

FINAL PROJECT REPORT
AGREEMENT # P1796020

*Reclaiming our Public Lands and Watersheds from the
Environmental Threats of Trespass Cannabis Cultivation*

Dates Covered: January 01, 2018 – September 30, 2020



Grant Administered To

Integral Ecology Research Center



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Citation

Any and all data and project information contained within this final report shall be cited as:

**Gabriel, M.W., G.M. Wengert and I.D. Medel (2020),
*Reclaiming our Public Lands and Watersheds from the
Environmental Threats of Trespass Cannabis Cultivation.*
Final Report to California Department of Fish and
Wildlife, Grant Agreement P1796020**

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PROJECT SUMMARY

Introduction

Cannabis cultivation on public lands has become a concern to natural resources stakeholders in recent years. Though the cultivation of cannabis on these lands has been occurring for several decades (Corva 2014), it has not been until the past decade that both the magnitude and the ecologically hazardous methodology of cultivation have escalated (Corva 2014, DEA 2020). Integral Ecology Research Center has scientifically documented the escalation of ecological risk since 2009 when IERC researchers documented the death of a fisher (*Pekania pennanti*), a state federally listed endangered species, from rodenticides likely originating from trespass cultivation (Gabriel et al. 2012). Since then, both federal and state natural resource agencies have proposed that cannabis cultivation on these lands may pose a significant threat to Species of Conservation Concern and State or Federally listed Endangered or Threatened species, such as the Northern spotted owl (*Strix occidentalis caurina*), California spotted owl (*S.o. occidentalis*), fisher, Humboldt marten (*Martes caurina humboldtensis*) and coho salmon (*Oncorhynchus kisutch*, Battistone and Clipperton 2016, USFWS 2000, 2006, 2012, 2019).

Currently, the process of addressing this cultivation threat on these lands is to detect, interdict, and eradicate cultivation sites by various law enforcement agencies. However, these priorities do not include the removal or mitigation of infrastructure and hazardous materials the cultivators have brought in. Therefore, the remaining infrastructure, human refuse, and toxicants continue to pose risks to fish, wildlife, and their habitats as well as community members using their public lands. Reclamation of these sites not only mitigates these threats, it removes the increased likelihood of risks to wildlife and their habitats, but it is also an effective preventative measure to cease the continued damage of these lands by clandestine cultivators seeking to return.

Definitions

Within this report, a trespass cannabis cultivation complex (TCCC) is a general term for a network of cultivation plots, camps, and water sources that may span large areas of a landscape yet are connected by conduits of connectivity which include trails and irrigation structures. Each TCCC is composed of one or more trespass cannabis cultivation sites (TCCS) defined as a distinct area of cultivation infrastructure capable of independent cultivation if all other TCCC infrastructure was removed.

Project Goal and Objectives

The goal of the Project is to implement a large-scale reclamation program to improve the environmental health of our public lands through the active removal of toxicants and refuse while providing guidance and structure for future efforts. Specific objectives outlined in Grant Agreement #P1796020 (Agreement) (Section 6.02) between the California Department of Fish and Wildlife (CDFW) and Integral Ecology Research Center (IERC) are as follows:

- Develop site-specific reclamation plans for 170 cannabis cultivation sites in the Klamath, Trinity, and Salmon River watersheds;
- Document and remove all non-hazardous refuse;
- Identify hazardous material and mark for addressing by hazardous material specialists;
- Remove all food items, cookware, and other attractants;
- Remove all water diversions, reservoirs, and other associated infrastructure;

- Act as a conduit for training and building the capacity of qualified groups to assist in addressing this environmental impact challenge in the future.

Summary of Project Accomplishments

Based on objectives outlined in the Agreement, the project “Reclaiming our Public Lands and Watersheds from the Environmental Threats of Trespass Cannabis Cultivation” hereafter referred to as “Project,” implemented between January 01, 2018 and September 30, 2020, exceeded all set expectations while arriving well under budget. Agreement objectives (Section 6.02) specify the reclamation of 170 independent trespass cannabis cultivation sites (TCCS) within the Klamath River Basin encompassing Klamath, Trinity, and Salmon River watersheds, yet project efforts resulted in the reclamation of 196 independent TCCS composed of 129 trespass cannabis cultivation complexes (TCCC) (Figure 1) where at least 97% of all site refuse and infrastructure was removed (Appendix A). This represented a 115% exceedance of Project objectives and resulted in the removal of 148,203 pounds of refuse, including 727,736 feet (137.83 miles) of black polyethylene irrigation pipe (detailed in ‘Implementation Overview’). The success of the Project has already received letters of support from two elected officials: US Congressman Jared Huffman and CA State Assemblyman Jim Wood (Appendix B).

During the Project, IERC conducted assessments at 163 TCCC on 112 unique dates. Based on assessment information, IERC conducted 75 staging operations, 34 manual removal, and 33 independent aviation reclamation operations within 24 United States Geological Survey Hydrologic Unit Code 10 (HUC10) watersheds and 58 HUC12 subwatersheds (detailed in ‘Implementation Overview’ section).

Throughout the Project, IERC identified and mitigated hazardous materials for addressment at 106 independent locations. IERC is currently working with USFS Region 5 forest safety personnel, using other funding opportunities, to arrange the removal of all mitigated hazardous materials using licensed hazardous material contractors.

In general, the Project exceeded all Agreement objectives for developing reclamation capacities for local organizations and governmental agencies by involving a total of 21 local, state, and federal agencies, non-governmental organizations, and academic institutions in at least one or more operation. Prior to project implementation, IERC provided two, 3-hour situational awareness and general reclamation process trainings to all participating organizations and was further attended by all interested persons employed by Trinity County, Six Rivers National Forest, and Shasta-Trinity National Forest. Trainings were held on March 22, 2018 and May 11, 2018 and were attended by 38 and 20 persons, respectively. Topics covered during these trainings are outlined in Appendix C. Prior to each reclamation event, safety briefings and site-specific briefings were further provided by IERC personnel to all operation participants. On-site hands-on training and education on general reclamation and safety protocols were further provided by IERC personnel during reclamation events to new reclamation participants. IERC also provided oversight to all new and returning reclamation participants to ensure adherence to safety protocols and provide real-time feedback and insights regarding efficient reclamation practices. Finally, structured guidance and training recommendations are provided in ‘Conclusion and Recommendations’ for all organizations interested in developing future reclamation programs.

Project efforts involved considerable direct and indirect efforts to increase stakeholder awareness at the local, state, and national levels of the detrimental environmental impacts of TCCC and the positive

success of IERC and partners' reclamation efforts. Between April 1, 2018 and February 13, 2020, IERC delivered 56 presentations to interested stakeholders and are either quoted or the main subject of 68 local, national, and international media articles ('Media and Outreach'; full list in Appendix D).

Project Agreement expenses totaled \$964,157.28, a 9.76% reduction in the original estimated Project costs outlined in the Agreement. A critical component promoting the Project's success was the interagency support and significant in-kind contributions provided by partner organizations totaling \$630,883 in match, a 376% increase from what was promised in the Agreement. The bulk of the increased match was provided in the form of personnel and aviation resources used for reclamation, by the United States Law Enforcement and Investigations (USFS-LEI), during the summer of 2018 and 2019. Further detail is provided in 'Expenditures' and discussed in the 'Conclusions and Recommendations' section.

