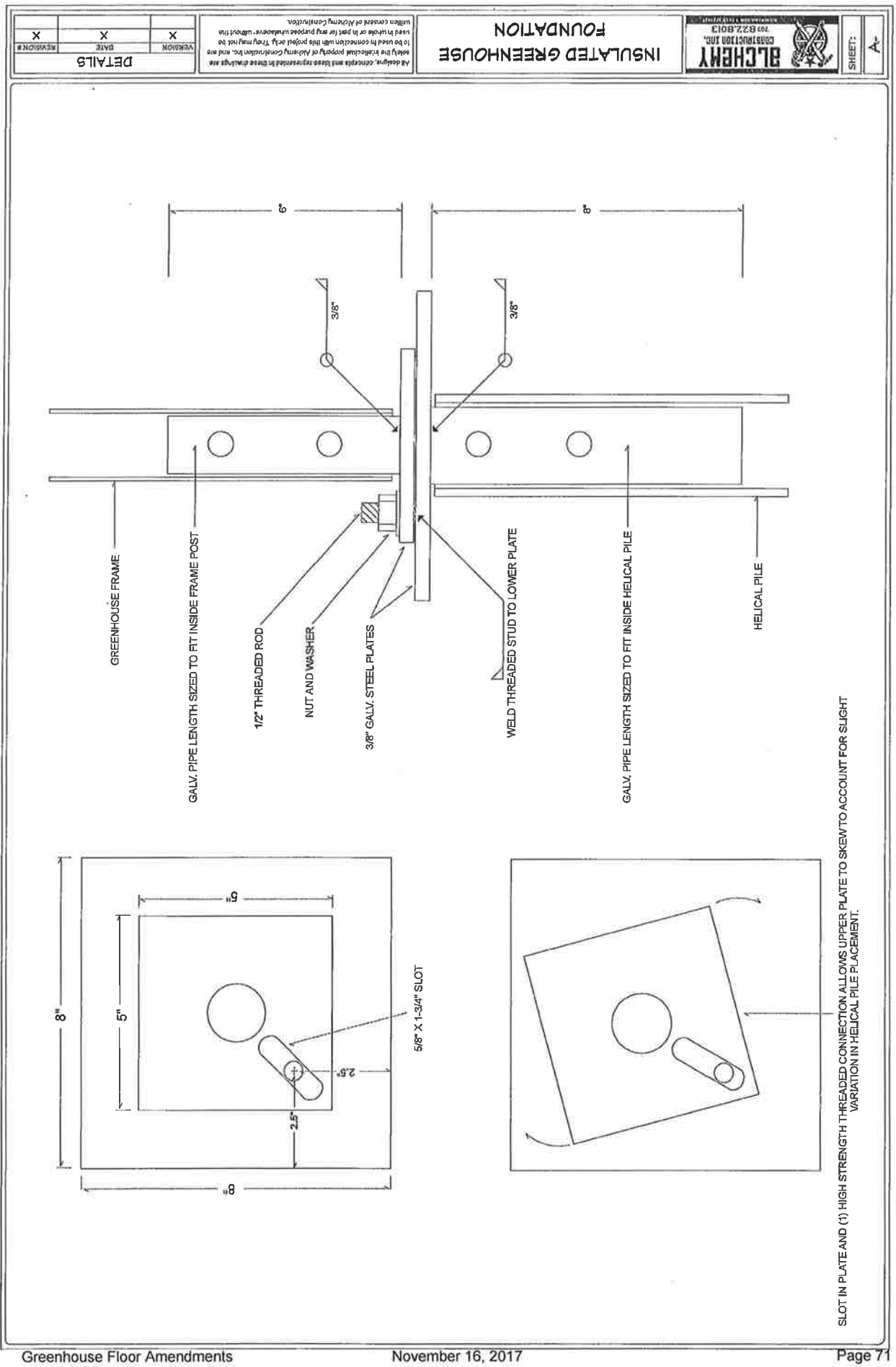
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**FACT SHEET FOR
TEMPORARY GREENHOUSES

UNDER THE NEW JERSEY
UNIFORM CONSTRUCTION CODE**

New Jersey Department of Agriculture
In Consultation with the New Jersey
Department of Community Affairs

