



# SALMON CREEK FIALLO: QUANTIFYING HISTORIC CANNABIS CULTIVATION

CANNABANIA, LLC  
APN 221-061-001  
App 12419

## ABSTRACT

This project uses an archaeological research design and survey techniques to identify definitive evidence of historic cannabis cultivation. The results of the survey and research have conclusively proved that cannabis was cultivated on the Salmon Creek Fiallo property for an extended period, using a variety of techniques that evolved with the growth of the industry in Humboldt County. 2,808 square feet of canopy was identified during field survey, 1,265 square feet was identified using aerial photography, and combined with the county assessment of 2,206 square feet CAV the total pre-existing cultivation in 2015 is 6,279 square feet.

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## Introduction

This research project included a targeted survey of one parcel, 221-061-001, 40-acres, application number 12419. The survey was driven by a research design based in background research and utilized professional archaeological field methods, ethnographic interviews, and aerial photography to utilize three lines of potential evidence. A twenty-five percent (25%) sample of the property was surveyed with the owner of the permit identifying areas which had been cultivated, indicating that the entirety of what was surveyed had been cultivated in 2013-2015 as the most intensive cultivation years and resulted in the identification of two (2) historic cannabis growing sites, totaling 1.06-acres within the parcel boundaries, 1.10-acres including aerial photographic evidence already quantified by Humboldt County. The subject property has been used to cultivate cannabis for at least the past 5 years, if not longer. There is no reason to believe that the evidence of production was not utilized on an annual basis, continuously. Given the survey only represents a 25% sample, it is clear the overall property has been used intensively for cannabis production and has utilized several different techniques to do so over the evolution of the industry in the county.

## Research Design

The research design for this project addresses a significant gap in the historic resources body of knowledge. The following breakdown of the history of the marijuana industry is compiled through multiple sources including the 'TIMELINE for Marijuana in Northwest California' compiled by Edie Butler for the Community Study of the Emerald Triangle Project, copyrighted by Guerra & McBane LLC 2015, Version December, 2015. The research design of this project is simply to document, at the project parcel level, both on the ground and through aerial/satellite photography, evidence of cultivation and the patterns which the cultivation follows within the historical context of the cannabis industry. The goal is to compile this research into a larger history of cannabis in Humboldt County that incorporates the archaeological evidence and compares this data with the known historic patterns developed through oral histories and various print documents.

## Research Orientation

Humboldt County and many of its cities have sequentially combated, de-criminalized, and recently regulated the agricultural production, processing and sales of Cannabis. The once underground market and now legal industry has not been documented from an historical perspective. The industry has both historic and contemporary significance to much of the country, particularly Humboldt County as the birthplace of the 'Emerald Triangle'. This research documents a small portion of a significant period in Humboldt County's economic history.

Archaeological literature is replete with examples of research focused on historic industries both in the built environment and within the depositional record. The field of historic archaeology, to a large degree is based in understanding the economic and social reality as interpreted through archaeological deposits and preserving the unique aspects of the built environment as related to significant people and places generally associated with dominant industrial drivers. To date there has not been a study related to Humboldt County's Cannabis industry, a world famous geographic location for the quality and quantity of product distributed, legally and illegally throughout the world. The fact that the best economic analyses have demonstrated that the underground Cannabis industry contributes 415 million dollars annually (conservatively) to Humboldt County's 1.6 billion dollar economy, roughly 26% (Jennifer Budwig, "Potential Economic Impact To Humboldt County If Marijuana Is Legalized," 2013, Budwig Thesis Pacific Coast Banking School graduate program University of Washington), indicates that the subject matter is worthy of historic research. The importance of understanding the history of industrial

level economy in Humboldt from port and early agricultural economies to the logging industry and now the Cannabis industry through the archaeological context is well proven. The lack of archaeological research focused on the development of the Cannabis industry is a significant hole in regional, state and national historic record.

## Background

### History

European ships were known to have traveled the waters of northern California as early as the 1600s. During these travels, explorers may have landed along the north coast of California, and would have almost undoubtedly contacted indigenous populations if they harbored in Humboldt or Trinidad Bay. Still, the first definitive contact is that of Hecata and Bodega in 1775. For nine days, they lay at anchor in Trinidad Bay, trading with the Yurok. Hecata noted that the Yurok were already in possession of iron knives, clearly indicating that this was not the first time the indigenous population had encountered and traded with Europeans (Coy 1929).

Though the frequency of travelers into north coastal California increased as time went on, it was not until the 1850s that large numbers of Euro Americans permanently settled in the area. In search of gold, thousands of settlers flooded the north coast of California. Despite finding much less than gold than the gold field of the Sierra Nevada foothills could yield, settlers stayed and quickly found other ways to make a living from the land.

Timber, fishing, dairy, and agriculture soon became the primary industries in Humboldt County. In the immediate vicinity of the project area, however, timber dominated. By the 1880s the larger, more profitable mills based out of Humboldt Bay to the south, including the project area, dominated the lumber markets.

Humboldt County had a short yet notorious history during prohibition, from 1920-1930 moonshiners found a safe-haven in the foggy green forests carving out their own life into the untouched and inaccessible character of the region. Smuggling alcohol back into the urban sprawl through rough north pacific seas was a risky but profitable venture for a couple decades.