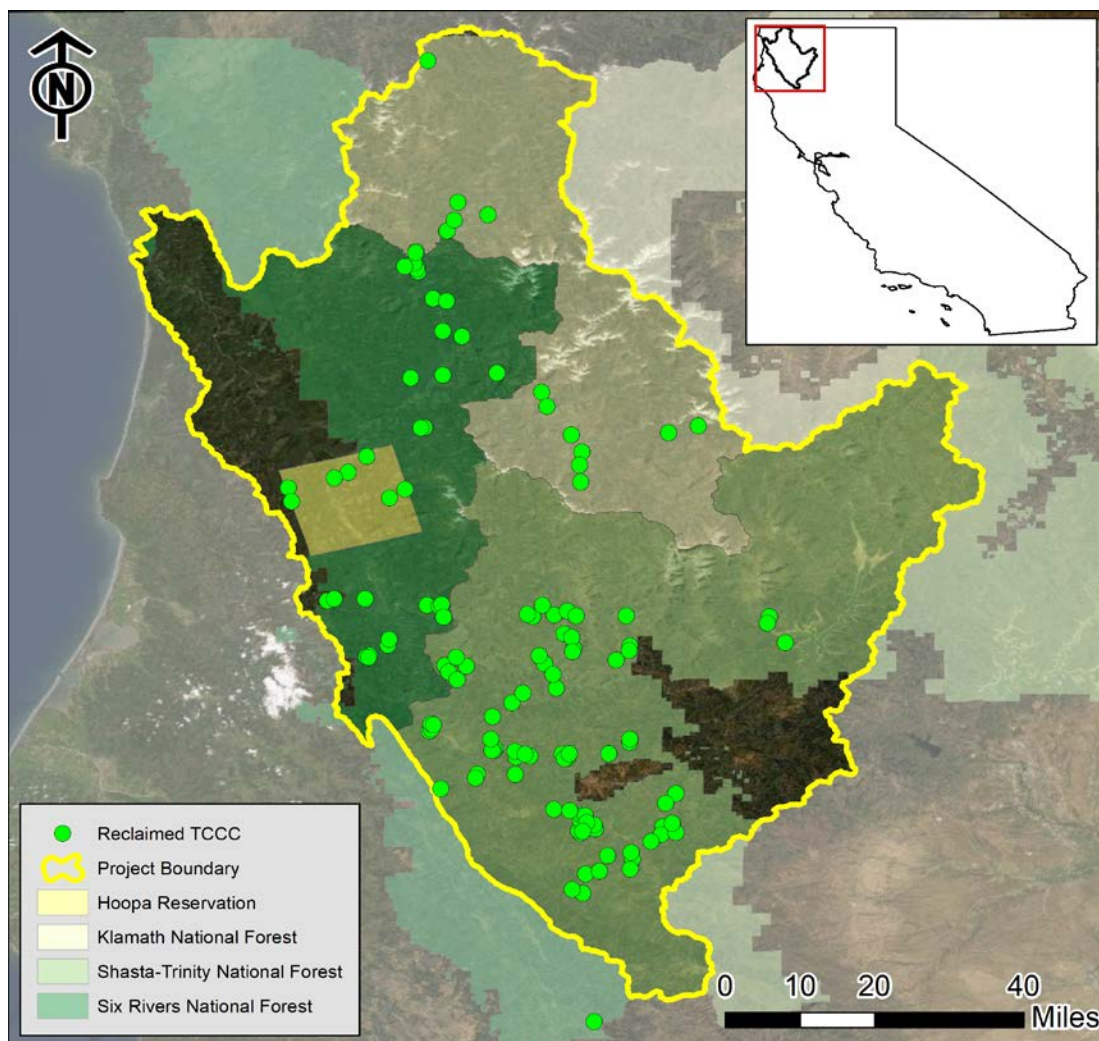


Figure 1. Map showing the distribution of 129 reclaimed trespass cannabis cultivation complexes representing 196 independent trespass cannabis cultivation sites between January 01, 2018 and September 30, 2020 within the Klamath National Forest, Shasta-Trinity National Forest, Six Rivers National Forest, and Hoopa Valley Indian Reservation within the Klamath River Basin.

Project Activities and Deliverables

Field Efforts

Field efforts composed the primary component of all Project activities with 180 potential TCCC visited by at least one IERC field team on 196 unique dates, on public lands in the Klamath National Forest, Six Rivers National Forest, Shasta-Trinity National Forest, and the Hoopa Valley Indian Reservation. Per the Agreement, TCCCs were visited with the objective of implementing up to three of the following activities:

1. **Assessment:** perform scientific assessments and evaluations ascertaining the magnitude of environmental impacts associated with the TCCC and the quantity and location of all site infrastructure and refuse for future removal. This includes the inventory and sequestration of hazardous materials to reduce the risk of exposure during reclamation efforts. Reclamation plans are developed based on the results and findings of these assessments.
2. **Pre-staging:** the collection, bagging, and preparation of non-hazardous grow site refuse and infrastructure into areas accessible to helicopter long-lines, or manual removal, using a varied workforce of IERC staff, federal, state, and local agency personnel, and teams of subcontracted non-governmental organization employees.
3. **Reclamation:** the manual or helicopter removal of grow site refuse and infrastructure utilizing a varied workforce of IERC staff, federal, state, and local agency personnel, and teams of subcontracted non-governmental organization employees.

The highest proportion of field efforts was conducted within the Shasta-Trinity National Forest where 102 TCCC (63% of all complexes) were assessed (Table 1) followed by the Klamath National Forest where 36 TCCC (22.1%) were assessed. Seventeen TCCC were assessed prior to the Agreement using matching funds from a variety of funding opportunities, including the US Fish and Wildlife Service's Cooperative Endangered Species Conservation Fund/ Section 6 Grants and Tribal Wildlife Grants programs, The Nature Conservancy, and US Forest Service Region 5 Law Enforcement and Investigations. Of the 163 potential TCCC locations visited by IERC assessment teams throughout the Project, no refuse was discovered at 23 locations (non-sites) (14.1%). The occurrence of these "non-sites" is attributed to spurious coordinates and inaccurate information provided within the law enforcement dataset of state-wide TCCC locations. IERC is using these data to help inform law enforcement agencies and assist in developing better data management techniques for future eradication efforts.

Shasta-Trinity National Forest saw the highest amount of reclamation with 125 TCCS (63.7% of total) reclaimed, followed by Klamath National Forest with 34 TCCS (17.3%) reclaimed (Table 1). TCCC were reclaimed in the highest number of HUC 10 watersheds (10) within the Klamath National Forest and the highest number of HUC 12 subwatersheds (26) within the Shasta-Trinity National Forest (Table 1, detailed in 'Implementation Overview'). TCCC reclamations occurred in the highest density per both HUC 10 watershed (8.8 TCCC per watershed) and HUC 12 subwatersheds (3.8 TCCC per watershed) within Shasta-Trinity National Forest.

Table 1. Summary of the quantity of trespass cannabis cultivation complexes (TCCC) and trespass cannabis cultivation sites where assessment and reclamation field activities within each land management area occurred. The quantity of United States Geologic Survey Hydrologic Unit Code (HUC) 10 watersheds and HUC 12 subwatersheds where any field activities occurred, are also listed.

	Assessment		Reclamation		All activities by drainage‡	
	Complexes	No refuse found	Sites	Complexes	HUC10	HUC12
Hoopla Reservation	5	1	9	7	3	4
Klamath NF	36	10	34	26	10	17
Shasta-Trinity NF	102	11	125	79	9	26
Six Rivers NF	17	1	28	17	5	10
Other*	3	0	0	0	3	3
	163†	23	196	129	30	60

* TCCC were assessed on private timberlands with a direct nexus to public lands with matching federal funds

† Does not include 17 additional TCCC assessed with matching federal funds reclaimed under the Agreement

‡ Numbers may not match raw summaries as drainages may overlap National Forest boundaries

Cumulative field efforts were strongly linear throughout the life of the Project for all activities indicating the Project advanced at a steady rate (Figure 2). Assessments progressed at a constant and reliable pace regardless of season as assessment teams were composed of full-time IERC staff members who were not encumbered by seasonal layoffs and lower elevation TCCC assessments could be prioritized during winter months to avoid areas covered in snow.

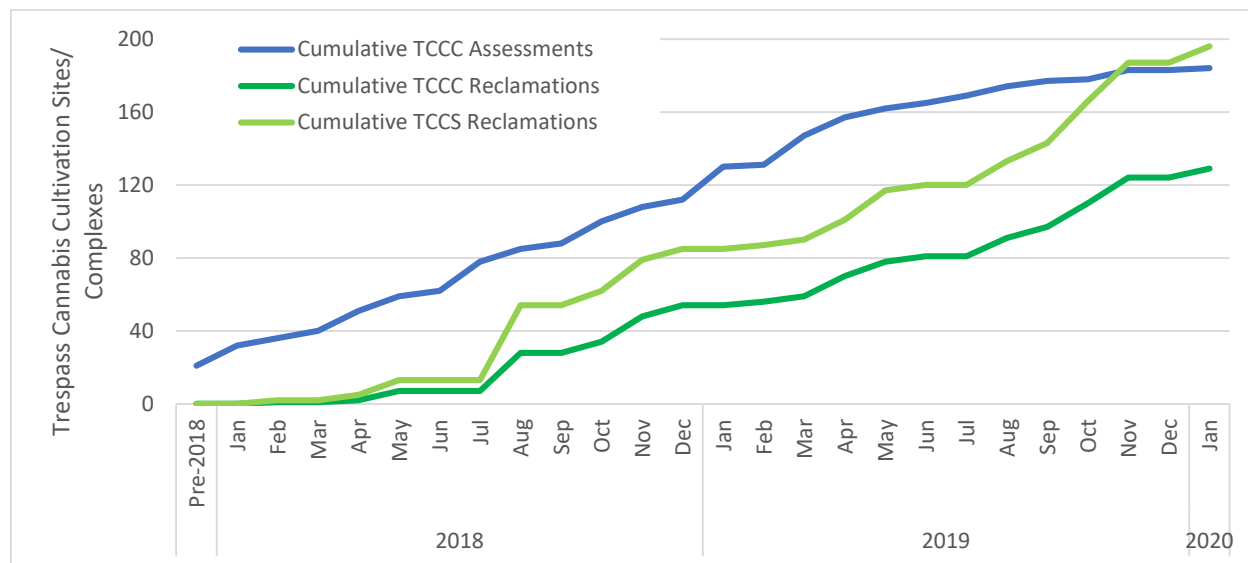


Figure 2. Cumulative trespass cannabis cultivation complex (TCCC) assessments and reclamations and cumulative trespass cannabis cultivation site (TCCS) reclamations conducted each month throughout the life of the Agreement. Note that the assessment of 17 TCCC occurred prior to implementation of the Agreement using matching federal funds.

While reclamation activities were conducted during all seasons, the greatest progress was made during later summer and fall months (i.e., August through November) (Figure 3). This timing was planned as project partners, specifically USFS-LEI, were able to dedicate large amounts of matching resources as aviation contracts were in effect during this period. This period also coincided with favorable weather (e.g., mild temperatures). Accordingly, very little active reclamation occurred during the preceding months (i.e., June and July) as activities consisted primarily of pre-staging TCCC in anticipation of aviation removal operations. Active reclamation efforts during the winter were also sparse as several sub-contractors experience seasonal layoffs during winter months.