June 2015
Revised

PERMIT EXEMPTION FOR TEMPORARY GREENHOUSES

(New Jersey Administrative Code 5:23-3.2(d))

effective November 19, 1990

revised October 15, 2001

4. A temporary greenhouse, also called a "hoophouse" or "polyhouse," used exclusively for the production and storage of live plants, shall be exempt from the permit requirements of the Uniform Construction Code if it meets all of the criteria of (d)4i through iv below :
 - i. There is no permanent anchoring system or foundation;
 - ii. There is no storage, temporary or otherwise, of solvents, fertilizers, gases or other chemical or flammable materials;
 - iii. The structure is;
 - no wider than 31 feet;
 - there is an unobstructed path of no greater length than 150 feet from any point to a door or fully accessible wall area;
 - the covering of which is a material no greater than six mils (152.4 micrometers) in thickness that yields approximately four pounds of maximum impact resistance to provide egress through the wall; and
 - iv. If a temporary greenhouse contains any device subject to the electrical subcode or any mechanical equipment subject to the mechanical subcode, a permit shall be required for the device, system or fixture only. If the temporary greenhouse is connected to a potable water system, a permit shall be required for the backflow prevention devices only.

DEFINITIONS

Potable Water Supply: a water supply, either city water or private well, which is intended for drinking purposes.

Permanent Anchoring Device: a device that is not readily dislodged, which is intended to secure a structure for an indefinite period e.g. concrete.

Foundation: a concrete or masonry base, usually below the surface of the ground, which is used to anchor a structure. One can also secure the structure to it.

Retail Sales: The use of a structure, or part thereof, which is for display and sales purposes and accessible to the public.

Zoning: The partitioning of a municipality by ordinance into sections reserved for different identified uses. Activity in each zone is restricted to the use(s) stated in the zoning ordinances, e.g. agricultural, commercial, residential, etc.

THE PURPOSE OF THE TEMPORARY GREENHOUSE EXEMPTION

The purpose of the exemption is threefold.

First, its provisions apply to all temporary non-retail greenhouses utilized by commercial farm and it applies uniformly throughout the Garden State.

Second, farmers will not be burdened with the permit requirements of the construction code and the associated fees such as site plans signed and sealed by a licensed architect or engineer, building subcode permit fees, etc., if construction is in compliance with New Jersey Administrative Code 5:23-3.2(d) (above) ., and

Third, the exemption will provide a cost savings to farmers and enhance the economic viability and competitiveness of New Jersey agriculture.

WHAT CAN BE BUILT

Prior to the exemption, existing regulations required that all temporary greenhouses were subject to the permit requirements of the UCC. However, there was a lack of uniformity with regard to the enforcement of the regulations by construction officials throughout New Jersey. This often created financial hardships for farmers and often allowed code officials to treat temporary greenhouse owners differently in various municipalities.

The temporary greenhouse exemption allows farmers to forgo securing a building permit to set up a hoophouse that is used exclusively for the production or storage of live plants.

There are some instances where specific subcode permits are required. If a hoophouse has a heater or fan(s), an electrical or mechanical subcode permit must be secured for the heater or fan unit. If the watering system is connected to a potable water supply or irrigation well, a plumbing subcode permit must be secured for the installation of a backflow prevention device only. These other subcode permits stand on their own and do not trigger the necessity to secure a building subcode permit for the temporary greenhouse.

QUESTIONS AND ANSWERS

1. **Are temporary hoophouses exempt from local zoning regulations?** If a farmer erects a hoophouse for the purpose of an agricultural/horticultural production facility, the use of the building must conform to the permitted uses in the particular zone in which the hoophouse is located.
2. **Are signed and sealed plans required for temporary greenhouses?** No. The framework is not subject to the building subcode permit requirements of the UCC; therefore, signed and sealed plans are not required.
3. **Are construction documents required when a temporary greenhouse is erected?** A permit is not required if the temporary greenhouse meets the criteria set forth in N.J.A.C. 5:23-3.2(d) et seq. therefore signed and sealed plans by a New Jersey licensed architect or engineer are not required.
4. **Is there a limit on the type of construction that can be used to erect the frame of a temporary greenhouse?** As long as there is no permanent anchoring device or foundation there is no restriction on the type of material used for the frame. However, temporary greenhouses constructed primarily of wood and in close proximity to other permanent structures may trigger additional fire safety requirements.
5. **On occasion, when the sun is extremely hot, can a shade cloth be placed over the polyethylene to keep the interior temperature of the hoophouse suitable for plant growth?** Yes. As long as there is a means of exiting the framework within 150 feet that does not require going through the shade cloth.
6. **Since the framework is exempt from a building subcode permit, is a site plan necessary?** No, site plans are not required for temporary greenhouses under the UCC. However, the township may require a site plan under its local zoning ordinance.

