

Appendix D

**CLUO EIR Site Relocation,
Construction and Operation
Assumptions for Alternatives**

CLUO EIR -- Site Relocation, Construction, and Operation Assumptions for Alternatives

Personal Grow for All Alternatives

- Alternatives 1, 2, 3, and 5 assume that personal use outdoor cultivation may occur in any zoning district on a parcel with a legal residence. These activities would likely involve no more 100 square feet of land area and would be required to be outside of front yard and side yard setback areas.
- Prohibition of personal grow is pre-empted by the state. At a minimum anyone is allowed to grow 6 plants indoors in any residence in any zone.
- At the local level the County is not required to allow any expanded personal grow rights beyond what the state has defined.
- Alternative 4 is the “no outdoor” grow alternative for all cannabis use types that includes personal grow.
- Alternative 5 is the “in agricultural designated areas only” alternative for all cannabis use types. Based on the state preemption, personal grow under this alternative can occur indoor in any zone, and, to be consistent with the alternative, outdoors only in agricultural zones. If outdoor, under this alternative 1,000 foot buffers would apply.
- The buffers assumed for any given alternative apply to outdoor personal grow with one exception. It is not possible to apply the buffer from residentially designated land as that would preclude all personal grow within residential areas. Each alternative includes a buffer from individual residences to personal grow, but does not apply the buffer to residentially designated land.

Alternative 1

Cultivation Relocation¹

- 1) Nine of the 78 existing and eligible sites are required to relocate due to zoning or buffers.
 - a) For relocated sites:
 - i) Cannabis cultivation parcels are assumed to be 40 acres in size.²
 - ii) Cannabis cultivation activity footprint is assumed at 2 acres (land area that contains the cultivation canopy and supporting operations and buildings).¹
 - iii) 33 percent of sites located on land areas in row crop production.³
 - iv) 39 percent of sites located on land areas in orchard or vineyard production.²
 - v) 28 percent of sites located on land areas used for grazing/pastureland.⁴
 - b) Relocated sites are located near their previous locations.
- 2) Relocated site assumed construction activities:
 - a) All sites would conduct ground vegetation removal.
50 percent of sites that require construction of new onsite roadways, buildings, and infrastructure.⁵

¹ Relocation may ultimately be required for compliance with other requirements in the CLUO. The EIR analysis focuses on zoning designation and identified sensitive use buffers only.

² Based on existing cultivation site data, County GIS data, and review of satellite images.

³ Based on acreage data in the Yolo County 2018 Crop Report (approximately 196,000 acres in row crop production, 227,000 acres in orchard or vineyard production).

⁴ Based on acreage data from the California Department of Conservation Table A-46: Yolo County 2014-2016 Land Use Conversion, approximately 166,000 acres.

⁵ Based on County inspection data on existing cultivation operations. Remaining sites are assumed to be located on sites that have active agricultural where ground disturbance routinely occurs and buildings already exist.

Assumed Cultivation Site Operation Activities

- 1) Preparation, planting, maintenance, and harvesting of cannabis (outdoors and in structures) through the use of staff, equipment, and vehicles.
- 2) Operation of greenhouses and interior lighting for the growing of cannabis plants in nurseries for outdoor planting or as part of a mixed-light or indoor cultivation.
- 3) Use of carbon dioxide for plant growth enhancement.
- 4) Employee vehicle trips to and from the site.
- 5) Seasonal employee vehicle trips to and from the site during harvest of outdoor cultivation.
- 6) Truck trips to and from the site to deliver supplies (e.g., soil amendments, fertilizers, pesticides, and carbon dioxide gas tanks) and/or transport cannabis plants, cannabis waste, and non-cannabis waste.
- 7) Operation of well, septic, and drainage facilities.

Noncultivation and Vertical Integration

- 1) Not applicable.