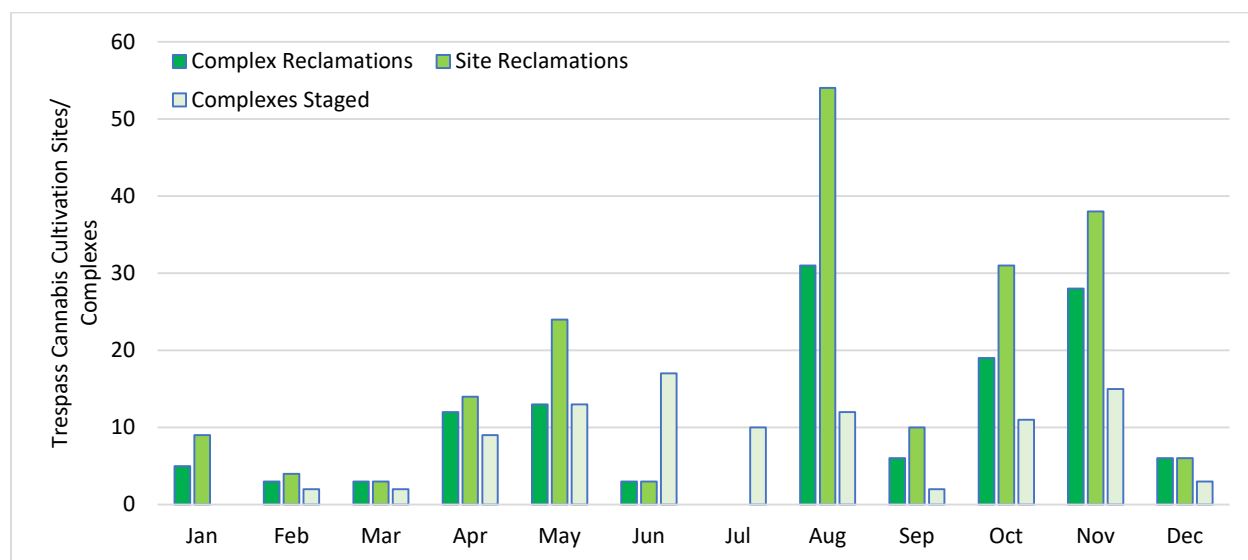


Figure 3. Quantity of trespass cannabis cultivation complexes staged and reclaimed and trespass cannabis cultivation sites reclaimed by month between January 01, 2018 and September 30, 2020.

Planning and Reporting

Throughout the life of the Project, IERC developed (and submitted through quarterly progress reports) a total of 310 pages of detailed site-specific reclamation planning, operational, and site reporting documentation (Appendix E). Based on information collected during assessments, a detailed reclamation plan was developed for each TCCC, highlighting site-specific background information, access coordinates, GPS locations of all known infrastructure, estimated refuse and irrigation pipe quantities, required number of personnel, and all known information on the location and status of toxic pesticides. These plans were provided to all project partners scheduled to be on-site, allowing internal review of potential risk evaluations and the development of job hazard assessments for applicable governmental organizations. Additionally, reclamation and operational plans for each operation were submitted to Project managers. For multi-day operations, these plans included detailed daily scheduling information for each organization when applicable.

The Project aimed to develop and refine efficient aviation removal practices which required optimizing the efficiency of helicopter resources through the removal of up to 14 staged TCCS per operation. Aviation operations are inherently complicated from both a planning and implementation perspective, as they require the coordination and/or scheduling of the helicopter, pilot, fuel truck, highly trained and

FAA/ USFS certified aviation management team, trailers and/or dump trucks, landing zone-based refuse handling teams, dozens of highly specialized TCCC-based personnel to hook up helicopter loads, Cal/OSHA and OSHA certified hazmat specialists, and frequently members of the media, politicians, and agency leadership. To maximize helicopter flight time, detailed aviation operational plans were developed for all 33 aviation operations providing the location of each staging location (when applicable), the estimated quantity of refuse at each location, the presence of pesticides, landing zone and drop zone (where applicable) locations, and a map showing the distribution of TCCC included in the operation. These planning documents were essential for aviation managers to coordinate the helicopter's daily itinerary and allowed efficient and informed management of up to 40 personnel operating without radio communication over several miles of densely forested landscapes.

Media and Outreach

While no specific objectives were outlined in the Agreement for public outreach and media, the Project was highly effective at promoting public and agency awareness of the detrimental environmental impacts of TCCC and the positive success of IERC Project efforts.

Between April 1, 2018 and February 13, 2020, IERC made 56 presentations to interested stakeholders and are either quoted or the main subject of 68 media articles and published press releases (Appendix D). These efforts included multiple site visits with media personnel where IERC team members provided in-depth on-site interviews.

Prominent media articles include:

- April 8, 2019: **National Geographic** – “Illegal marijuana growers poison forests—these people fight back”
<https://www.nationalgeographic.com/environment/2019/04/illegal-marijuana-growing-threatens-california-national-forests/>
- July 02, 2019: **Playboy.com** – “Inside the Fight for Safe Cannabis for All”
<https://www.playboy.com/read/protecting-pleasure-inside-the-fight-for-safe-cannabis>
- Aug 29, 2019: **L.A. Times** – “Illegal cannabis farms still scarring public lands, two years after Prop. 64”
<https://www.latimes.com/environment/story/2019-08-28/cannabis-california-national-forests-environment>
- Sept 5, 2019: **Lost Coast Outpost** – “OPERATION ‘WILD FISHER’ [PRESS RELEASE]: Weeklong Trespass Grow Cleanup Operation Hauls Tons of Trash, Miles of Water Lines Out of the Trinity Alps Wilderness”
<https://lostcoastoutpost.com/2019/sep/5/operation-wild-fisher-weeklong-trespass-grow-clean/>
- Nov 12, 2019: **NPR** – “Illegal Pot Operations In Public Forests Are Poisoning Wildlife And Water”
<https://www.npr.org/2019/11/12/773122043/illegal-pot-grows-in-americas-public-forests-are-poisoning-wildlife-and-water>

- December 09, 2019: **The Atlantic** – “The Environmental Catastrophe in your Joint”
<https://www.theatlantic.com/ideas/archive/2019/12/environmental-catastrophe-your-joint/603211/>
- December 18, 2019: **PBS** – “SoCal Connected Investigation Finds Deadly Pesticides in Marijuana Products in Illegal Los Angeles Stores”
<https://www.kcet.org/shows/socal-connected/socal-connected-investigation-finds-deadly-pesticides-in-marijuana-products-in>

Extensive outreach efforts were also made to local, state, and national officials, natural resource Directors, and assorted dignitaries. These efforts consisted of both on-site visits to TCCC and in-person meetings where IERC personnel briefed top government officials and decision-makers on the current status and trends of TCCC within California, a broad overview of the associated environmental impacts, the efforts and progress of IERC to address these issues, and beneficial assistance that can be offered by their respective agencies and organizations.

Notable meetings, press conferences, and site visits with dignitaries include:

May 29, 2018: In-person meeting and press conference with US Attorney for the United States District Court for the Eastern District of California, **McGregor Scott**; Director of High Intensity Drug Trafficking Areas (HIDTA) program, **Bill Ruzzamenti**; USFS Director of Law Enforcement and Investigations, **Tracy Perry**; California Attorney General, **Xavier Becerra**; USFS Region 5 Regional Forester, **Randy Moore**; California National Guard Major General, **David Baldwin**; Fresno County Sheriff **Margaret Mims** and Siskiyou County Sheriff, **Jon Lopey**.

August 03, 2018: All-day site visit and reclamation demonstration with CA state Assemblyman **Jim Wood**.

August 28, 2018: In-person meeting and press conference with Chief of the USFS, **Vicki Christiansen**; California Attorney General, **Xavier Becerra**; US Attorney for the United States District Court for the Eastern District of California, **McGregor Scott**; USFS Director of Law Enforcement and Investigations, **Tracy Perry**; USFS Region 5 Regional Forester, **Randy Moore**; USFS Region 5 Deputy Regional Forester, **Barnie Gyant**; USFS Region 5 Law Enforcement and Investigations Special Agent-in-Charge, **Don Hoang**.

May 09, 2019: All-day site visit and extended meeting with USFS Region 5 Deputy Regional Forester, **Barnie Gyant**; USFS Region 5 Law Enforcement and Investigations Assistant Special Agent-in-Charge, **Pete Jordan**; USFS Region 5 Law Enforcement and Investigations Assistant Special Agent-in-Charge, **Steve Frick**; and USFS Region 5 Safety and Occupational Health Manager, **Jeff Bradshaw**.

August 20, 2019: All day site visit and media outing with Director of the Executive Office of the White House, U.S. Office of National Drug Control Policy, **James Carroll**; Acting Administrator of the Drug Enforcement Administration, **Uttam Dhillon**; US Attorney for the United States District Court for the Eastern District of California, **McGregor Scott**; USFS Director of Law Enforcement and Investigations, **Tracy Perry**; USFS Region 5 Law Enforcement and Investigations Special Agent-in-Charge, **Don Hoang**; and BLM Region 1 Law Enforcement and Security Special Agent-in-Charge, **Kynan Barrios**.

Furthermore, award-winning multimedia journalist, Morgan Heim, was hired to document assessment and reclamation efforts for the development of outreach and training materials. The journalist

embedded with IERC personnel on 4 separate visits and collected videos and still photos used by several media outlets reporting on IERC reclamation and research efforts.

Additionally, an international film student from the University of West England - Bristol embedded with IERC personnel for one month to document assessment and reclamation efforts. The student produced a 12-minute film for the final product of their Master's Degree in Film Production titled "This Land." The film was shown at the student's university and additional plans are made for local viewing in Humboldt County.

Permits

No permits were necessary for the implementation of the Project. The Project was not subject to the California Environmental Quality Act because no discretionary permits were required as adverse environmental impacts were not expected to occur through the reclamation process. Enhancement and protection of public natural resources were the only anticipated outcomes of the Project (detailed in 'Discussion of Habitat Improvements and Ecological Benefits' section).

CHALLENGES

While all challenges were resolved to successfully accomplish project goals, some recurring obstacles included limited site access during winter conditions, difficulty coordinating the dynamic schedules and unexpected lack of availability of some of our project partners, and need to eliminate the risk posed by our operations to ongoing law enforcement investigations at adjacent sites. Low elevation snow levels during winter months impeded TCCC access, limiting our capacity to conduct assessments and/or implement reclamation operations. Additionally, after significant planning efforts, multiple aerial reclamation operations had to be postponed due to inclement weather.