7. **If the framework of the exempt hoophouse is secured with concrete, is a building subcode permit required?** Yes, if the frame of the hoophouse/greenhouse is secured to a permanent foundation, the foundation is subject to all requirements and inspection of any applicable subcode(s).
8. **Can a concrete pad be poured inside a temporary greenhouse?** Yes, however, concrete cannot wrap around the hoophouse frame. If the frame is embedded in the concrete pad, the frame becomes permanent and a building subcode permit is required. A concrete pad, in and of itself, does not make a temporary greenhouse a permanent structure.
9. **Is a building permit required for a sidewalk installed in a temporary greenhouse?** No, a building permit is not required for a sidewalk within the temporary greenhouse. However, if the supporting structures (the hoops) of the temporary greenhouse are imbedded in or touch the concrete, a building subcode permit is required for the hoop house and sidewalk since the concrete now serves as a permanent anchoring device.
10. **If a crop is produced in the exempt hoophouse and the plastic covering is removed for a limited period of time, so consumers can select plant materials (retail sales), is the exemption being jeopardized?** No, the exemption is only for the production or storage of live plants within the structure. The framework is not a structure provided all of the covering is removed. However, the exception does not permit customers to enter the hoophouse while it is covered or partially covered. The farmer or farm employee can enter the covered hoophouse and remove the plant material for the customer.
11. **The exemption specifies that there must be "an unobstructed path of no greater length than 150 feet from any point to a door or fully accessible wall area." What would be an example of an "obstruction"?** Benches or a rail system in a hoophouse would be an example of an obstruction. If the hoophouse is 300 feet or less in length and has a means of egress at both ends, there must be an unobstructed center aisle. If the hoophouse is greater than 300 feet in length, provisions must be made for sidewall egress. It is recommended that the farmer part the plant material or trays every 150 feet in hoophouses greater than 300 feet in length. In addition, a rail system for the benches should not obstruct egress through the walls.
12. **Are gutter-connected houses subject to a building subcode permit?** Yes. However, it is possible to construct a gutter-connected greenhouse under this exemption. As long as the framework meets all of the criteria of this rule, it is exempt from building subcode permits. In most cases the supporting structure to the gutter connected houses are embedded in concrete and the overall width of the structure usually exceeds 31 feet. In this instance a building subcode permit is required.

13. **Are two individual layers of six mils polyethylene film designed to be separated by air provided by a small blower fan acceptable in a temporary greenhouse?** Yes, provided each layer of polyethylene is six mils or less and an electrical subcode permit is secured for the fans.
14. **Can a temporary greenhouse built under the provision of N.J.A.C. 50:23-3.2(d) remain standing throughout the year or must it be dismantled after 180 days?** A hoophouse, meeting all of the eligibility criteria of N.J.A.C. 50:23-3.2(d), may remain standing throughout the year and is not required to be dismantled.
15. **Can a hoophouse built under the exemption be used for retail purposes?** No, the hoophouse must be used exclusively for the production or storage of live plants. The public must not have access to temporary greenhouses built under the exemption; nor can the hoophouses be used for a retail sales area. Where farm operators have retail stands, it is recommended that an "Employees Only" sign be posted on any temporary greenhouse built under the exemption which is in close proximity to retail facilities. This will alert the customers that the temporary greenhouse is off-limits to the public.
16. **Do the temporary greenhouses built under the exemption have to be semi-circular in design (hoops)?** No. Any geometric design is acceptable. It is up to the designer of the temporary greenhouse what style is necessary to achieve optimum horticultural production.
17. **If a hoophouse is built under the exemption and later the farmer decides to allow retail customers to enter the hoophouse to select plant material, are additional approvals needed from the local code officials?** Yes. The "use" of the hoophouse has changed and the local code official must be notified. The code official must certify that the hoophouse meets the intent of the provisions of the laws governing building construction for the proposed new use, and that such "change in use" does not result in any greater hazard to the public safety or welfare.
18. **If the hoophouse is erected for agricultural/horticultural production, can all or a portion of it be used to store containers for nursery material, equipment, bags of peat moss, fertilizer, etc.?** No. The temporary greenhouse can only be used to produce or store live plants. If it is to be used for anything other than the production or storage of live plants, a building subcode permit must be secured and it must meet all applicable building subcode requirements.
19. **How does the permit exemption for temporary greenhouses relate to real estate taxes?** The "Farmland Assessment Act of 1964" states that "...structures' shall not include temporary demountable plastic covered framework made up of portable parts with no permanent understructures..." The regulation governing the

exemption of temporary greenhouses from the permit requirements of the UCC defines temporary greenhouses.