The logging industry slowed during the depression but blossomed during the post war era with large scale industry driving the economy to the exclusion of other industries. However, after the summer of love in 1967 many counter culture figures migrated north from San Francisco into the hills and mountains of Humboldt. Disenfranchised with the war in Vietnam and the turbulence of the civil rights movement homesteads began to develop, which attracted people from all over the country seeking alternative lifestyles distant from the dramas of the world. Living from the land, shedding material possessions, and deepening their connection with the earth were some of main attributes to these newfound ideas being put into practice. The sheer distance of Humboldt from the chaos of society opened a large space for personal exploration which would lead to the dramatic transformation of a whole region (Humboldt Seed Organization 2014).

The Controlled Substances Act of 1970 classified marijuana along with heroin, methamphetamine, cocaine and LSD as a Schedule 1 drug. In 1975 the U.S. government started their major campaign against cannabis eradication. Mexico was the major producer and supplier to the United States and to reduce the influx, Mexican fields of cannabis were sprayed with a powerful chemical nerve toxin Paraquat (Humboldt Seed Organization 2014). It's difficult to pinpoint the exact moment when the technique for growing sinsemilla, or seedless pot, arrived in Humboldt County, but it was most likely in

the mid 1970's (Butler 2015). Around the same time that marijuana growers in Humboldt and the neighboring counties of Trinity and Mendocino began producing sinsemilla, the U.S. and Mexican government began spraying paraquat on the Mexican marijuana crop, inadvertently creating a market for Humboldt County growers. This eradication of Mexican interests caused a major increase in cannabis production in the Humboldt region as the continued isolation ensured the confidence of these newly developing growers. Many genetics began to flood in from all over the world brought by these "free spirited" travelers settling down behind the "redwood curtain" (Humboldt Seed Organization 2014). At the time, more than 90 percent of the marijuana smoked in the United States came from abroad (Daly 2014). Paraquat-laced pot posed serious health risks to consumers creating a sudden interest in other sources. By 1979 an estimated 35 percent of the marijuana smoked in California was homegrown, and rising (Daly 2014). California marijuana became synonymous around the state and nation with high quality. By 2010, an estimated 79 percent of all marijuana consumed in the United States came from California (Brady 2013). An industry was born in Humboldt County, bridging "the cultural divide between hippies and rednecks by providing income for all, and would bring a new economic boom to the area just as the old industries were drying up" (Brady 2013). People flocked to Humboldt County, marijuana was \$4,000 a pound, a family could get by on 20, 30, 40 pounds a year and be happy (Woody 2016).

This peace wouldn't remain for long as the 1980's were an incredibly difficult time for grower's. President Reagan started a major attack by instating minimum prison sentencing for trafficking and production of the plant.



*Figure 1 Local CAMP helicopter from a grower's perspective, from The New Yorker, Jackson Kruse 2014*

Reagan also funded the Campaign Against Marijuana Production (CAMP), a collaborative effort between federal, state and local authorities designed to eradicate the production of Marijuana within Humboldt County (Woody 2016). This time also marked the beginning of California's domination of domestic production, as quality began to rise through the emerging hybrid movement.

The 1990's brought on a new kind of change, one of resistance against the government. Many grower's lived on their own private land but retreated to the safety of state and national forests to cultivate.

Reducing the risk of direct confrontation, many devoted guerrilla growers quietly worked in extreme environmental conditions far out of the reach of most authority's hands. Small portions of crops were eradicated but most of the region remained unscathed. In 1996, the Compassionate Use Act or proposition 215 was voted in by the people of California, forever shifting the Nation's view on cannabis. Some of the first doctors recommending cannabis were concentrated in Northern California including Humboldt County as many began to exercise their new-found rights. This controversial medical movement was met with force from the federal government, which contradicted the individual States' rights written into the constitution to protect the people. Many were prosecuted but the numbers continued to rise in medical marijuana recommendations and growers. Mom-and-pop backyard pot gardens got bigger after 1996. After spending decades trying to eradicate marijuana in Humboldt County, the state started treating the business as quasi-legal, at least if growers were supplying the medical marijuana market. People came out of the woods and started growing pot in greenhouses (Woody 2016).

