



# MOTHER EARTH ENGINEERING

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March 11, 2022

Humboldt County Planning Department  
Attn: Rodney Yandell  
3015 H St, Eureka, CA 95501

RE: April Armstrong  
Proposed Cultivation Consolidation Project – REVISION 2  
APPS# 12290 (APN 316-086-011), 12269 (APN 316-086-017), 11217 (APN 316-086-023)

## Proposed Project Overview

Dear Humboldt County Planning,

Please accept this project proposal to consolidate cultivation and associated infrastructure of three cannabis projects into one project based on environmental justifications. We hope to work with your team to refine our proposal and to comply with current land-use code and create a win-win solution to complex problems for all parties. The environmental superiority of this proposal is robust and includes a significant increase in wildlife habitat continuity, and significant reduction in sediment transport to several watercourses.

### Phase 1: Project Consolidation

The proposed project includes the consolidation of the entirety of the cultivation areas from two 1.0 projects known as Apps 12290 (APN 316-086-011) to Apps 12269 (APN 316-086-017) through a project merger. This includes combining the CAV assessed 14,493 sq ft outdoor and 2,870 sq ft mixed light cultivation from APN 316-086-011 with the 22,766 sq ft outdoor and 1,450 mixed light cultivation from APN 316-086-017. County Planning was supportive of dissolving Apps 12290 as part of this consolidation, and transferring all funds paid toward this project to Apps 12269 (see attached record of correspondence). The total of square footage for this phase if approved will be 37,259 sq ft outdoor and 4,320 mixed-light. Please note that the properties are contiguous, both owned by the applicant, and both permits are included in one State license with CDFG.

### Phase 2: Big Oak Merger

For this phase of the project, the applicant is proposing to relocate 2,052 sq ft of mixed light and 5,040 sq ft of outdoor cultivation located on Apps 11217 (316-086-023). No additional square footage above what was assessed in the original CAV is being proposed. This parcel is zoned AG/RA20. It is currently under a separate commercial cannabis permit and is also owned by the applicant. The cumulative total square footage proposed to be relocated to Apps 12269 will be 42,299 sq ft outdoor and 6,372 sq ft mixed light cultivation. A plan for full environmental remediation as deemed appropriate by the Planning Department will be prepared by a licensed engineer and implemented for this parcel. The applicant is prepared to implement monitoring and reporting to ensure all required project elements are completed within the required 12 months, and affirm that the remediation is achieving the restoration goals.

Table 1: Summary of cultivation area totals by parcel

Permit Number	Outdoor Square Footage	Mixed Light Square Footage
12269	22,766	1,450
12290	14,493	2,870
11217	5,040	2,052
<b>Total Proposed Square Footage to APN 316-086-017</b>	<b>42,299</b>	<b>6,372</b>

## Water Sources

There are multiple water sources located at the proposed consolidation and receiving site known as Apps 12269 (APN 316-086-017). Proposed water sources to be used for cannabis irrigation include two (2) points-of-diversion, a groundwater well yielding an estimated 5 gallons per minute and a 500,000 gallon rainwater catchment pond.

The applicant observes the forbearance period for the PODs required by both the State Water Board and the California Department of Fish and Wildlife and limits surface water diversions for irrigation to the rainy season. As the hydrologic connectivity of the well is currently unknown the applicant is willing to forebear from pumping water from the well for commercial cannabis irrigation during the dry season from March 15<sup>th</sup> to October 15<sup>th</sup> or whenever State and local regulations stipulate for any given year.

*Table 2: Summary of water sources*

<b>Water Source</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Date Established</b>
POD-1	40.9115	-123.7917	1987
POD-2	40.9096	-123.7918	1990
Well	40.9098	-123.7897	2012
Pond	40.9095	-123.7932	2005

## Water Storage

The applicant currently has 42 hard tanks on the receiving parcel totaling 145,575 gallons of storage. The rainwater catchment pond provides approximately 500,000 gallons of storage. This amounts to a total of 645,575 gallons, which exceeds the total annual irrigation applied for the existing square footage on all three parcels.