20. **Can a temporary greenhouse built under the exemption be attached to a farm retail sales area?** No. If the hoop house is connected to the farm retail sales area, it then becomes permanent and a building permit is needed.
21. **If I drill a separate well to be used exclusively for my irrigation system in my temporary greenhouse, is a plumbing subcode permit needed?** No. A plumbing subcode permit will not be required for the irrigation system. However, a plumbing subcode permit is required for the installation of a backflow prevention device. The backflow prevention device must be installed by a New Jersey licensed plumber.
22. **I want to connect my irrigation system for my temporary greenhouses to the water supply line for my home and the plumbing fixtures in the separate lavatories for my farm help. Do I have to secure a plumbing permit?** Yes. When an irrigation system for a temporary greenhouse is connected to a potable water supply (either a private well or city water) a plumbing subcode permit must be secured for the installation of a backflow prevention device and all potable water piping that is not part of the irrigation system. However, a plumbing permit is not necessary for the irrigation system in the hoop house and a building permit is not necessary for the temporary greenhouse. The backflow prevention device must be installed by a New Jersey licensed plumber.
23. **Farmers often install pipe (rail system) to mobilize the tables that hold the plant material so they can be rolled in or out of a permanent or temporary greenhouse. If the pipe is embedded in concrete, is a building subcode permit required for the pipe?** No. The national model building code adopted by New Jersey, the International Building Code, does not specifically address the rail system that farmers use for the tables. The pipe embedded in concrete for the tables is most similar to the frame of a fence. It is not a structure and does not require a building subcode permit. However, the rail system should not obstruct egress.
24. **Is the pipe for the tables subject to a site plan approval under the UCC?** No. The pipe installation is not subject to site plan approval under the UCC. However, the pipe is similar to fence posts. If a local fence ordinance requires site plan approval for a certain size fence, then a site plan approval may be required. You should check with your local zoning official.
25. **Are heating units, lights or fans allowed in a temporary greenhouse?** Yes. However, according to the Electrical Contractors Licensing Act of 1962, a New Jersey Licensed Electrical Contractor must install electrical connections to heating units, lights or fans and electrical permits are required. According to the Master

Plumbing Licensing Law of 1968, A Licensed Master Plumber must install the potable water supply with backflow preventer to the heating unit and a plumbing permit is required. A building, fire, or plumbing permit will be required for the installation of the heating units and fans. Each permit is distinct and stands on its own. A building subcode permit is not required for the temporary greenhouse.

- 26. Does the owner of a temporary greenhouse built under the exemption have to comply with Chapter 251, P.L. 1975, the Soil Erosion and Sediment Control Act?** The municipality will not require a Chapter 251 soil erosion and sediment control plan since it will not have jurisdiction for a construction permit. However, the soil conservation district may still require a Chapter 251 soil erosion and sediment control plan if more than 5,000 square feet of land is disturbed for temporary greenhouse construction. This requirement can be satisfied if any needed erosion controls are addressed in a farm conservation plan and implemented during construction. The Natural Resource Conservation Service through the soil conservation districts can usually prepare the plan for agricultural producers at no cost. If the farm conservation plan procedure is not utilized, a Chapter 251 plan may be required.
- 27. Does the plastic covering the hoop house have to be removed periodically?** No, in many instances, the polyethylene covering is removed during certain periods of the year, however, the Department of Environmental Protection has objected to the amount of waste polyethylene film generates and some owners may choose not to remove the plastic every year. Removal of the polyethylene film is optional.