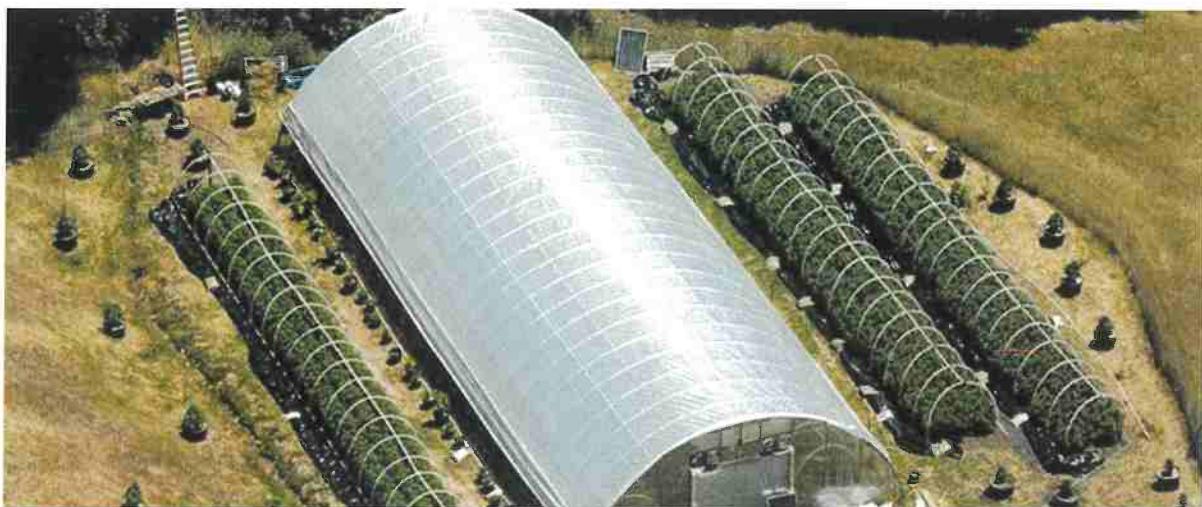


Figure 2 Large Scale Marijuana Production, from: North Coast Journal 2015

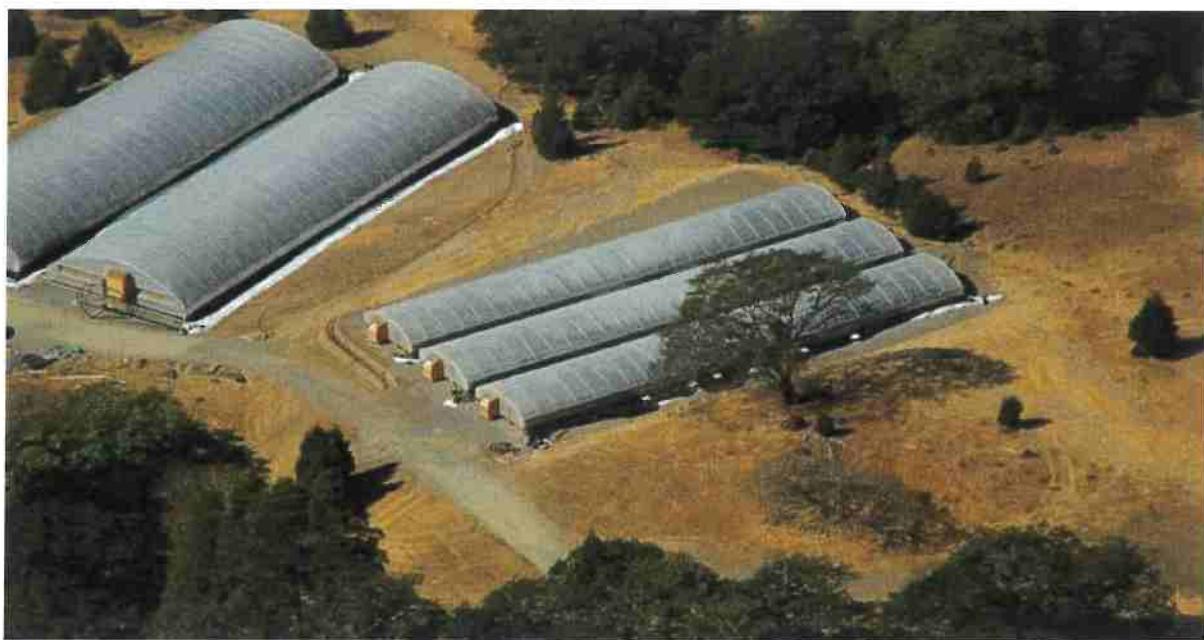


Figure 3 Large Scale Marijuana Production, from: Lost Coast Outpost September 2014

The potential of the region was quickly realized, and production spiked substantially as Humboldt was now become one of the most renown places on earth for producing Cannabis.

By the year 2000, case history within the judicial system was changing. Larger amounts of people were succeeding in their defense of legal gardens in city, county and state courts alike. Confidence was reaching an all-time high and the liberal laws in Humboldt County stood out from the rest of the state. Respecting privacy laws and not prosecuting those actively cultivating gardens, Humboldt was becoming a safe-haven for cultivation.

This liberal approach to the law has pulled growers from all over the world to Humboldt to participate in this immense movement. A "green rush" hit Humboldt as outsiders, Bulgarians, Laotians, Texans, flooded into the county and set up industrial-scale marijuana farms (Woody 2016). Now with over 30,000 active greenhouses and tens of thousands of full sun gardens it is more than apparent that growth is in full effect (Humboldt Seed Organization 2014). This incredible growth hasn't come without its share of problems and federal intervention. In late of 2013 Humboldt County was declared by the federal government and the DEA as a "High Intensity Drug Trafficking Area" (Salon 2013). The environmental impact from these pot "gardens" is ravaging the redwood ecosystem that Humboldt environmentalists have spent decades fighting to save and restore (Woody 2016). "The single biggest threat to our environment right now has been unregulated cannabis," said Natalynne DeLapp, executive director of the Environmental Protection Information Center, a grassroots group that spearheaded the effort to protect the Headwaters and its wildlife (emphasis added). "In the last 20 years we've seen a massive exponential growth in cannabis production in the hills of Humboldt County and we've seen really devastating environmental effects" (Woody 2016).

Growers have fragmented forests by cutting trees to build greenhouses and roads on steep hillsides, choking creeks home to endangered salmon with sediment, fertilizers and pesticides and sucking streams dry during a record drought to irrigate marijuana crops. Once-still forests echo with the racket of hundreds of diesel generators. Rat poison and other toxic chemicals used by some growers to protect their plants are killing rare wildlife like the Pacific fisher.



Figure 4 Poisoned Fisher, from: North Coast Journal, August 1, 2013

After a radio-collared fisher was found dead in a remote forest in 2009, an autopsy revealed it had died from poisoning by a rodenticide commonly used on illegal grow sites. As the green rush brought more of these "trespass grows" into state and national forests and parks and onto private timberlands, the fisher death toll rose. In a 2012 study, Gabriel and his colleagues found that 79 percent of 58 fishers they examined had been exposed to rodenticides, four had died and a nursing female had passed the poison on to her offspring. By late 2015, the death rate from poisoning hit 18 percent of the radio-collared population (Woody 2016).