The proposed relocation of water storage includes moving 13 tanks totaling 34,775 gallons of storage from Apps 12290 (APN 316-086-011) and 6 tanks totaling 17,500 gallons of storage from Apps 11217 (APN 316-086-023). All existing water bladders will be phased out and removed.

Total water storage proposed at the consolidation and receiving site will be 697,850 gallons to support the operation. This breaks down to 14.33 gallons of available water storage per sq ft of cultivation which is adequate to support the proposed 42,299 sq ft outdoor and 6,372 sq ft mixed light cultivation.

## Water Use

Total proposed water use will be roughly 480,000 gallons but is estimated to decrease significantly after the installation of a hugelbed permaculture system. The applicant proposes to excavate a series of trenches in a previously existing flat where cultivation presently exists. Fallen logs will be laid at the bottom, followed by wood chips and compost. She will then top it with amended soil from the previously existing beds and cultivate in rows on top of the trenches. This will maximize soil moisture retention, mycoproliferation, and allow for planting of full term outdoor in-ground. Cover crop and mulching will allow for the re-use of "living" soil each year with compost being added for fertilizer. This system will decrease water use to an estimated 350,000 gallons upon installation at all cultivation areas.

## Power Plan & Noise

The applicant currently uses a combination of generators and solar power for cultivation. Two (2) portable Honda EU2000 generators are used for feeding and irrigation needs in the cultivation areas. The Honda EU2000 emits 59 dB at the maximum rated load at 23 feet. It is expected the generators will not be used at their maximum rated loads. The nearest property line distance to a cultivation area is approximately 100 feet. Using the Inverse Square Law Calculator for a generator used at 100% rated load, it is expected that the sound pressure level at the nearest property line is 46.2 dB. Noise suppression will be installed if requested to minimize noise impacts.

The applicant proposes scaling up the use of solar power after project approval to replace generators and transition to a renewable power sources. They will apply for matching grants to pursue funding to install a more solar panels and reserve power battery systems to make this transition and will use solar power to support operations. Solar will be installed only in previously disturbed areas or on the roofs of established structures.

As the location of this project is adjacent to currently established PG&E power lines, the applicant is proposing to apply to receive power from the grid. However, it is unreasonable to expect this change in power source to occur in the near-term as the current wait time for power upgrades can take multiple years. Eventually, however, she would like her operation to run completely on power supplied from PG&E with solar supplementation.

### **Processing**

Drying and bucking will occur on site in an existing ag-exempt structure. If additional processing is necessary, it will be performed onsite by the owner and her family, or will take place at a licensed off-site facility.

### **Employees & Sanitation**

Up to two employees will be present on-site during the week of the cultivation and harvest season between February 1<sup>st</sup> to November 30<sup>th</sup> besides the applicant and family. Employees carpool to the site for work each day. It is expected there will be one to three vehicle trips per day on and off the site.

A permitted groundwater well supplies drinking water for all employees. A flushable toilet and sink for handwashing are available for employee use. The facilities exist in the main residence which has a permitted Onsite Wastewater Treatment System (OWTS).

### **“Shaded” Parcel Relocation Justification**

The parcel known as APN 316-086-023 (Apps 11217) is one of the properties impacted by the Bareilles Subdivision. As these projects were not subdivided in compliance with the Subdivision Map Act, there was inadequate environmental review for the development.

There is an EIR in the process with the County to complete an environmental review of the Bareilles Subdivision which will eventually allow commercial cannabis projects to be fully permitted in this area. However, a timeline for when the EIR will be finalized is not known, and LACO, the firm contracted to complete the EIR did not respond to a request for a status update on the report. This situation severely limits what development can be supported by Humboldt County and State law.