SOURCE OF INFORMATION FOR TECHNICAL QUESTIONS

Zoning:

Municipal zoning officials are listed in the telephone directory under "local government, township name"

Right To Farm – State Agriculture Development Committee (609) 984-2504

<http://www.nj.gov/agriculture/sadc/rtfprogram/>

Production Practices:

County Agricultural Agent - Rutgers Cooperative Extension is listed in the telephone Directory under "county government, cooperative extension"

<http://njaes.rutgers.edu/county/>

Greenhouse Design and Environmental Control:

For the use of a shade cloth, hoophouse design, various types of polyethylene, single layer poly vs. double layer polyethylene, etc.

Center for Controlled Environment Agriculture

Rutgers , New Jersey Agricultural Experiment Station
(732) 932-9534
<http://aesop.rutgers.edu/~horteng/>

Soil Erosion and Sediment Control:

NJ Department of Agriculture, State Soil Conservation Committee, (609) 292-5540
<http://www.state.nj.us/agriculture/divisions/anr/nrc/soil.html>

SOURCES OF ADDITIONAL INFORMATION ON THE TEMPORARY GREENHOUSE EXEMPTION

Specific questions about the Permit Exemption for Temporary Greenhouses and its application should be directed first to local building officials. For copies of the Fact Sheet for Temporary Greenhouses contact:

New Jersey Department of Agriculture

John Fitch Plaza, PO Box 330
Trenton, New Jersey 08625-0330
(609) 292-2242

For additional technical information contact:

New Jersey Department of Community Affairs

Division of Codes and Standards
Construction Assistance Unit
P.O. Box 802
101 South Broad Street

Trenton, New Jersey 08625-0802
(609) 984-7609
Email: codeAssist@dca.nj.gov

Reply all | Delete Junk | ...

RE: Heated Greenhouses on Prime Ag

WS Werner, Steve
Thu 3/23, 7:27 PM
Amy Bohner <amy@alchemyinc.com>; Sobolik, Todd; +1 more

Reply all |

Amy,

We have reviewed your plan which is quite innovative. Unfortunately, our zoning regulations regarding greenhouses on prime agricultural soils do not permit us to use this design. No improved floor which would preclude use of the underlying soil is permitted.

The concept is simple: prime soils are to be protected for their remarkable agricultural capabilities. A greenhouse which allows direct access to the soil itself for propagation of plants furthers this purpose. The Code does not contemplate a greenhouse structure with an elevated floor overlying the soil even if such concept would not imperil long term soil productivity. The design makes more sense in areas of lower agricultural capability where use of the underlying soils is not as important a factor. Our future update of the CMMLUO may open up opportunities where such a concept may be better suited.

Regards,

Steven P. Werner
Supervising Planner
Planning Division
Planning and Building Department
3015 H Street
Eureka, CA 95501
(707) 268-3726
swerner@co.humboldt.ca.us

From: Amy Bohner [mailto:amy@alchemyinc.com]
Sent: Thursday, March 23, 2017 10:05 AM
To: Sobolik, Todd; Werner, Steve
Cc: Alchemy Construction
Subject: RE: Heated Greenhouses on Prime Ag

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Just checking in on this email from March 8th.
We are anxious to hear back.
Thank you!

--
Amy Bohner
Alchemy Construction Inc.
www.alchemyinc.com 707-822-8013
Green Building/Net Zero Radiant Heat
Solar/Foundations & Excavation/Concrete Polishing

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Subject: RE: Heated Greenhouses on Prime Ag

Date: Wed, 8 Mar 2017 22:24:42 +0000

From: TSobolik@co.humboldt.ca.us

To: info@alchemyinc.com

CC: SWerner@co.humboldt.ca.us

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FYI, the greenhouse as designed would need engineering if you went with this type of a pe

Todd

Todd Sobolik
Chief Building Official
County of Humboldt
Building Inspection Division
Planning and Building Department
3015 H Street | Eureka, CA 95501
Phone: 707-445-7245 | Fax: 707-445-7446
Email: tsobolik@co.humboldt.ca.us

-----Original Message-----

From: Alchemy Construction [<mailto:info@alchemyinc.com>]

Sent: Tuesday, March 07, 2017 2:46 PM

To: Sobolik, Todd

Subject: Heated Greenhouses on Prime Ag

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"Can a concrete pad be poured inside a temporary greenhouse? Yes, however, concrete canno

CA

Warmly,

Stephen Bohner

Alchemy Construction Inc.

www.alchemyinc.com 707-822-8013

Green Building/Radiant Heat

Distillery Design+Build & Consulting

Foundations/Concrete Polishing/Foxblock ICF Solar Elec & Hot H2O/ Helical Piles

Phone conversation with Ag Commissioner, Jeff Dolf
Sept. 13, 2017 11AM

Jeff did see John LaBoyteaux's response to email regarding floored greenhouses (copied below), and acknowledged his apparent reversal in opinion as to their necessity/usefulness. Jeff reiterated the need that flooring over prime agricultural soil must be permeable. Mr. Dolf also agreed with J. LaBoyteaux's concern that allowing a floored greenhouse on prime agricultural soil might create an unwanted avenue for permanent conversion of prime ag soils.