Figure 5 Rodenticides at Marijuana Grow, from: North Coast Journal August 2013

Gabriel estimates that only a fraction of trespass grow sites are detected. "There may be 10,000 to 20,000 sites that still need to be cleaned up," he said. "With the 300 to 500 grow sites law enforcement eradicates each year, you could just see the numbers just piling and piling up. What we worry about is that wildlife and their habitat are slowly drowning in these toxicants that will be in the environment for decades to come."

The California Ballot of 2016 legalized cannabis in California. With plans from locally produced and permitted marijuana gardens to tasting rooms and smoke lounges, ending a medical era and allowing marijuana tourism to flourish. This community is deeply rooted in the evolution of the cannabis industry.

The current research is driven by the recent regulatory efforts of Humboldt County resulting in an ordinance that gives preference to documented historic Cannabis grows during the permitting process. Salmon Creek Fiallo is an approximately 40-acre property with conclusive evidence of historic Cannabis cultivation and processing, representing Humboldt County's historic association with the plant during the 215 era. The grow sites are represented in the archaeological record as discrete areas of watering equipment and soils containers among a variety of other objects in association with the production of Cannabis.

The above research has resulted in a division of the history of cannabis cultivation in Humboldt County into three era's:

1. Early period, or Counter Culture Era representing small scale and gradating into large scale rudimentary farming techniques with a relative lack of concern over law enforcement ramifications. These areas will be the most difficult to find as the early counter culture farmers tended to 'clean up after themselves' at the end of the season. The evidence of grows should be in open south facing areas with easy access to year-round water and represented by tilled field farming techniques. As the old hippies' recount, 'we used to grow fields, just like rows of corn'.

2. The CAMP era. This era began in the mid 1980's and runs into the mid 1990's. The exponential increase in law enforcement, the growers move to the fringe, prices skyrocket and grows become small but more numerous. A distributed economic model begins to develop to mitigate risk with single growers tending multiple locations, often creating 'sacrificial' grows in the open while locating high quality grows in difficult locations. It is expected that there will be an increase in the quantity of Cannabis grows in locations both on north and south facing aspects, located in fringe forest areas or forested areas with trees removed to open holes in the canopy.
3. The Prop 215 era. Post 1996 we see a real change in both the ethos of growers and the makeup of those growing and comprising the expanding industry. Early entrepreneurs saw a loophole in prop 215, no real regulations were adopted with the new law. Growers start aggregating 215 permits to develop large grows, again, and both outdoor and a new indoor grow industry develops. The industry has developed into a significant black market prior to the prop 215 era and now explodes with the confusion created among law enforcement by the aggregation of permits. CAMP and local authorities no longer know if a grow is legal or illegal from a helicopter. This created fertile ground for organized crime syndicates to invest in the industry. We expect these grows to range from a distributed model of the CAMP era to the open grow techniques of the early era but incorporating greenhouses as a technological advancement, and what can only be described as brazen open grows. We have described the first two expected deposit types above; specific artifacts should allow for temporally defining assemblages. The brazen grows will incorporate the use of heavy equipment, massive spring and water impoundments and a heavy prevalence of modern fertilizers and rodenticides. In addition, herbivore protection devices now not only include fencing but traps including nets, and traditional spring traps. The prop 215 era sites will be located throughout the property and indoor grows will be associated with the addition of generators, fuel bunkers, and either metal containers or wooden structures.

The known history of the industry in Humboldt County begins in the late 1960's with an alternative, 'Counter Culture Era' moving to the county to 'live off the land' with Cannabis cultivation being the only agriculture crop that could provide a decent standard of living. The industry began to develop into a larger scale black market economy during the 1980's when the children and grandchildren of the original 'farmers', and local large scale land owners who found it increasingly more difficult to operate their ranches with traditional income flows, decided the market was underdeveloped and production could be massively increased with relative ease. The significant increase and brazen disrespect for the law resulted in the Camp Era (Campaign Against Marijuana Production) beginning in the mid 1980's. The law enforcement efforts both drove the industry into a dispersed production model and led to the blossoming of the indoor grow.

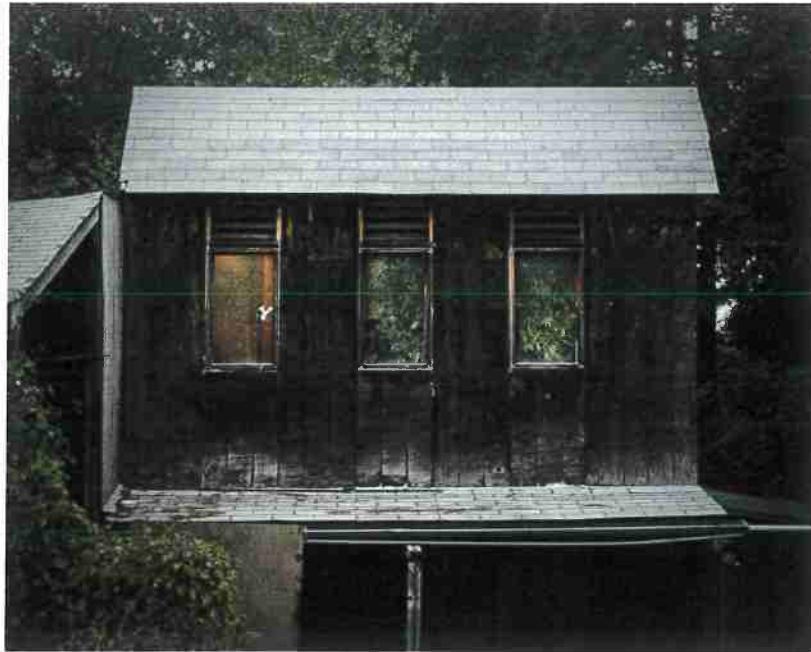


Figure 6 An indoor grow; photograph by the New Yorker's Jackson Kruse November 3, 2014