Alternative 2

Cultivation Relocation¹

- 1) 30 of the 78 existing and eligible sites are required to relocate due to zoning or buffers.
 - a) For relocated sites:
 - i) Cannabis cultivation parcels are assumed to be 40 acres in size.
 - ii) Cannabis cultivation activity footprint is assumed at 2 acres (land area that contains the cultivation canopy and supporting operations and buildings).
 - iii) 33 percent of sites located on land areas in row crop production
 - iv) 39 percent of sites located on land areas in orchard or vineyard production
 - v) 28 percent of sites located on land areas used for grazing/pastureland
- 2) Relocated sites are located near their previous locations.
- 3) Relocated site assumed construction activities:
 - a) All sites would conduct ground vegetation removal.
 - b) 50 percent of sites that require construction of new onsite roadways, buildings, and infrastructure.

New Cultivation

- 1) The two new cultivation sites under this alternative as assumed to occur with vertical integration (more than one cannabis use on site).

Assumed Cultivation Site Operation Activities

- 1) Preparation, planting, maintenance, and harvesting of cannabis (outdoors and in structures) through the use of staff, equipment, and vehicles.
- 2) Operation of greenhouses and interior lighting for the growing of cannabis plants in nurseries for outdoor planting or as part of a mixed-light or indoor cultivation.
- 3) Use of carbon dioxide for plant growth enhancement.
- 4) Employee vehicle trips to and from the site.
- 5) Seasonal employee vehicle trips to and from the site during harvest of outdoor cultivation.
- 6) Truck trips to and from the site to deliver supplies (e.g., soil amendments, fertilizers, pesticides, and carbon dioxide gas tanks) and/or transport cannabis plants, cannabis waste, and non-cannabis waste.

7) Operation of well, septic, and drainage facilities.

Noncultivation and Vertical Integration

1) 90 percent of noncultivation uses are vertically integrated and located on agriculturally zoned parcels assumed to be 40 acres in size located on the same range of agricultural lands assumed for cultivation relocation.⁶

a) Vertically integrated sites would include a combination of the follow activity footprints:

- i) Cultivation activity footprint is 2 acres per cultivation site.
- ii) Nursery activity footprint (land area that contains the nursery facility and supporting operations and buildings) is assumed to be 15 acres per nursery.⁷
- iii) Processing, manufacturing, testing, distribution, retail, and microbusiness activity footprints are assumed to be 0.50 acres per use.⁸

b) Construction activities for vertically integrated sites:

- i) Removal of existing ground vegetation and/or crops within activity footprint.
- ii) Grading to create onsite roadways, parking, and building pads for a single-story buildings.
- iii) Graveling or paving of onsite roadways and parking.
- iv) Grading and/or trenching for septic systems or public wastewater system connections, wells and water tanks or public water system connections, electrical facilities, and drainage/water quality improvements.

2) 10 percent of noncultivation uses are located on commercial or industrial zoned property and would not be vertically integrated because of limited availability of undeveloped commercial and industrial parcels and average parcel sizes (approximately 1.5 acres for industrial sites and 7 acres for commercial sites).

a) Approximately 80 percent of noncultivation sites within commercial zoned property are assumed to be located within an existing building on a developed site. Approximately 70 percent of noncultivation sites within industrial zoned property are assumed to be located within an existing building on a developed site. Commercial parcel size is assumed to be approximately 1.50 acres and the industrial parcel size is assumed to be 7 acres.⁹

b) Assumed noncultivation operation activities:

- i) Operation of the building that includes energy use, wastewater generation, water demand, and stormwater management.
- ii) Employee and customer vehicle trips to and from the site.
- iii) Truck trips to and from the site to deliver supplies (e.g., chemicals, gases, containers, equipment) and/or transport cannabis plants, cannabis products, cannabis or cannabis product waste, and non-cannabis waste.

Alternative 3

Cultivation Relocation¹

1) Nine of the 78 existing and eligible sites are required to relocate due to zoning or buffers.

a) For new (57 cultivation sites) and relocated sites:

- i) Cannabis cultivation parcels are assumed to be 40 acres in size.

⁶ Vertically integration means more than one cultivation and/or noncultivation use on a single parcel. It is assumed that 2 new cultivation uses would be included as part of vertical integrated parcels.

⁷ Based on review of the Green Coast Industries and Dark Heart nursery Early DA applications.

⁸ Based on review of applications and satellite imagery for sites in Humboldt County and the cities of Needles and Eureka.