The Project relied heavily on our law enforcement partners for additional specialized labor crews and provided site security during the active cultivation season. As law enforcement work can be highly dynamic, including emergency calls and last-minute scheduling needs, there were multiple occasions where, after significant planning efforts, law enforcement turnout was lower than initially anticipated requiring on-the-fly operational adjustments to maximize the efforts of work crews. Additionally, several budgetary restrictions, including a six-week Federal government shutdown, further limited the ability of agency law enforcement partners to allocate promised resources to assessment and reclamation operations.

Finally, active TCCC within operational areas forced several stand-downs of aviation support by US Forest Service law enforcement and California Department of Fish and Wildlife, so helicopter and personnel resources could be re-allocated to active site surveillance. Similarly, several aviation operations were planned to occur close to an active TCCC and had to be postponed until after active site eradication.

Unmet project objectives and alternative approaches

While many challenges required resolving throughout the life of the Project, all specific objectives outlined in the Agreement were met or exceeded.

RECLAMATION OVERVIEW

Implementation Overview

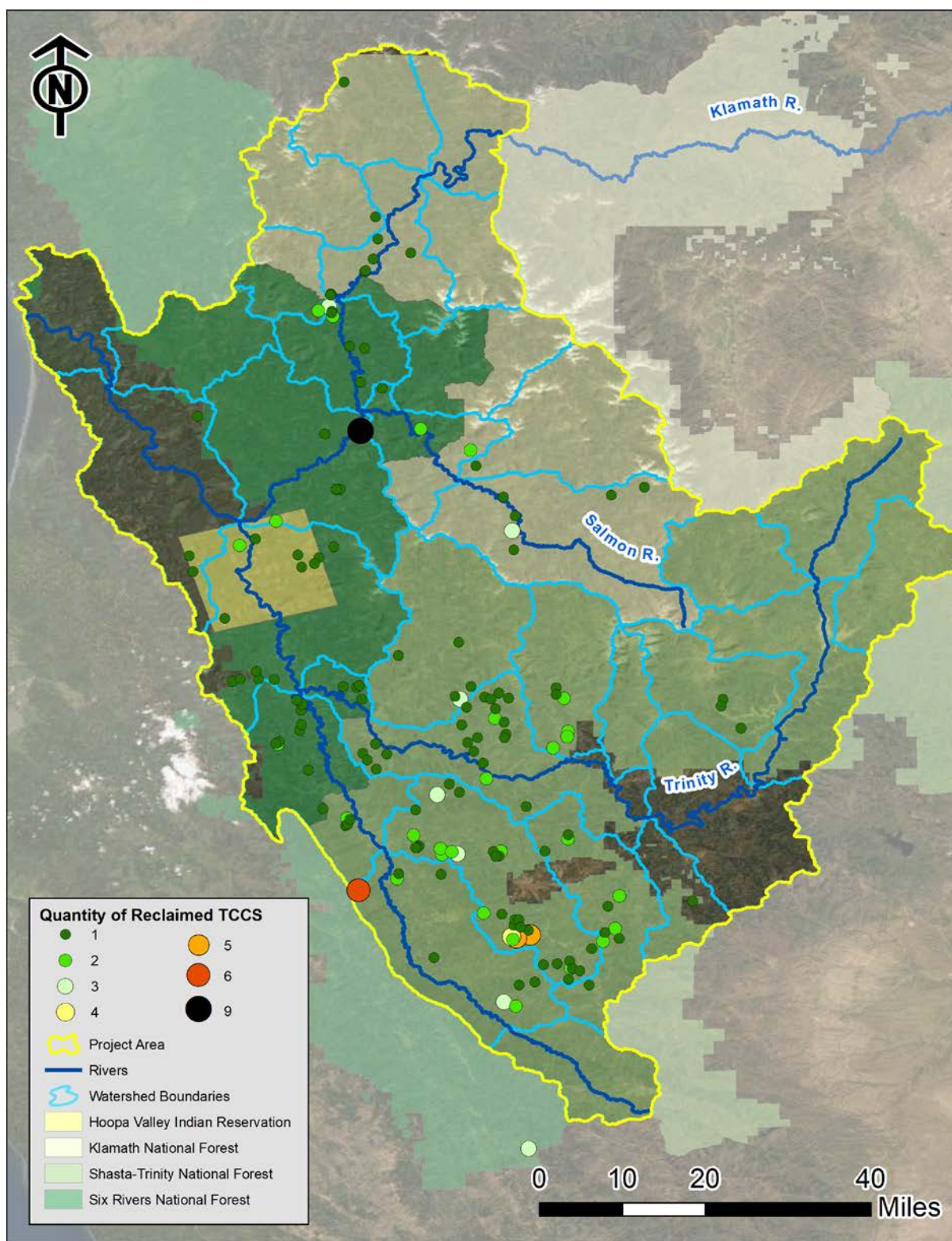
Throughout the Project, IERC reclaimed 196 independent cannabis cultivation sites between January 01, 2018, and September 30, 2020. One hundred ninety-three (193) TCCS were located within the Klamath River Basin encompassing the Hoopa Valley Indian Reservation (HVIR), Klamath National Forest, Shasta-Trinity National Forest, and Six Rivers National Forest (Figure 4). Three additional TCCS were located on Six Rivers National Forest lands, but not within the Klamath River Basin, were reclaimed with grant manager approval for a total of 196 reclaimed TCCS composed of 129 TCCC.

Reclamation efforts resulted in the removal of 148,203 total pounds (lbs.) of refuse, composed of 45,483 lbs. of black polyethylene irrigation pipe (totaling roughly 727,736 feet [ft.]; 137.83 miles), and 102,720 lbs. of food waste, human refuse, and assorted TCCC infrastructure. Based on these calculations, irrigation pipe typically accounts for 31% of the total removed refuse weight. While no vehicles or irrigation pumps were identified at any TCCS, four firearms and a large quantity of additional equipment (e.g., propane tanks, camp stoves, car batteries) were removed from reclaimed sites (Appendix A). August 2018 was the most productive reclamation month based on reclaimed TCCS (41) followed by October (23 TCCS) and November (21 TCCS), 2019 (Figure 5).

Because many TCCC are situated in remote forest settings, located several hundred meters from the nearest road with more than 1,000 lbs. of refuse on average, aerial removal operations using a helicopter to long-line refuse was utilized to reclaim the majority of sites. Aerial removal operations were implemented at 144 of the 196 total reclaimed TCCS (73%) to remove refuse during 36 independent aviation operations (Table 2). Thirty-three operations were specifically dedicated to reclamation activities, while three operations consisted of opportunistic refuse removal during eradication efforts. Through aerial removal operations, 112,879 lbs. of refuse (76.2% of total) and 535,479 ft. of irrigation pipe (73.6% of total), averaging 3,136 lbs. of refuse and 14,878 ft. (2.81 miles) per operation, were removed. On average, each aerial removal operation required 3.02 hours of helicopter flight time and approximately 20 personnel to manage and operate the aviation resources, handle the refuse at the landing zone, and hike into sites to attach the staged refuse to the helicopter long-line.

For smaller TCCC located near roads with well-defined and open trail networks, refuse was removed manually. Manual removal operations were implemented at 52 of the 196 total reclaimed TCCS (37%) to remove refuse during 40 independent reclamation operations (Table 3). Through manual removal operations, 35,324 lbs. of refuse (23.8% of total) and 192,257 feet of irrigation pipe (26.4% of total) was removed during these 40 independent operations. On average, 883 lbs. of refuse and 4,806 feet of irrigation pipe (0.91 miles) was removed per operation and required 10 personnel.

Pre-staging operations were conducted at a higher proportion of aviation removal sites to maximize helicopter flight time. As multiple adjacent TCCC could be removed in a single operation, the most efficient use of flight time and personnel resources was achieved if sites were pre-staged on prior days to the aerial operation. Pre-staging operations occurred at 119 TCCS (83% of helicopter sites) removed via helicopter compared to 27 TCCS (52%) that were reclaimed manually (Table 4).



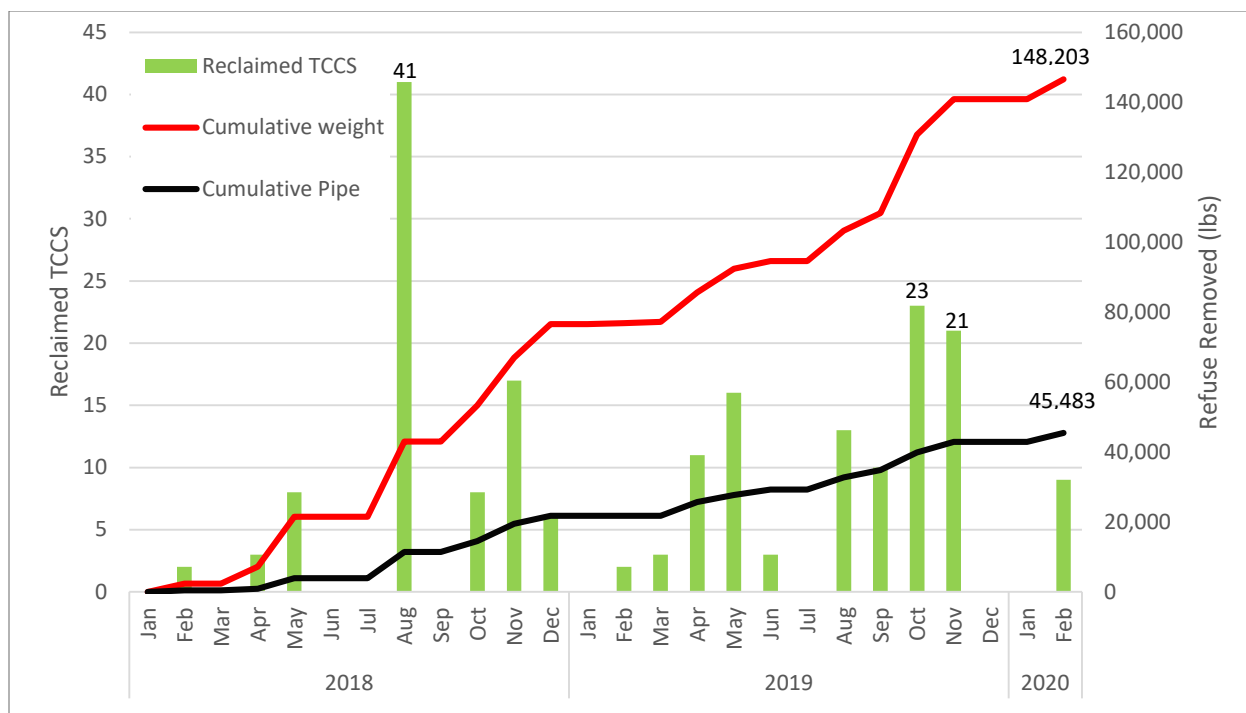


Figure 5. Total trespass cannabis cultivation sites (TCCS) reclaimed (primary x-axis), and cumulative weight in pounds of removed refuse and irrigation pipe (secondary y-axis) by month throughout the life of the Project.