Additionally, CAMP resulted in a massive price increase with the long-term grower appreciative that they no longer had to produce by the field but could now limit crops to small plots to make their fortunes. This fight between law enforcement and illicit growers continues today but peaked in the 1990's. In 1996, with the passage of California's proposition 215 the battle began to wane with growers using the new law to grow more volume both indoor and outdoor in greenhouses as producers of medical marijuana (Woody 2016). During the 21<sup>st</sup> century the Cannabis industry has exploded with law enforcement, and local populations seeing the entry of organized crime into the county setting up industrial scale operations with millions of dollars of investment and devastating impacts to the environment. The competition from these organizations has led the local producers to up their game as well. Now well-heeled with generations of wealth accumulated through the underground market, local industrialists followed suit, burying trailers and containers to hide indoor grows, leveling mountain tops, importing thousands of yards of high quality soil annually, drilling high volume wells and developing acre-feet of water storage to provide water for thirsty crops.

Each of these eras result in substantially different archaeological deposits, early farmers cleaned up after themselves leaving very little evidence, their children openly grew acres of crops with little fear from the localized law enforcement efforts (particularly when a bag of cash could cause an otherwise conservative land owner or law enforcement officer to look the other way, the next generation, the CAMP generation hid from the law, growing at the fringes of the canopy and turning to a new indoor production model to hide from the black helicopters. The passage of prop 215 allowed for large scale production with aggregation of growing permits resulting in large greenhouse grows, and as the value of the industry skyrocketed attracted industrial capitalists focused solely on increasing production and margins with little concern for the environment or of being impacted by law enforcement.

### Property Specific History

The Salmon Creek Fiallo property has been cultivated since at least 2015 with the current cultivator becoming associated with the property in 2017. Each of the areas surveyed was associated with

cultivation over the past decade and each area was cultivated or part of a cycle that occurred year on year. The owner of the property, Ivan Fiallo, has been cultivating by himself at the subject location and others on the property. During the early 215 Era federally-funded enforcement efforts tended to ignore California regulations which extended the cultivation patterns of the Camp Era on this property, and others. The continued disguised grow patterns are identified in the project area as partially shade grown crops placed underneath the canopy and confirmation of the extended pattern is highlighted with a transition from canopied growing to full sun growing.

There was cultivation evidence on this property of plastic pots, grow holes, and stems with root balls, but it is a reasonable expectation that other areas of the property harbor other forms of cultivation. While this project did document evidence of cultivation, the documentation reflects only a small percentage of actual annual operations as only 25% of the property was surveyed. Where plastic pots, grow holes, stems with root balls and clear evidence of use during previous years provided strong evidence of cultivation it is considered herein to be a location of cultivation.

In the context of this project the definition of what is considered to be a cultivation area and site is provided for the record from Humboldt County CUMLUO section 55.4.7 "Definitions":

*"Cultivation Area" means the sum of the area(s) of cannabis cultivation as measured around the perimeter of each discrete area of cannabis cultivation on a single premises, as defined herein. Area of cannabis cultivation is the physical space where cannabis is grown and includes, but is not limited to, garden beds or plots, the exterior dimensions of hoop houses or greenhouses, and the total area of each of the pots and bags containing cannabis plants on the premises. The cultivation area shall include the maximum anticipated extent of all vegetative growth of cannabis plants to be grown on the premises.*

*"Cultivation site" means the location or a facility where medical cannabis is planted, grown, harvested, dried, cured, graded, or trimmed, or that does all or any combination of those activities, except where drying, curing, grading or trimming is otherwise prohibited.*

The results of this project are presented in this context as the area where cultivation occurred on a single premise and each site is a location where cannabis was planted, grown, and harvested. A very conservative approach was utilized, restricting the potential production areas to the subject parcel and tightening polygons to the greatest degree possible, omitting water lines between features and artifacts. It is the opinion of this research that the proposed project will result in significant environmental protection by consolidating the documented production of the parcel into a well-regulated facility.

#### Field Methods:

One survey and one field visit were conducted by three qualified archaeologists from ARSC utilizing no more than 15 meter transects providing for 100% coverage of all accessible areas identified in an approximate 25% sample, including three (3) previously unknown locations of historic cannabis growing on the property and conducted interviews of the current cultivator and the property owner telephonically and electronically. The survey conducted on December 21st used three archaeologists and identified two (2) areas of cultivation during field survey, one (1) using aerial imagery, and three (3) more areas given by Humboldt County Cultivation Area Verification, totaling six (6) distinct areas of cultivation.

Further background research of aerial imagery was used solely as background and justification for the cultivation strategy of placing pots under the canopy. Therefore, this assessment should be seen as an addition to existing aerial photography documentation already assessed by Humboldt County, the **Cultivation Area Verification (CAV) for this property is 2,206 square feet.**

This report accurately recounts the results of the background research and survey as guided by the research orientation. The survey included areas of the property as identified on the attached map that were selected due to the location of known historic Cannabis cultivation sites. The research was objective in nature and any Cannabis related resources identified during field survey have been documented and included in this report as table 1 below.