Apps 12269 (APN 316-086-017) and Apps 12290 (APN 316-086-011) are not within the illegal subdivision. Relocating cannabis cultivation off illegally subdivided land to a legal parcel will dramatically increase permit processing time and ease.

### **Environmental Superiority Justifications**

#### Phase 1: Consolidation

We propose to relocate the entirety of the cultivation area (~17,363 square feet) from APN 316-086-011 (Apps 12290) to APN 316-086-017 (Apps 12269).

The basis for relocation is primarily environmental superiority and includes the following:

1. Streamlining of operations and resources by consolidating a total of four (4) cultivation areas spread across three parcels onto one or two discrete areas within the same parcel.
2. Reduction of surface water diversions. Currently, three (3) surface water diversions and one spring fed pond provide irrigation water for the four (4) cultivation areas. Consolidation would eliminate all the diversions on APN 316-086-011, reducing the energy required to transport water for irrigation purposes, and allowing the watercourses to return to an undiverted state.
3. Creation of superior riparian and vegetated buffers by increasing the distance from the cultivation area to the nearest watercourse. The relocation area is far from surface waters, thereby reducing impacts to water quality from potential nutrient and sediment runoff.

4. Providing arrangements better suited for the topography of the cultivation areas, reducing areas of potential (geologic) instability. Slopes at the relocation site are less steep and drier, therefore less prone to land wasting or movement.
5. Reducing road and water quality impacts from travel and dust on access roads by reducing the number of trips and distance traveled.
6. Providing superior energy efficiency and potential to reduce overall energy use. The proposed relocation area is in an open area where the solar aspect will allow for more efficient cultivation, thereby reducing energy demands.
7. Lower demand for fossil fuels used in generators and vehicles transporting supplies between locations.
8. Providing better security because of the centralized location.
9. Relocated cultivation areas will be remediated and restored to “natural” conditions.