⁹ County GIS data identifies approximately 750 acres of commercial zoned land (approximately 70 percent developed) and 610 acres of industrial zoned land (approximately 80 developed) in the unincorporated area.

- ii) Cannabis cultivation activity footprint is assumed at 2 acres (land area that contains the cultivation canopy and supporting operations and buildings).
 - iii) 33 percent of sites located on land areas in row crop production.
 - iv) 39 percent of sites located on land areas in orchard or vineyard production.
 - v) 28 percent of sites located on land areas used for grazing/pastureland.
- 2) Relocated sites are located near their previous locations.
 - 3) Relocated site assumed construction activities:
 - a) All sites would conduct ground vegetation removal.
 - b) 50 percent of sites that require construction of new onsite roadways, buildings, and infrastructure.

New Cultivation

- 1) 57 cultivation new sites:¹⁰
 - a) Cannabis cultivation parcels are assumed to be 40 acres in size.
 - b) Cannabis cultivation activity footprint is assumed at 2 acres (land area that contains the cultivation canopy and supporting operations and buildings).
 - c) 33 percent of sites located on land areas in row crop production.
 - d) 39 percent of sites located on land areas in orchard or vineyard production.
 - e) 28 percent of sites located on land areas used for grazing/pastureland.
- 2) New site assumed construction activities:
 - a) All sites would conduct ground vegetation removal.
 - b) 50 percent of sites that require construction of new onsite roadways, buildings, and infrastructure.

Assumed Cultivation Site Operation Activities

- 1) Preparation, planting, maintenance, and harvesting of cannabis (outdoors and in structures) through the use of staff, equipment, and vehicles.
- 2) Operation of greenhouses and interior lighting for the growing of cannabis plants in nurseries for outdoor planting or as part of a mixed-light or indoor cultivation.
- 3) Use of carbon dioxide for plant growth enhancement.
- 4) Employee vehicle trips to and from the site.
- 5) Seasonal employee vehicle trips to and from the site during harvest of outdoor cultivation.
- 6) Truck trips to and from the site to deliver supplies (e.g., soil amendments, fertilizers, pesticides, and carbon dioxide gas tanks) and/or transport cannabis plants, cannabis waste, and non-cannabis waste.
- 7) Operation of well, septic, and drainage facilities.

Noncultivation and Vertical Integration

- 1) 90 percent of noncultivation uses are vertically integrated and located on parcels assumed to be 40 acres in size located on the same range of agricultural lands assumed for new cultivation.¹¹
 - a) Vertically integrated sites would include a combination of the follow activity footprints:
 - i) Cultivation activity footprint is 2 acres per cultivation site.

¹⁰ 57 of the 82 new cultivation sites are assumed to occur without vertical integration.

¹¹ Vertically integration means more than one cultivation and/or noncultivation use on a single parcel. It is assumed that 25 new cultivation uses would be included as part of vertical integrated parcels.

- ii) Nursery activity footprint (land area that contains the nursery facility and supporting operations and buildings) is assumed to be 15 acres per nursery.
 - iii) Processing, manufacturing, testing, distribution, retail, and microbusiness activity footprints are assumed to be 0.50 acres per use.
- b) Construction activities for vertically integrated sites:
- i) Removal of existing ground vegetation and/or crops within activity footprint.
 - ii) Grading to create onsite roadways, parking, and building pads for a single-story buildings.
 - iii) Graveling or paving of onsite roadways and parking.
 - iv) Grading and/or trenching for septic systems or public wastewater system connections, wells and water tanks or public water system connections, electrical facilities, and drainage/water quality improvements.
- 2) 10 percent of noncultivation uses are located on commercial or industrial zoned property and would not be vertically integrated because of limited availability of undeveloped commercial and industrial parcels and average parcel sizes (approximately 1.5 acres for industrial sites and 7 acres for commercial sites).
- a) Approximately 80 percent of noncultivation sites within commercial zoned property are assumed to be located within an existing building on a developed site. Approximately 70 percent of noncultivation sites within industrial zoned property are assumed to be located within an existing building on a developed site. Commercial parcel size is assumed to be approximately 1.50 acres and the industrial parcel size is assumed to be 7 acres.
- 3) Assumed noncultivation operation activities:
- a) Operation of the building that includes energy use, wastewater generation, water demand, and stormwater management.
 - b) Employee and customer vehicle trips to and from the site.
 - c) Truck trips to and from the site to deliver supplies (e.g., chemicals, gases, containers, equipment) and/or transport cannabis plants, cannabis products, cannabis or cannabis product waste, and non-cannabis waste.