## Results

The surveys resulted in two (2) previously undiscovered historic marijuana grow areas being identified while in the field, as well as a third being discovered through satellite imagery. Three (3) additional sites had previously been documented by the county, these being plastic pots of a full-sun cultivation on two distinct areas of the property which we confirmed both in the field as well as from aerials, totaling 2,206 square feet of pre-existing cultivation. The third area seen both in field and in aerial imagery was made up of five (5) greenhouses totaling 6,080 square feet which had been built due to a misunderstanding between the property owner and the county regarding permitted square footage. This area is not included in the county CAV (Figure 7) or in our pre-existing calculation as it did not exist prior to 2015. Both these pre-existing and new cultivation areas can be seen below (Figure 8). Historic grow areas 1 and 2 were discovered in the field while areas 3-5 were already documented by the county, although area three and area five's greenhouses were built after 2015 so they are not included in our pre-existing square footage calculations.

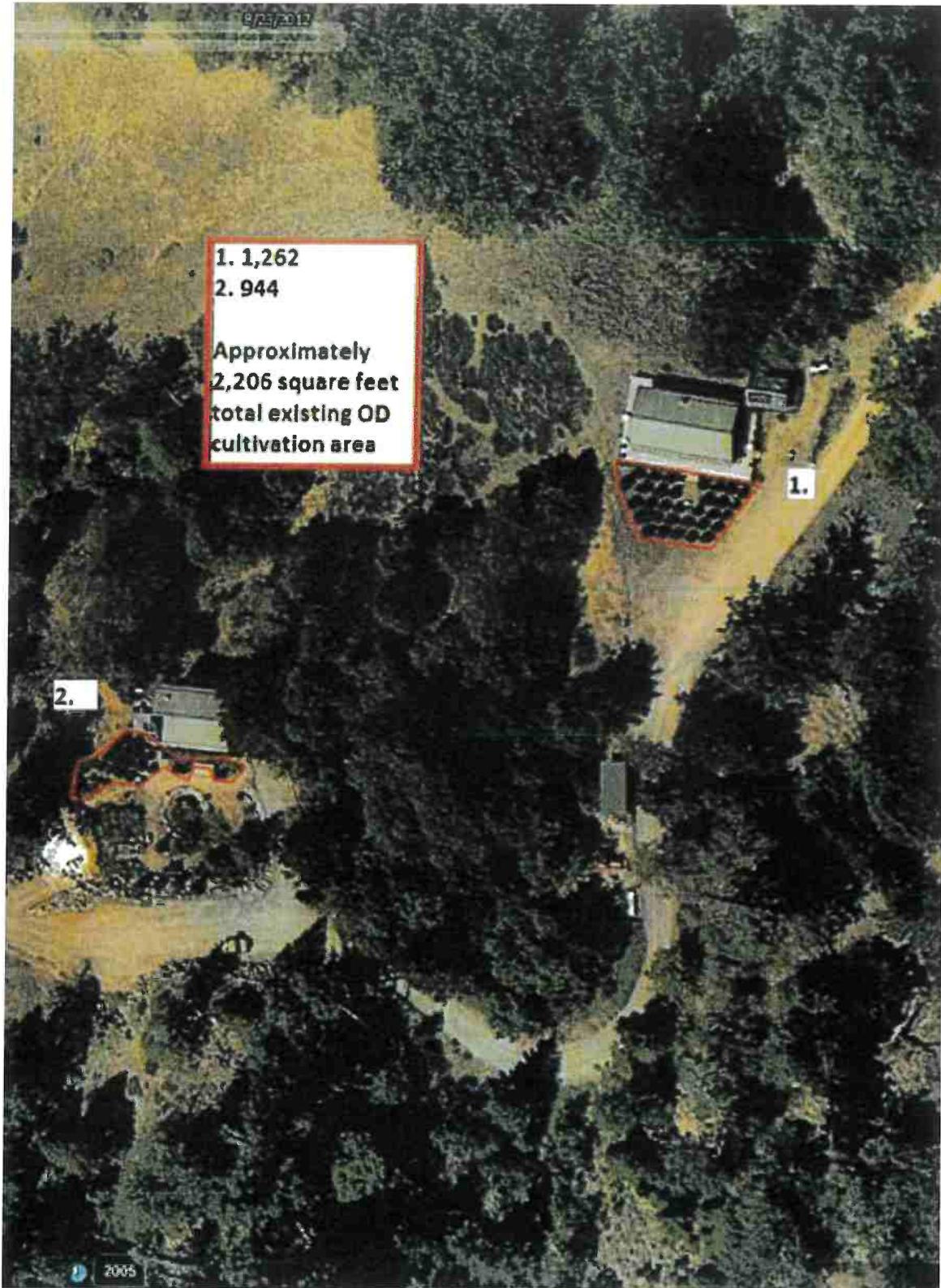


Figure 7 County CAV of total outdoor cultivation area



Figure 8 Aerial map showing newly discovered historic grow areas and new cultivation areas

The historic sites were located in the field and revealed two (2) cultivation areas partially covered by canopy; research of aerial/satellite photos confirmed the cultivation techniques of placing pots in areas covered from aerial view by trees, as well as in sunny, open areas of land. Evidence of the age of the pots is indicated by both silt build up at the base and vegetation growth within and between pots. The survey utilized one crew of three individuals, documenting the six (6) distinct areas of the parcel, the field visit photo documented the areas where original photography had failed. Area 1 was replete with plastic pots and Smart Pots in small concentrations,  $n = 18$  pots, as well as irrigation line, trellis netting, soil bags, metal cages, and a water barrel. Area 2 was relatively spread out with Smart Pots and plastic pots,  $n=50$  (Figure 9, areas 1-2).