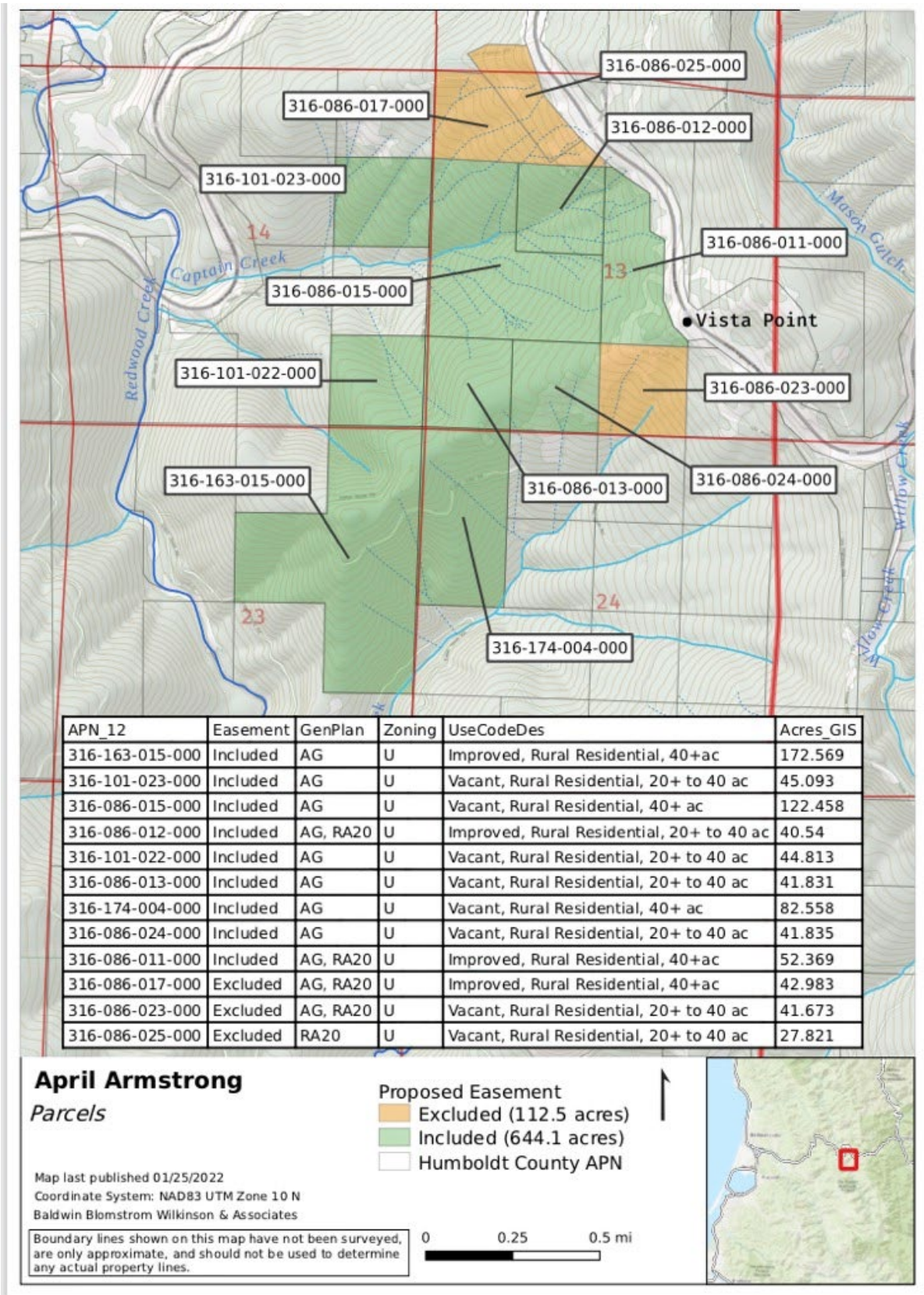
## Phase 2: Big Oak Merger

The environmental justification for retirement, remediation and relocation of Apps 11217 are as follows:

1. A stream encroachment and point of diversion associated with the irrigation shall be removed.
2. All water storage infrastructure including six (6) storage tanks and two (2) bladders with a total storage capacity of 57,500 gallons shall be removed and relocated to Apps 12269 (APN 316-086-017).
3. All fertilizers, amendments and fuel will be relocated off site.
4. Trips to and from this site will cease and all cultivation will be centrally located on 12269 (APN 316-086-017). This will reduce road impacts, sedimentation and fuel consumption associated with transportation.
5. The gas generator needed to support cultivation will be removed. This will reduce fossil fuel consumption and noise impacts to local wildlife.
6. Processing of product and the development of a commercial processing facility will not occur.
7. Minimization of the use of roads which are in excess of 15% slope requirements.
8. Relocation of a cannabis project out of the iconic Highway 299 Burney Vista Point viewshed which is located directly eastward less than 0.5 miles away. This contributes to public value by preserving and increasing aesthetic beneficial use.
9. Eligibility of the retiring parcel to be part of a contiguous conservation easement and preservation of historic ranchland which includes APN 316-086-023 as seen in the image below. This will allow for multiple environmental benefits including increasing habitat connectivity, and allows for other uses such as agricultural grazing land, recreation, and preservation as ecologically valuable oak woodland habitat.

The applicant has completed and oak woodland restoration on several acres of the land shown in the figure below, and these efforts are ongoing. She has been working on a natural conservation easement application for the parcels shown. The addition of APN 316-086-023 (shown in orange on southeast side of this easement map in Figure 1) through this proposed process will allow for even greater habitat connectivity and land stewardship on several parcels with headwater tributaries to Redwood Creek. The conservation easement will not only prevent commercial cannabis cultivation on the parcel, but also limit development of any kind in the future.

Figure 1: Proposed natural land conservation easement map.



Thank you for your consideration of this proposal and please let me know if we can provide any other information to aid in a discussion. We look forward to moving forward on these projects.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K. Miers', with a long horizontal flourish extending to the right.

Kendra Miers, PE