Table 2. Aerial removal statistics presented by operation data including quantity of trespass cannabis cultivation complexes (TCCC) reclaimed, the quantity of trespass cannabis cultivation sites (TCCS) reclaimed, total refuse removed, irrigation pipe removed, operational helicopter flight time, and total personnel.

Operation Date	TCCC Reclaimed	TCCS Reclaimed	Refuse Removed (lbs.)	Irrigation Pipe Removed (ft.)	Op Flight Time (hrs.)	Total People
4/20/2018	1	3	4,810	6,527	1.8	31
5/7/2018	2	4	5,885	27,273	No Data	No Data
5/8/2018	3	6	9,320	39,622	No Data	No Data
5/9/2018	1	1	3,050	6,400	0.9	No Data
7/9/2018†	0	0	800	0	No Data	No Data
7/10/2018†	0	0	350	0	No Data	No Data
8/14/2018	1	9	4,840	9,903	3.8	19
8/15/2018	2	3	1,581	11,273	4.2	16
8/16/2018	4	4	1,385	7,436	4	24
8/17/2018	5	9	4,130	28,121	4.3	21
8/18/2018	2	3	1,010	3,879	1.7	13
8/19/2018	1	1	1,120	4,727	1.8	13
8/20/2018	4	5	2,870	10,121	4.9	19
8/21/2018	1	6	4,950	42,061	4.5	21
8/31/2018†	0	0	500	0	No Data	No Data
10/25/2018	2	3	3,730	25,760	1.9	6
11/30/2018	3	4	7,900	9,576	6.8	24

Table 2 continued

Operation Date	TCCC Reclaimed	TCCS Reclaimed	Refuse Removed (lbs.)	Irrigation Pipe Removed (ft.)	Op Flight Time (hrs.)	Total People
12/3/2018	4	4	6,290	28,960	1.4	21
4/12/2019	6	6	4,195	36,512	2.7	12
4/30/2019	3	3	2,860	27,520	3.9	11
5/10/2019	6	14	6,279	33,152	2.9	31
8/13/2019	1	1	1,450	15,056	2.2	8
8/22/2019	1	2	200	0	3.3	19
8/23/2019	1	1	2,170	800	3.6	22
8/26/2019	3	5	2,220	20,320	2.9	28
8/27/2019*	0	0	0	0	3.3	35
8/28/2019	2	2	1,380	10,720	3.3	29
8/29/2019	1	1	760	4,000	2.4	27
8/30/2019	1	1	830	7,680	2.4	24
9/24/2019	3	5	2,169	14,864	1.4	17
9/25/2019	1	2	780	3,920	1.8	12
9/26/2019	1	1	680	1,600	2.9	15
10/11/2019	5	10	5,470	29,360	2.2	19
10/15/2019	3	8	7,775	25,440	3.1	18
11/14/2019	6	9	7,040	31,936	3.7	18
11/15/2019	4	8	2,100	10,960	3.7	26
	84	144	112,879	535,479		

*Operation only consisted of transporting personnel in order to pre-stage refuse within Trinity Alps Wilderness TCCC.

† Operation was not an organized reclamation effort, but consisted of opportunistic aerial removal of refuse during either eradication or assessments efforts using matching federal funds.

Table 3. Manual removal statistics presented by operational data including quantity of trespass cannabis cultivation complexes (TCCC) reclaimed, quantity of trespass cannabis cultivation sites (TCCS) reclaimed, total refuse removed, irrigation pipe removed, and total personnel.

Operation Date	TCCC Reclaimed*	TCCS Reclaimed*	Refuse Removed (lbs.)	Irrigation Pipe Removed (ft.)	Total People
5/8/2018	1	1	200	2,182	No Data
6/19/2018	0	0	30	424	No Data
7/10/2018	0	0	1,672	0	No Data
8/27/2018	1	1	115	182	No Data
9/20/2018	0	0	700	970	9
10/23/2018	1	1	180	485	19
10/24/2018	1	1	2,600	1,818	10
10/25/2018	1	1	325	1,212	17
11/6/2018	0	0	553	0	14

Table 3 continued

Operation Date	TCCC Reclaimed*	TCCS Reclaimed*	Refuse Removed (lbs.)	Irrigation Pipe Removed (ft.)	Total People
11/8/2018	1	1	340	1,600	17
11/26/2018	1	2	820	13,122	16
11/27/2018	3	3	1,375	3,830	12
11/28/2018	3	3	3,532	31,040	13
11/29/2018	3	4	3,032	23,768	14
12/19/2018	2	2	3,515	11,920	9
2/6/2019	1	1	60	0	2
2/28/2019	1	1	220	24	4
3/1/2019	2	2	215	64	2
3/7/2019	1	1	125	960	3
4/11/2019	1	1	400	800	3
4/23/2019	1	1	100	240	2
5/7/2019	1	1	350	0	7
5/9/2019	0	0	150	0	3
6/20/2019	3	3	2,150	24,000	20
7/23/2019	0	0	100	16	2
9/19/2019	1	2	140	640	3
10/10/2019	1	1	400	0	10
10/28/2019	1	1	1,332	4,800	14
10/29/2019	1	1	1,332	4,800	13
10/30/2019	2	2	2,138	11,600	13
11/8/2019	0	0	100	1,600	9
11/18/2019	2	2	190	1,120	18
11/19/2019	1	1	500	2,400	17
11/20/2019	1	1	220	2,400	19
1/28/2020	2	3	595	5,056	6
2/14/2020	0	0	1,864	16,432	12
2/15/2020	0	0	437	2,528	6
2/16/2020	2	3	1,785	15,168	5
2/24/2020	1	2	995	2,528	5
2/28/2020	1	2	437	2,528	5
	45	52	35,324	192,257	

* Reclaimed TCCC and TCCS are only counted for the date the reclamation is completed. Therefore, multi-day manual removal operations or dates where refuse have been opportunistically removed may have refuse quantities with no corresponding reclaimed TCCC or TCCS values. Dates where refuse is opportunistically removed also do not count as an independent reclamation operation.

Table 4. List of trespass cannabis cultivation sites (TCCS), trespass cannabis cultivation complexes (TCCC), and proportions of reclaimed sites where pre-staging operations were conducted before the removal of refuse.

Mode of Reclamation	Not Pre-staged		Pre-staged		% Prestaged	
	TCCC	TCCS	TCCC	TCCS	TCCC	TCCS
Aerial Removal	19	24	64	119	77%	83%
Manual Removal	24	25	21	27	47%	52%
	43	49	85	146		

Post-implementation Conditions

Per Project objectives, TCCS are classified as reclaimed if at least 97% or more of the known refuse and infrastructure is removed. This includes all attractants in the form of food refuse, pesticides, fertilizers, as well as, all water diversion and storage structures including source diversions, cistern and water irrigation piping. Pre- and post-implementation photos were collected at nearly every site; however, only a selection of photos have been presented to visually illustrate site conditions both before and after reclamation activities (Figures 6 – 10).



Figure 6. Pre- (top) and post- (bottom) reclamation photographs of a camp at the Big French Wild 2 trespass cannabis cultivation complex reclaimed on August 23, 2019 as a representative example of the 97% refuse removal threshold required to classify a location as reclaimed.



Figure 7. Pre- (top) and post- (bottom) reclamation photographs of a camp at the Big Creek 2 trespass cannabis cultivation complex reclaimed on August 20, 2018, as a representative example of the 97% refuse removal threshold required to classify a location as reclaimed.



Figure 8. Pre- (top) and post- (bottom) reclamation photographs of a camp at the Eye in the Sky trespass cannabis cultivation complex reclaimed on August 21, 2018, as a representative example of the 97% refuse removal threshold required to classify a location as reclaimed.



Figure 9. Pre- (left) and post- (right) reclamation photographs of a camp at the Raspberry Delight trespass cannabis cultivation complex reclaimed on July 13, 2018, as a representative example of the 97% refuse removal threshold required to classify a location as reclaimed.



Figure 10. Pre- (top) and post- (bottom) reclamation photographs of a camp at the Wildwood China Gulch trespass cannabis cultivation complex reclaimed on October 25, 2018, as a representative example of the 97% refuse removal threshold required to classify a location as reclaimed.