Figure 9 Overviews of cultivation areas 1-2

Nick Angeloff, MA, surveyed this parcel of land for archaeological findings and noted the plastic and Smart Pots from areas 1-2 in the field, which can be seen below (Figure 10). Upon looking at aerial imagery, ARSC discovered a third area of outdoor cultivation placed in rows dating back to 2013. Efforts

were made by Mr. Fiallo to keep the pre-existing cultivation intact in areas 1 and 2, however the third area was only seen by aerial imagery and was unknown to Fiallo at the time of field survey. This being the case it was prudent to not only assess evidence of areas shown to us by Mr. Fiallo, but also take time to comb through areas of his property that would likely have been grown on during the 215 era. Below (Figure 11, photos 1-3) are two polygons made to assess the square footage the 2013 cultivation year was using, as it could not be counted in the field and the plants are too close together to count from the quality of the image.

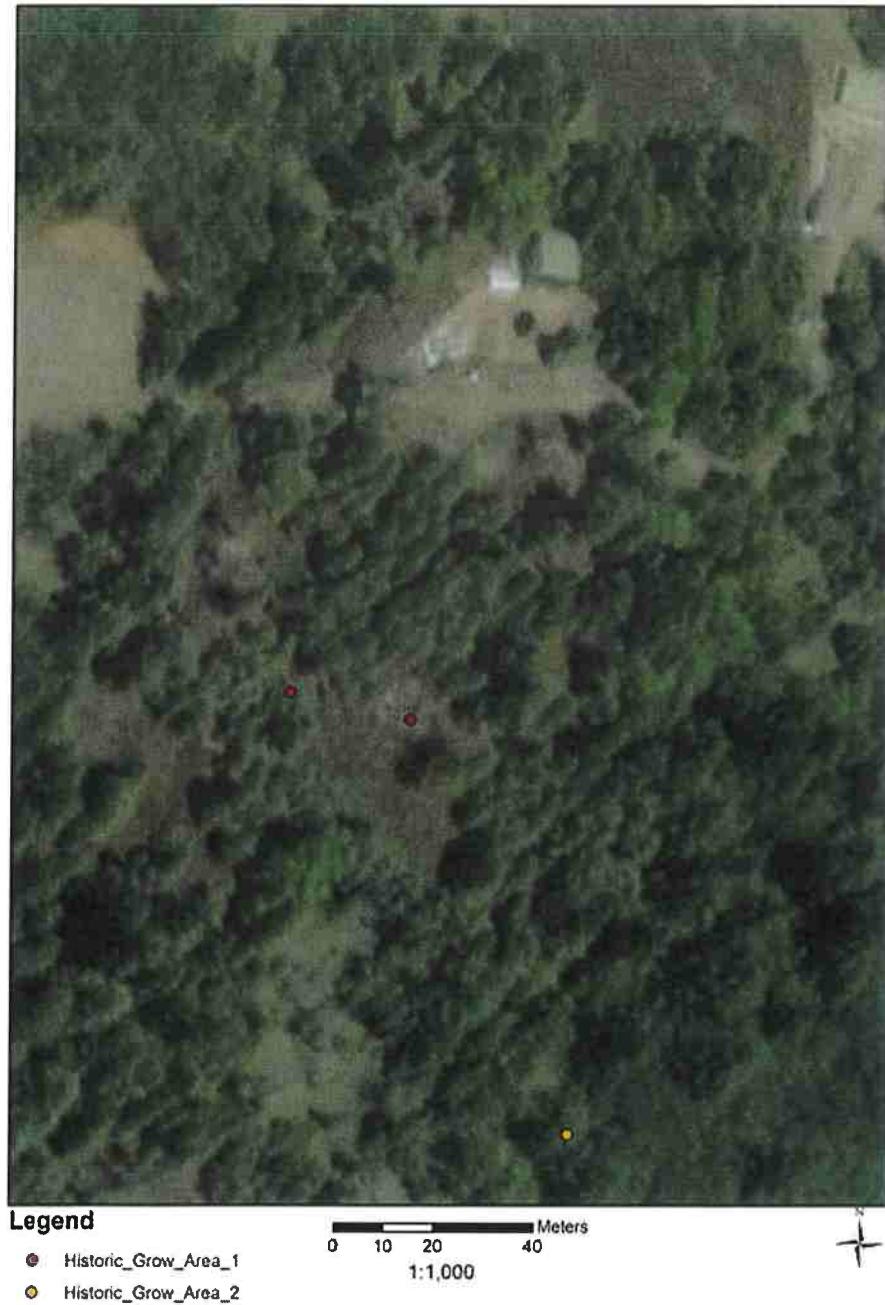


Figure 10 Aerial of historic cultivation areas 1 & 2 under canopy

In areas 1 and 2 ARSC documented 2,808 square feet according to the county guidelines of one point equaling 36 square feet of cultivation area.





Figure 11 Polygons of Historic Cultivation Area 3 from August 23<sup>rd</sup>, 2013

Via satellite imagery, a photo from 2013 was found and overlaid into GIS in order to match up exact areas and measure the area of cultivation, coming out to 1,265 square feet in total.