Just the same, after I informed him of the design requirements for permits in the proposed amendments, he still thought the floored greenhouse concept was feasible and acceptable.

I informed him that I'd make note of our conversation, and that no further written response was required.

MM

.....
Earlier response from John Laboyteaux:

Original Message-----

From: John LaBoyteaux [mailto:helenthemelon@earthlink.net]

Sent: Friday, August 25, 2017 5:22 PM

To: Mary Milner <MMilner1@co.humboldt.ca.us>

Cc: Agriculture Commissioner <agcommissioner@co.humboldt.ca.us>; humboldtfb@sbglobal.net; buckeye@humboldt1.com; jon.shultz@ca.usda.gov; Johnson, Cliff <CJohnson@co.humboldt.ca.us>; Richardson, Michael <MRichardson@co.humboldt.ca.us>; Marty McClelland <martymc.1@suddenlink.net>

Subject: Re: Zoning Change - Greenhouse on Prime Ag Soil

Hello Mary,

From my reading, the zoning ordinance does not prohibit greenhouses on prime agricultural soils. The prohibition applies to concrete foundations, floors or walkways. Actually I know of numerous "hoop structure" type greenhouses which are located on prime agricultural soils. These greenhouses may serve for many years but are still easily removable without damage or permanent impairment of the underlying soil.

Typically where raised beds or containers are used within the greenhouse, the earthen floor is covered with weed control fabric and any footpaths are defined and slightly raised with wood chips. The fabric is removable and the wood chips will compost into the soil.

While a completely elevated floor would not touch the underlying soil, construction could require concrete piers or posts in concrete which could permanently impair the productivity of the site. Furthermore, an elevated floor, depending on its construction, might be converted to a larger structure and the complete loss of productivity on the site.

In my view, farmers have already developed a functional greenhouse design, extensively used, which does not require a concrete base, floor or pathways nor construction of an elevated floor.

John LaBoyteaux

> On Aug 25, 2017, at 3:57 PM, Mary Milner <MMilner1@co.humboldt.ca.us> wrote:

>

> <Draft Ordinance 8-23-2017.docx>

=====

Milner, Mary

From: John LaBoyteaux <helenthemelon@earthlink.net>
Sent: Friday, August 25, 2017 5:22 PM
To: Mary Milner
Cc: Agriculture Commissioner; humboldtfb@sbglobal.net; buckeye@humboldt1.com; jon.shultz@ca.usda.gov; Johnson, Cliff; Richardson, Michael; Marty McClelland
Subject: Re: Zoning Change - Greenhouse on Prime Ag Soil

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John LaBoyteaux

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 >
 > <Draft Ordinance 8-23-2017.docx>



Humboldt County Farm Bureau

5601 So. Broadway, Eureka, CA 95503
Serving Agriculture Since 1913

C7

October 3, 2017

County of Humboldt
Planning Department
2015 H Street
Eureka, CA 95501

Re: Cannabis Zoning Regulations; Greenhouse Floors

Attn: Mary Milner

The Humboldt County Farm Bureau would like to provide comments on the proposed zoning code regarding floors on greenhouses in Prime Agricultural Zones.