Spatial Distribution and Habitat Characteristics of Reclaimed Sites

Spatial Distribution

Project activities occurred within four primary management areas: Klamath National Forest, Shasta-Trinity National Forest, Six Rivers National Forest, and the Hoopa Valley Indian Reservation (HVIR). Within these areas, reclamation efforts were implemented within 18 United States Geological Survey Hydrologic Unit Code 10 (HUC10) watersheds (Figure 4) and 47 HUC12 subwatersheds (Table 5). The majority of reclaimed TCCS were located on the Shasta-Trinity National Forest (125), followed by Klamath National Forest (34), Six Rivers National Forest (28), and HVIR (9).

One-third of the total refuse removed during the Project and 29% of the total reclaimed TCCS were located within the Lower Hayfork Creek Watershed in Trinity County. Both HUC12 subwatersheds with the largest removed refuse weights were located within the Lower Hayfork Creek watershed: Olsen Creek – Hayfork Creek (23,205 lbs. removed, 17 TCCS reclaimed) and Salt Creek (15,139 lbs. removed, 23 TCCS reclaimed).

Table 5. Quantity of reclaimed trespass cannabis cultivation sites (TCCS) by management area, watershed, and subwatershed, reclaimed between January 01, 2018 and September 30, 2020.

Management Area	Watershed	Subwatershed	TCCS Reclaimed	Refuse Removed (lbs.)
Hoopa Valley Indian Reservation	Bluff Creek-Klamath River	Slate Creek-Klamath River	2	995
		Deerhorn Creek-Trinity River	3	1,740
	Horse Linto Creek-Trinity River	Mill Creek	2	1,032
		Pine Creek	2	820
Klamath National Forest	Dillon Creek	Copper Creek-Dillon Creek	6	2,360
		Upper Indian Creek	1	325
	North Fork Salmon River	Olsen Creek-North Fork Salmon River	1	890
	Rock Creek-Klamath River	Reynolds Creek-Klamath River	3	1,235
		Ti Creek-Klamath River	4	1,870
	Salmon River	Butler Creek-Salmon River	2	780
		Crapo Creek-Salmon River	2	1,231
		Somes Creek-Salmon River	1	150
	South Fork Salmon River	Black Bear Creek-South Fork Salmon River	5	3,129
		East Fork South Fork Salmon River	2	1,960
		Methodist Creek-South Fork Salmon River	1	600
	Ukonom Creek-Klamath River	Swillup Creek-Klamath River	2	1,425
		Titus Creek-Klamath River	4	3,070
Shasta-Trinity National Forest	Big French Creek-Trinity River	Big French Creek	7	4,635
		Little French Creek-Trinity River	6	3,640
		McDonald Creek-Trinity River	5	5,335
	Lower Hayfork Creek	Corral Creek	5	8,030
		Olsen Creek-Hayfork Creek	17	23,215
		Rusch Creek-Hayfork Creek	4	1,280

Table 5 continued

Management Area	Watershed	Subwatershed	TCCS Reclaimed	Refuse Removed (lbs.)
Shasta-Trinity National Forest (cont.)		Salt Creek	23	15,139
		Tule Creek	7	3,776
	Lower South Fork Trinity River	Pelletreau Creek-South Fork Trinity River	5	2,870
	Middle South Fork Trinity River	Butter Creek	4	8,712
		Rattlesnake Creek	2	2,220
		Smoky Creek-South Fork Trinity River	5	3,649
		Sulphur Glade Creek-South Fork Trinity River	6	5,503
	New River	Big Creek	4	1,780
		Devils Canyon	1	440
	North Fork Trinity River	East Fork North Fork Trinity River	6	1,550
		Lower North Fork Trinity River	2	550
	Stuart Fork	Lower Stuart Fork	3	2,150
	Upper Hayfork Creek	Barker Creek-Hayfork Creek	4	4,052
		Big Creek	1	2,592
		Dubakella Creek-Hayfork Creek	6	5,661
		East Fork Hayfork Creek	2	2,270
	Big French Creek-Trinity River	Sharber Creek-Trinity River	4	2,830
Six Rivers National Forest	Bluff Creek-Klamath River	Boise Creek-Klamath River	9	3,782
		Camp Creek	1	350
		Red Cap Creek	2	295
	Horse Linto Creek-Trinity River	Campbell Creek-Trinity River	1	340
		Willow Creek	2	215
	Lower South Fork Trinity River	Grouse Creek	4	1,080
		Mingo Creek-South Fork Trinity River	2	190
	North Fork Eel River	Red Mountain Creek	3	4,810
			196	146,553*

*Only includes refuse weights for fully reclaimed sites and does not incorporate refuse removed opportunistically and did not result in a full reclamation.

Affected Habitats

To estimate the area affected by each TCCC, minimum convex polygons were drawn around all site features (e.g., camps, cisterns, plots) for Complexes with three or more identified features ($n = 105$ TCCC), and the area was calculated (Table 6). This analysis constitutes the initial phase of a more in-depth examination of the scope of environmental impacts associated with TCCC areas. The approach is a sound method for rapid analysis as trails and discarded refuse connect all site infrastructure and are subjected to varying intensities of anthropogenic stress. Additionally, all affected areas have been improved through the reclamation activities implemented through the Project.

In total, 1,796.6 affected acres will be improved by Project reclamation activities. By management area, the largest cumulative area affected by TCCC reclaimed through the Project was located within the Shasta-Trinity National Forest (1,372 affected acres) and the smallest area within the Hoopa Valley Indian Reservation (30.3 affected acres) (Table 6).

Table 6. Total acres affected by trespass cannabis cultivation complexes (TCCC) and number of TCCC with three or more recorded site features (e.g., camps, cisterns, plots) incorporated into the analyses listed by management area.

Management Area	Affected Acres
Hoopa Valley Indian Reservation	30.3
Klamath National Forest	298.3
Shasta-Trinity National Forest	1,372.4
Six Rivers National Forest	95.6
	1,796.6

Affected area polygons were further used to characterize affected habitat types using the California Wildlife Habitat Relationships (CWHR) habitat type classification system (Table 7). Using the CWHR classification system, 14 total habitat classifications were affected. The Sierran Mixed Conifer (907.78 affected acres) and Douglas Fir (518.5 acres affected) habitat classification types composed nearly 80% of all affected areas. These habitats represent crucial refuge for northern spotted owls, Pacific fisher, and many other protected wildlife species (see ‘Species of Special Concern’ section).

Table 7. Classification of the area affected by reclaimed trespass cannabis cultivation complexes in acres using both the National Vegetation Classification System (NVCS) and the California Wildlife Habitat Relationships (CWHR) classification systems.

CWHR Code	CWHR Type	Affected Acres
Barren	BAR	0.59
Blue Oak-Foothill Pine	BOP	17.48
Coastal Oak Woodland	COW	2.12
Douglas Fir	DFR	518.5
Jeffrey Pine	JPN	7.37
Klamath Mixed Conifer	KMC	20.57
Mixed Chaparral	MCH	75.15
Montane Chaparral	MCP	60.61
Montane Hardwood	MHW	57.02
Montane Hardwood-Conifer	MHC	105.37
Ponderosa Pine	PPN	2.57
Red fir	RFR	0.29
Riverine	RIV	6.55
Sierran Mixed Conifer	SMC	907.78
White fir	WFR	14.64
		1796.6

Affected Stream Reaches

All stream reaches, based on the USGS National Hydrography Dataset (NHD), within affected area polygons were extracted to allow the calculation of summary statistics of stream reaches immediately adjacent to reclamation activities. Streams were only identified within 56 of the 129 affected area polygons totaling 23,635 meters. When present, the largest average stream lengths within TCCC-affected areas were identified within the Shasta-Trinity National Forest (Figure 11) at 509 meters. The Hoopa Valley Indian Reservation demonstrated the lowest average stream reach length within TCCC affected areas (71.6 m); however, an NHD stream was only detected within 1 TCCC affected polygon.

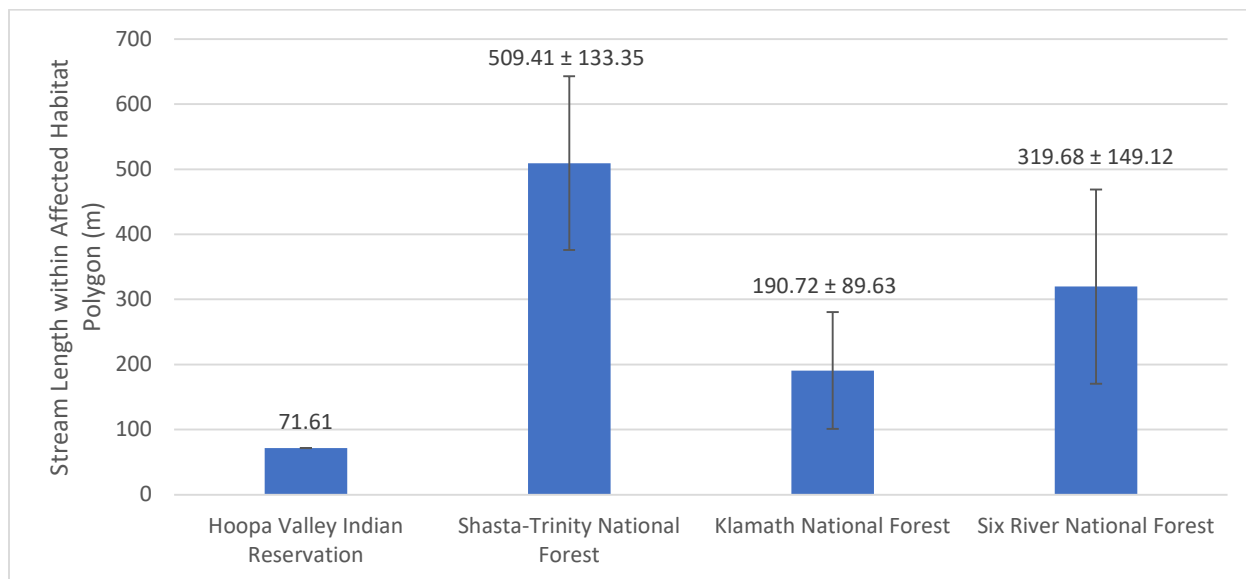


Figure 11. Average National Hydrographic Dataset stream length located within affected area polygons at each reclaimed trespass cannabis cultivation complex by management area.