Alternative 4

Cultivation Relocation or Modification¹

- 1) Nine of the 78 existing and eligible sites are required to relocate due to zoning.
- a) For relocated sites:
- i) Cannabis cultivation parcels are assumed to be 40 acres in size.
 - ii) Cannabis cultivation activity footprint is assumed at 2 acres (land area that contains the supporting operations and buildings).¹²
 - iii) 33 percent of sites located on land areas in row crop production.
 - iv) 39 percent of sites located on land areas in orchard or vineyard production.
 - v) 28 percent of sites located on land areas used for grazing/pastureland.
- 2) Relocated sites are located near their previous locations.
- 3) Relocated assumed construction activities:
- a) All sites would conduct ground vegetation removal.
 - b) 50 percent of sites that require construction of new onsite roadways, buildings, and infrastructure.

¹² Two acres is based on the average size of existing indoor and mixed-light cultivation operations in the County.

- 4) 75 of the 78 existing and eligible sites are required to convert entirely to indoor or mixed-light (greenhouse) cultivation.

New Cultivation

- 1) The two new cultivation sites under this alternative as assumed to occur with vertical integration (more than one cannabis use on site).

Assumed Cultivation Site Operation Activities

- 1) Preparation, planting, maintenance, and harvesting of cannabis (in structures only) through the use of staff, equipment, and vehicles.
- 2) Operation of greenhouses and interior lighting for the growing of cannabis plants in nurseries as part of a mixed-light or indoor cultivation.
- 3) Use of carbon dioxide for plant growth enhancement.
- 4) Employee vehicle trips to and from the site.
- 5) Truck trips to and from the site to deliver supplies (e.g., soil amendments, fertilizers, pesticides, and carbon dioxide gas tanks) and/or transport cannabis plants, cannabis waste, and non-cannabis waste.
- 6) Operation of well, septic, and drainage facilities.

Noncultivation and Vertical Integration

- 1) 90 percent of noncultivation uses are vertically integrated and located on parcels assumed to be 40 acres in size located on the same range of agricultural lands assumed for cultivation relocation.¹³
 - a) Vertically integrated sites would include a combination of the follow activity footprints:
 - i) Cultivation activity footprint is 2 acres per cultivation site.¹³
 - ii) Nursery activity footprint (land area that contains the nursery facility and supporting operations and buildings) is assumed to be 15 acres per nursery.
 - iii) Processing, manufacturing, testing, distribution, retail, and microbusiness activity footprints are assumed to be 0.50 acres per use.
 - b) Construction activities for vertically integrated sites
 - i) Removal of existing ground vegetation and/or crops within activity footprint.
 - ii) Grading to create onsite roadways, parking, and building pads for a single-story buildings.
 - iii) Graveling or paving of onsite roadways and parking.
 - iv) Grading and/or trenching for septic systems or public wastewater system connections, wells and water tanks or public water system connections, electrical facilities, and drainage/water quality improvements.
- 2) 10 percent of noncultivation uses are located on commercial or industrial zoned property and would not be vertically integrated because of limited availability of undeveloped commercial and industrial parcels and average parcel sizes (approximately 1.5 acres for industrial sites and 7 acres for commercial sites).
 - a) Approximately 80 percent of noncultivation sites within commercial zoned property are assumed to be located within an existing building on a developed site. Approximately 70 percent of noncultivation sites within industrial zoned property are assumed to be located within an existing building on a developed site. Commercial parcel size is assumed to be approximately 1.50 acres and the industrial parcel size is assumed to be 7 acres.

¹³ Vertically integration means more than one cultivation and/or noncultivation use on a single parcel. It is assumed that 2 new cultivation uses would be included as part of vertical integrated parcels.