As per question of the validity of the pots found in areas 1-2, ARSC documented and aged these areas accordingly in order to provide the county with evidence that the area had in fact been utilized since at least 2015. The survey documented both silt build up and vegetation growth in and between pots to accurately depict the consistency of the age of the grow. You can also see the growth of moss on all the felt Smart Pots on the property. It appears that within this specific environment, the pots in question compacted the soils limiting vegetative growth underneath them, meaning that the cultivation area had been in the location for a minimum of several seasons using these same pots (Figure 12, photos 1-2).



Figure 12 Close up of buildup of plant matter inside and at edge of pots, areas 1 and 2

The crew documented areas of cannabis production, noted the evidence at each site, and took GPS points at each concentration of pots. In addition, points representing pre-existing grows are shown in Figure 10 resulting in 1.10-acres of pre-existing cannabis cultivation area with aerials included (Figure 11), and 1.06-acres *excluding* aerial photography. The data is presented below both in descriptive terms and in tabular form; as well as in map form with points represented. Aerial photos were used to identify pre-existing cultivation strategies through GIS.

The quantified pre-existing cultivation by the county from aerial photography is 2,206 square feet of outdoor pots, which is included in the overall square footage, and combined with the field documentation below and at the end of the document. A total of 1.06 acres of pre-existing cultivation was documented by counting each pot found in the field survey as representing 36 square feet, adding to 2,206 square feet at a minimum within the 25% sample survey. In addition to the field survey, a third historic cultivation area was found through aerial imagery in which a polygon was made to conclude an additional 1,265 square feet. Combined with the county assessment of 2,206 square feet, the total pre-existing cultivation in 2015 would have been **6,279 square feet at the minimum**.

## Sites 1-2

Sites 1 and 2 (points 93-95) were not seen or documented by Humboldt County as they were hidden under the canopy and have been for many years, where they were in situ and used during the 2015 cultivation year at a minimum. Not easily seen from aerial photography, we can attest to why these cultivation sites would have gone unnoticed at first glance. The results of the field surveys for sites 1-2 are presented below. The survey crew both took GPS points of features and artifacts associated with cannabis cultivation including groupings of plastic pots, these results are presented in table form below (table 1).

GPS Point	Area	Description	Total
93	1	10 smart pots, 3ft diameter	360
93	1	soil bags	360
93	1	plastic pots, irrigation line	144
94	2	30 smart pots, 3ft diameter	1080
94	2	20 plastic pots	720
95	1	4 plastic pots	144
Total Square Footage			2808

*Table 1 Pre-existing Smart Pots, plastic pots, and soil bags previously unaccounted for*

The team at ARSC verified the credibility of the plastic pots located in areas 1-2 by identifying the way in which the environment was taking back the space (ie moss on Smart Pots, weeds and grasses growing in and around the pots, as well as a complete lack of growth underneath pots when moved). Below (Figure 13) we have provided pictures of the state in which we found the Fiallo property, with grasses growing from old soil bags as well as disregarded bamboo sticks and metal cages once used to support large marijuana plants.



Figure 13 Cultivation areas 1 and 2, visual of metal support cages, Smart Pots, and the overtaking of native grasses

This area was historically cultivated but *had* been somewhat cleaned up, leaving approximately 78 plants-worth of pots and other cultivation materials (points 93-95) as evidence of previous cultivation. With this information, we can project that the Fiallo property owner would qualify for 2,808 square feet of cultivation area from our survey alone, not including what the county already noted on the CAV from

aerial imagery.

In order to substantiate our evidence, provided below is an aerial image from 2015 and showing cultivation on the parcel that the county did not see when looking previously. The satellite imagery was of poor quality, but sparsely laid pots can be seen spotting the hillside circled.



Figure 14 Aerial from September 2015 of Grow Area 1 & 2

## Conclusions

The evidence for long term cannabis cultivation on the Salmon Creek Fiallo property is indisputable. Cannabis production has been occurring on the property since at least through the 215 Era. All aspects of

the cultivation process are present on the property and at individual sites. The sites are in areas that follow patterns of the 215 Era artifacts represented by guerilla grows in the canopied areas. As expressed on this property it appears that growers were attempting to conceal their activities to some extent well into the 215 Era.

With the understanding that this project undertook a 25% sample of the property, approximately 10-acres of survey on a 40-acre parcel, this report only reflects a small percentage of the actual cannabis cultivation that took place on the property but documents a conservative 1.10-acres of pre-existing cultivation within the boundaries of the Humboldt County GIS parcels alone. Given that the sample included areas of known cultivation based on the producer's memory, that the owner was clear that this project only included a portion of the pre-existing cultivation, and that the survey was not completely random and therefore the results cannot be extrapolated on a one to one basis, it can conservatively be assumed that the 40-acre property will harbor various locations both in timber and in prime agricultural zones.

It is clear that the parcel was utilized to cultivate more acres of cannabis with greater environmental impacts in any one given year over the past decade than is proposed via the permitted and regulated process as proposed. Not only was there more direct cultivation on the property prior to permit application, but also likely other environmental impacts resulting from the pre-existing cultivation. Upon issuing the permit, the owner will take great care while mitigating past and existing environmental impacts.

This overall assessment documents:

The county assessment of pre-existing cultivation (CAV) based on aerial photography is 2,206 square feet.

This survey documented 2,808 square feet of cultivation from field work as well as 1,265 square feet from aerial imagery based on the county's formula of 36 square feet per individual location.

The total documented pre-existing cultivation totals **6,279 square feet**.

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## Appendix A: Photos