Additional Environmental Impacts

Fertilizers and Pesticides

During the assessment process, all detected fertilizer and pesticide containers were recorded. Evidence of 83,444 lbs. of fertilizer and 1,050 lbs. of pesticides were detected across all reclaimed TCCC. Total pesticide weights were composed over at least 47 distinct chemicals. Select site-specific pesticide information may be found in site reclamation plans (Appendix A). While no chemicals were specifically removed from sites, select hazardous materials were mitigated on-site and IERC is currently working with USFS to arrange their removal via hazardous materials contractors.

Water Diversions and Cisterns

Access to irrigation water is a fundamental requirement of every cultivation operation, so water diversions removing up to 100% of natural stream flows were present and removed at all of the 129 reclaimed TCCC. Once diverted, water is often stored in either upland or in-stream cisterns for later use. One hundred fifteen (115) in-stream and upland cisterns, ranging in storage capacity from 100 to over 30,000 gallons, were discovered at 58 TCCC within 18 HUC 10 watersheds during assessments at all reclaimed TCCC (Table 8).

Table 8. Quantity, mean and maximum storage capacity in gallons of cisterns detected through Project assessments listed by USGS Hydrologic Unit Code 10 (HUC10) watersheds and summarized by management area.

Management Area	HUC10 Watershed	Total Cisterns
Hoopa Valley Indian Reservation	Bluff Creek-Klamath River	1
	Horse Linto Creek-Trinity River	1
	Tectah Creek-Klamath River	1
		3
Klamath National Forest	Indian Creek	1
	Rock Creek-Klamath River	2
	Salmon River	3
	South Fork Salmon River	5
	Ukonom Creek-Klamath River	2
		13
Shasta-Trinity National Forest	Big French Creek-Trinity River	15
	Lower Hayfork Creek	35
	Lower South Fork Trinity River	1
	Middle South Fork Trinity River	18
	New River	4
	North Fork Trinity River	3
	Stuart Fork	2
	Upper Hayfork Creek	10
		88
Six Rivers National Forest	Big French Creek-Trinity River	3
	Bluff Creek-Klamath River	3
	North Fork Eel River	5
		11

Complexes Recommended for Restoration

While reclamation activities do reduce impairments of stressors to degraded natural processes encountered within TCCC, they are not a substitute for active restoration activities. High level of varied impacts were encountered within these sites including, direct application of concentrated highly toxic pesticides, stream modifications, dewatering from stream/ spring water diversion (Figure 12), direct habitat destruction as natural forested areas are cleared to increase space and sunlight for *Cannabis* spp. plants (Figure 12), and substantial earthworks to terrace planting plots (Figure 12) and create water cisterns (Figure 12). As a result, some degree of restoration is recommended for every TCCC assessed during the Project. To prioritize future restoration resources, we have developed a list of TCCC

recommended for restoration (Table 9). Restoration recommendations were identified by the assortment of impacts requiring addressing and the scale of each impact.

Table 9. Trespass cannabis cultivation complexes (TCCC) recommended for priority restoration activities.

Priority	Management Area	TCCC	Impacts	Recommended Restoration
1	Shasta-Trinity National Forest	Plummer Peak	Heavy vegetation clearing; large cisterns both within and outside of creek; heavy application of pesticides	Tree and brush planting, in-stream bank stabilization, soil remediation
2	Shasta-Trinity National Forest	Rays Peak 2019	Heavy vegetation clearing; large cistern	Tree planting with upland fill of cistern; slope stabilization and sediment control
3	Six Rivers National Forest	5 Mile	Heavy vegetation clearing; plot terracing; large cistern; dugout springs	Tree and brush planting; upland bank stabilization; spring restoration
4	Shasta-Trinity National Forest	Wildwood China Gulch	Dugout springs and in-stream cisterns	In-stream bank stabilization and spring restoration
5	Shasta-Trinity National Forest	Raccoon Face 2019	Heavy vegetation clearing; large dugout in-stream cistern	In-stream bank stabilization and tree planting
6	Klamath National Forest	Crapo Creek	Heavy vegetation clearing; terraced plots immediately adjacent to main tributary	Soil stabilization and erosion control
7	Klamath National Forest	Offield Saddle	Heavy vegetation clearing; terraced plots immediately adjacent to main tributary	Soil stabilization and erosion control
8	Six Rivers National Forest	Quinby Creek*	Large cisterns	Upland filling of cisterns with bank stabilization

* TCCC was reclaimed during a previously funded reclamation project but is being included as it would benefit greatly from restoration activities.



Figure 12. Representative examples of various environmental impacts warranting active restoration efforts, including direct habitat destruction and tree removal (top left), large upland dugout cisterns (top right), in-stream cisterns (bottom left), and earthworks and terracing (bottom right).

DISCUSSION OF HABITAT IMPROVEMENTS AND ECOLOGICAL BENEFITS

Trespass cannabis cultivation often occurs within heavily forested regions inhabited by a broad array of Species of Special Concern where cultivation practices posing both a direct and indirect threat to wildlife, natural habitats, and ecological processes. Ecological threats from TCCC include, but are not limited, to the introduction of high volumes of food waste and human refuse, which attracts local wildlife to TCCC, where they are at risk of interacting with a broad array of highly toxic chemicals, and the diversion of water from sensitive low-order aquatic habitats. While the reclamation process is not a substitute for active restoration for re-establishing natural processes, particularly direct destruction and modification of habitats, it is highly effective at mitigating the most immediate and concerning ecological stressors to both terrestrial and aquatic ecosystems within sensitive forested regions. To date, zero TCCC reclaimed through the Project have been re-activated by cultivators, so benefits gained by Project reclamation efforts may be considered long-term.

Species of Special Concern

The ecological benefits gained from the Project reclamation activities described in the following sections will improve habitats for at least 9 Species of Special Concern within four animal groups at either the state or federal level (Table 10) (BIOS 2020). Species of Special Concern benefitting from the Project notably include the northern spotted owl, foothill yellow-legged frog (*Rana boylei*), and several species of anadromous fish.

Table 10. List of Species of Special Concern, including state and federal listing status, whose habitat was improved as a result of the Project reclamation efforts.

	Common Name	Scientific Name	Conservation Status	
			Federal	State
Mammal	Humboldt marten	<i>Martes americana humboldtensis</i>	None	Endangered
Avifauna	Northern spotted owl	<i>Strix occidentalis caurina</i>	Threatened	Threatened
	Bald eagle	<i>Haliaeetus leucocephalus</i>	None	Endangered
Amphibian	Foothill yellow-legged frog	<i>Rana boylei</i>	None	Candidate Threatened
	Cascades frog	<i>Rana cascadae</i>	None	Candidate Endangered
Ichthyofauna	Southern Oregon/Northern California Coho salmon Evolutionarily Significant Unit (ESU)	<i>Oncorhynchus kisutch</i>	Threatened	Threatened
	Northern California steelhead trout distinct population segment	<i>Oncorhynchus mykiss irideus</i>	Threatened	None
	Summer-run steelhead trout	<i>Oncorhynchus mykiss irideus</i>	None	Candidate Endangered
	Chinook salmon - upper Klamath and Trinity Rivers ESU	<i>Oncorhynchus tshawytscha</i>	None	Candidate Endangered

Refuse and Food Waste

Assessments conducted through the Project and previous IERC research demonstrate that TCCC cultivators often reside on-site for up to six months during the growing season requiring large quantities of food and human-made resources to sustain two to four individuals. Large camps with extensive living quarters are often discovered, which include multiple sleeping bags, cooking equipment, and up to several thousand pounds of refuse and food waste (Figure 13). TCCC cultivators do not observe or follow wildlife-safe campsite practices and often leave raw food, including meat, vegetables, and cheese readily available for and attractive to wildlife. Also, spoiled food, it's packaging, and large amounts of soap and detergents are discarded at the periphery of these cultivation sites or within creek or stream beds. In addition to refuse being carelessly strewn about the forest floor to be picked at by wildlife and transported off-site by natural processes, trash pits dug several feet deep into the forest floor are discovered ubiquitously within TCCC (Figure 13). Expiration dating on food products can often be used to determine the active years of a given TCCC and indicate that refuse is frequently layered over several years of occupancy. Human latrines at these sites provide an additional source of environmental contamination and wildlife attractants through the presence and high density of human fecal matter.



Figure 13. Photo of living quarters (top left) including kitchen and sleeping area indicating long-term on-site TCCC habitation and a close-up (top right) of approximately 130 pounds of fresh food items. Photo of food waste and refuse scattered about the forest floor (bottom left). Photo of an empty freshly dug trash pit (bottom right).

The presence of food waste and human refuse is highly attractive to wildlife species and poses multiple risks. Wildlife habituation to TCCC refuse increases reliance on TCCC waste as a food source and may put

individual animals at risk of negatively interacting with humans in the future by associating human infrastructure with food. Additionally, wildlife attraction to TCCC food and refuse odors places animals at greater risks of interacting with toxicants present at the site (discussed in greater detail in 'Fertilizers and Pesticides').