- 3) Assumed noncultivation operation activities:
 - a) Operation of the building that includes energy use, wastewater generation, water demand, and stormwater management.
 - b) Employee and customer vehicle trips to and from the site.
 - c) Truck trips to and from the site to deliver supplies (e.g., chemicals, gases, containers, equipment) and/or transport cannabis plants, cannabis products, cannabis or cannabis product waste, and non-cannabis waste.

Alternative 5

Cultivation Relocation¹

- 1) 30 of the 78 existing and eligible sites are required to relocate due to zoning or buffers.
 - a) For relocated sites:
 - i) Cannabis cultivation parcels are assumed to be 40 acres in size.
 - ii) Cannabis cultivation activity footprint is assumed at 2 acres (land area that contains the cultivation canopy and supporting operations and buildings).
 - iii) 33 percent of sites located on land areas in row crop production.
 - iv) 39 percent of sites located on land areas in orchard or vineyard production.
 - v) 28 percent of sites located on land areas used for grazing/pastureland.
- 2) Relocated sites are located near their previous locations.
- 3) Relocated site assumed construction activities:
 - a) All sites would conduct ground vegetation removal.
 - b) 50 percent of sites that require construction of new onsite roadways, buildings, and infrastructure.

New Cultivation

- 1) The two new cultivation sites under this alternative as assumed to occur with vertical integration (more than one cannabis use on site).

Assumed Cultivation Site Operation Activities

- 1) Preparation, planting, maintenance, and harvesting of cannabis (outdoors and in structures) through the use of staff, equipment, and vehicles.
- 2) Operation of greenhouses and interior lighting for the growing of cannabis plants in nurseries for outdoor planting or as part of a mixed-light or indoor cultivation.
- 3) Use of carbon dioxide for plant growth enhancement.
- 4) Employee vehicle trips to and from the site.
- 5) Seasonal employee vehicle trips to and from the site during harvest of outdoor cultivation.
- 6) Truck trips to and from the site to deliver supplies (e.g., soil amendments, fertilizers, pesticides, and carbon dioxide gas tanks) and/or transport cannabis plants, cannabis waste, and non-cannabis waste.
- 7) Operation of well, septic, and drainage facilities.

Noncultivation and Vertical Integration

- 1) 90 percent of noncultivation uses are vertically integrated and located on parcels assumed to be 40 acres in size located on the same range of agricultural lands assumed for cultivation relocation.¹⁴

¹⁴ Vertically integration means more than one cultivation and/or noncultivation use on a single parcel. It is assumed that 2 new cultivation uses would be included as part of vertical integrated parcels.

- a) Vertically integrated sites would include a combination of the follow activity footprints:
 - i) Cultivation activity footprint is 2 acres per cultivation site.
 - ii) Nursery activity footprint (land area that contains the nursery facility and supporting operations and buildings) is assumed to be 15 acres per nursery.
 - iii) Processing, manufacturing, testing, distribution, and microbusiness activity footprints are assumed to be 0.50 acres per use.
 - b) Construction activities for vertically integrated sites:
 - i) Removal of existing ground vegetation and/or crops within activity footprint.
 - ii) Grading to create onsite roadways, parking, and building pads for a single-story buildings.
 - iii) Graveling or paving of onsite roadways and parking.
 - iv) Grading and/or trenching for septic systems or public wastewater system connections, wells and water tanks or public water system connections, electrical facilities, and drainage/water quality improvements.
- 2) 10 percent of noncultivation uses would not be vertically integrated located on the same range of agricultural lands assumed for cultivation relocation. Parcels are assumed to be 40 acres in size.
- a) Nursery activity footprint (land area that contains the nursery facility and supporting operations and buildings) is assumed to be 15 acres per nursery.
 - b) Processing, manufacturing, testing, distribution, and microbusiness activity footprints are assumed to be 0.50 acres per use.
- 3) Assumed noncultivation operation activities:
- a) Operation of the building that includes energy use, wastewater generation, water demand, and stormwater management.
 - b) Employee and customer vehicle trips to and from the site.
 - c) Truck trips to and from the site to deliver supplies (e.g., chemicals, gases, containers, equipment) and/or transport cannabis plants, cannabis products, cannabis or cannabis product waste, and non-cannabis waste.