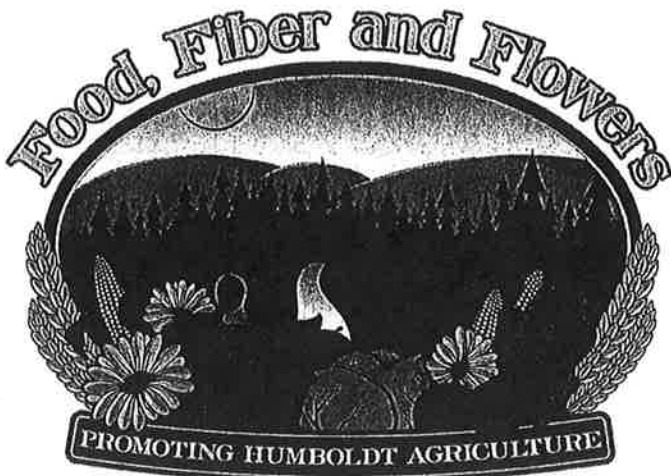
The Farm Bureau has provided many letters to the County regarding the Cannabis Industry. One letter in particular was dated December 30, 2016, when we asked the county to discourage Ag Exclusive Lands from future cannabis operations. We do not believe Cannabis Operations will preserve and protect the important AE soils in our county and their financial interest in these farms will prevent other agricultural operations from being able to purchase the lands at a price which would reflect their commodity's value.

The Farm Bureau would like to discourage all Cannabis Operations on AE Soil and believe that Humboldt County has an abundance of Commercial and Industrial Zoned lands that should be inventoried and promoted to the Cannabis operators as alternatives for their future business.

The concept of requiring a floor in a cannabis greenhouse is not the answer. The construction of a floor will increased regulations and costs and will not protect the prime soils for the future. The county must enforce the existing grading ordinance and not allow the removal of the prime soil from project site. We do not believe the greenhouse floor would accomplish your intended desire which is to protect the prime soil. We also believe that this regulation could be extended to harm other agricultural producers in the future.

We appreciate the opportunity to provide comments on this important zoning code. We would prefer the Cannabis operations to be located on lands other than Agricultural Exclusive. Humboldt County has many vacant industrial sites as well as appropriate commercial zone property which would be a much better use of those lands. It appears that all the Cannabis operations utilize imported soils and special containers eliminating the need to be located on Prime Soils.

Sincerely,
Katherine Ziemer
Katherine Ziemer
Executive Director



November 2, 2017
Humboldt County Planning Commission
3015 H Street
Eureka, California 95501

C8

Attn: Mary Milner

RE: OR 17-005

P.O. Box 624, Fortuna, CA. 95540

Directors:

Dave Feral
Feral Family Farm

Paul Gluntoll
Warren Creek Farm

Portia Bramble

John Gary
Organic Matters Ranch

Cliff Clendenen
Clendenen's Cider Works

Kevin & Melanie Cunningham
Shakefork Community Farm

Erin Darden-Little

Jacque and Amy Newkom
Newkom Family Farm

Mel Kreb
Flood Plain Produce

Martha Spencer MS
Natural Resource Planner

Jared Zystro PhD
Plant Breeder and Geneticist

John LaBoyteaux
Camp Grant Family Farm

Dear Commissioners:

This group of industry experts and representatives believes the proposed changes to the Greenhouse Ordinance are unnecessary and could be damaging to the agricultural productivity of the effected properties. No changes to the ordinance are necessary and this proposal should be declined.

Food, Fiber and Flowers is strongly associated with the various farmers market associations and independent fruit and vegetable producers in the County. Most of these operations have greenhouses, all of which utilize a native soil floor. Sometimes crops are raised directly in native soil within the greenhouse, while in other cases weed control fabric is utilized and crops are raised on free standing benches, tables or containers. Pathways in the greenhouses can be slightly elevated with wood chips or movable planks.

Similar free standing benches, tables or containers can be used for hydroponic operations. We are aware of aquaponic operations, including fish tanks, floating "grow rafts" and recirculating grow beds all constructed within earthen floor greenhouses.

If applicants believe they need a rigid, impervious floor surface, those operations should occur on industrial sites.

Most all farms and ranch require some infrastructure, barns, milking parlors, greenhouses, packing sheds or processing facilities. Most of these reduce or eliminate the productivity of the underlying soil and usually some curtilage. The distinction to be made is that these structures AUGMENT the productivity of the entire agricultural property while hydroponic and aquaponic operations are SELF CONTAINED PRODUCTION UNITS which could occur on most any level surface.

Secondly, in our view, an agricultural conversion or significant impact occurs when a structure or activity eliminates or reduces the agricultural capability of the native soil. Temporary parking lots and other non-agricultural activities are significant impacts on prime agricultural soils as are structures which do not augment agricultural use of the whole property.

The Greenhouse Ordinance does not need to be changed, Please decline this proposal.

John LaBoyteaux
Food, Fiber and Flowers