Preliminary passive infrared (PIR) motion-activated game camera data suggests that carnivores, including fishers and black bears, regularly favor TCCC over adjacent habitats, likely because of the presence of massive food stores and trash piles left after cultivators have vacated the area following the growing season or due to law enforcement eradication. Carnivores and other wildlife have been documented regularly by PIR cameras using trails established to connect TCCC features (Figure 14) and rummaging through trash piles and assorted refuse left by cultivators (Figure 14), and traveling through plots, which are often contaminated with pesticides. The preference of species to frequent TCCC may lead to modified wildlife behaviors as the attraction of TCCC refuse promotes uncommon species interactions between predators and prey. Furthermore, all loose refuse is subject to transportation off-site by wind and water processes where they will eventually be conveyed in waterways to degrade downstream aquatic habitats.



Figure 14. Photo (left) captured by a passive infrared (PIR) motion-activated game camera of a gray fox utilizing a trail established by cultivators en route to a trespass cannabis cultivation complex (TCCC) camp. PIR photo (right) of a black bear rummaging through trash at a TCCC camp.

Reclamation efforts implemented through the Project removed 102,720 lbs. of assorted refuse and food waste from public lands to help reduce TCCC habituation and negative effects on downstream aquatic habitats. Camera trap data indicate that wildlife preference for TCCC continues following reclamation efforts as individuals search for remnant food scraps, but, in the absence of refuse, the individuals are forced to pass through in search of other resources (Figure 15).

IERC is currently in the data collection process of a large-scale TMCC camera trap research project to better understand wildlife interactions within TCCC and the impacts of reclamation on wildlife site use. Data collected through the Project will allow higher precision quantifications of the scope of ecological benefits gained within reclaimed habitats.



Figure 15. Pre-reclamation photos of a black bear (top left) and cubs (top right) rummaging through refuse and fertilizers at the camp of a trespass cannabis cultivation complex (TCCC). Photo of a black bear (bottom left) and mountain lion (bottom right) returning to the same TCCC camp now lacking refuse and human attractants following reclamation implementation. Notice the individuals simply walking through as there are no readily available food sources.

Fertilizers and Pesticides

Anticoagulant Rodenticides

Recent research has highlighted the growing prevalence of exposure to sensitive and federally listed species, including the fisher, (Gabriel et al. 2012; Thompson et al. 2013; Gabriel et al. 2015) and northern spotted owls (Wiens et al. 2019, Franklin et al. 2018, Gabriel et al. 2018) connected to illegal TCCC-sourced anticoagulant rodenticides (AR).

For example, in 2012, 79% of all fishers collected and tested in California were exposed to AR (Gabriel et al. 2012). In 2015 that percentage increased to 85% (Gabriel et al. 2015), and most recently, in 2017, 100% of all fishers tested demonstrated exposure to AR (Gabriel, Unpublished Data). Seven of ten (70%) northern spotted owls collected between 2012 and 2016 were found positive for AR and examinations

of barred owls (*Strix varia*), serving as surrogates for northern spotted owls due to their overlapping habitat and diet preferences as well as physical similarities, showed that overall, 40% of barred owls tested positive for one or more AR (Gabriel et al. 2018). Spatial analysis and years of data collection directly implicate the widespread presence of toxicants at TCCC as the source of exposure for fishers and northern spotted owls (Figure 16) (Gabriel et al. 2012; Thompson et al. 2013; Gabriel et al. 2015; Thompson 2017, Gabriel et al. 2018, Franklin et al. 2018).



Figure 16. Examples of anticoagulant rodenticide discovered within reclaimed trespass cannabis cultivation complexes (TCCC).

Throughout the Project, AR were discovered and removed or mitigated at 26 TCCCs, in addition of other rodenticides of interest from 21 TCCC. The removal of these substances from the natural landscapes will help reduce wildlife exposures capable of bioaccumulation through the food web. In a continued effort to assess the threat of AR to wildlife populations, IERC's ongoing monitoring projects include a continuation of AR screening of fisher and barred owl populations in the Project Area in collaboration with Hoopa Tribal Forestry.

Other Toxicants and Fertilizer

Extensive amounts of pesticides and fertilizers are used at TCCC to accommodate cultivation on less-than-optimal, often rocky, soils. While the quantity of applied pesticides and fertilizers found at a typical TCCC might be optimal for hundreds of acres of agricultural crops, they are used in plots typically no larger than a ½ - 1 acre of forest land (Figure 17). When unmitigated, these concentrated toxicants and fertilizers enter and impair the terrestrial forest food webs of species of conservation concern (Table 10), absorb into the surrounding vegetation, and enter downstream surface waters. Within TCCC, labeled containers of pesticides dangerous to aquatic species such as organophosphates, carbamates, and pyrethroids are commonly found empty and often damaged, usually showing bite marks from larger mammals such as bears (Figure 18). Recent data has demonstrated that many of these toxicants are polluting watercourses below grow sites (Gabriel et al. 2017). Due to the mobility of these fertilizers and pesticides, the impairments present within these TCCC extend into the entire food web and adjacent

habitats, and with an average of 100+ TCCC discovered and eradicated annually in just northern California's public lands (Wengert et al. 2017, Unpublished data), the need to address these impairments is crucial.

Through the Project assessments, evidence of pesticides and fertilizers were found at nearly every assessed TCCC and 1,050 lbs. of concentrated pesticides, and 83,444 lbs. of concentrated fertilizer were discovered, removed, or mitigated from reclaimed TCCC. In an ongoing cooperative agreement with USFS-LEI, IERC continues to monitor the ever-changing trends in cultivation practices within TCCC.



Figure 17. Representative photographs showing the high volumes of concentrated fertilizers detected at trespass cannabis cultivation complexes.



Figure 18. Photograph of an empty container of methamidophos, a highly toxic, banned organophosphate pesticide with holes likely created by a black bear.

Water Diversions and Cisterns

Fifty (Sedell et al. 2000) to sixty (LAO 2018) percent of California's available potable water for municipalities, ranchers, farmers, and indigenous tribes originates from the state's National Forests and provides essential habitat as well as water for threatened and endangered fish and wildlife. The presence of thousands of TCCC on our public lands poses a significant risk to terrestrial and aquatic wildlife, water availability, water quality, and public safety. TCCC often divert 100% of the water from a stream or spring to supply water to the site. In-stream water diversions and lined cisterns (Figure 19) illegally redirect and store millions of gallons of water from watercourses each year on public land.

Data on the specific amount of water *Cannabis* spp. plants use per day is lacking and speculative. Current available data generated by the Humboldt Growers Association stated that a cannabis plant utilizes 6 gallons of water a day over a 150-day growing season for total usage of 900 gallons of water per plant (HGA 2010). This data has been cited in peer-reviewed publications (Bauer et al. 2015), though not validated, it was the best available data at the time. This data is now being strongly contested as either an over- or underestimation of water requirements per plant.

In addition to withdrawing water directly from streams, many TCCC have reservoirs that store water within upland habitats on-site. Reservoirs found at TCCC are variable in size, ranging in storage capacity from 100 to over 30,000 gallons. Through reclamation activities implemented through the Project, 115 upland and in-stream cisterns were detected at 58 TCCC and removed through reclamation activities. These water storage infrastructures were mitigated throughout the entire Project Area within 18 HUC 10 watersheds and 48 HUC12 subwatersheds.



Figure 19. Two examples of lined cisterns capable of storing 9,116 gallons (left) and 23,698 gallons (right) located at trespass cannabis cultivation complexes within the Trinity Alps Wilderness.

BUDGET AND EXPENDITURES

Expenses

Within the scope of the Agreement budget, \$964,157 were spent on operating costs, with an additional \$630,883 being donated as match by various organizations (Table 11) (see 'In-kind Contributions' section) for a total project cost of \$1,595,040.

Table 11. Total Project operating costs including in-kind contributions.

A. Personnel Services	
Project Manager	\$ 90,480.68
Assistant Project Manager	\$ 47,102.79
Ecologists	\$ 171,322.21
Subtotal Personnel Services	\$ 308,905.68
Staff Benefits at 25%	\$ 77,226.42
Subtotal A: Personnel Services	\$ 386,132.10
B. Operating Expenses: General	
Supplies	\$ 61,394.76
Travel	\$ 29,037.21
Subtotal B: General	\$ 90,431.97
C. Operating Expenses: Subcontractors	
Watershed Research and Training Center	\$ 185,659.02
Trinity County Resource Conservation District	\$ 84,086.14
California Conservation Corps	\$ 102,773.10
Helicopter Contractor	\$ 47,672.04
Multimedia Contractor	\$ 20,000.00
Subtotal C: Subcontractors	\$ 440,190.30
D. Subtotal and Indirect Costs	
Subtotal A: Personnel Services	\$ 386,132.10
Subtotal B: General	\$ 90,431.97
Subtotal C: Subcontractors	\$ 440,190.30
Indirect Costs (12%)	\$ 47,402.91
*TOTAL AGREEMENT EXPENSES	\$ 964,157.28
In-kind Contributions and Match	
In-kind Contributions	\$ 630,883.21
TOTAL PROJECT COSTS	\$1,595,040.49

* Agreement expenses represent a projected estimate as the final invoice has not been tabulated upon drafting of this report; however, final expenses are not expected to differ from estimates by more than \$5,000.

In-kind Contributions

The achievements accomplished through the Project were only possible due to exceedances in in-kind contributions received from project partners, primarily in the form of personnel resources and aviation assets. Of the \$132,590 promised in in-kind contributions, the Project was able to secure \$630,883, marking an exceedance of \$498,293 or 376% (Table 12).

The United States Forest Service, specifically the Law Enforcement and Investigations branch constituted the primary matching partner, surpassing their original promised in-kind contribution of \$19,900 by matching resources worth a total of \$416,600, marking an exceedance of 1,993% their original promised amount. An unexpected match of over \$20,800 was also secured from the CA Army National Guard Counter Drug Task Force. Other notable organizations consisted of the Trinity and Siskiyou County Sheriff's Departments, and volunteers from several local environmental groups, including the Rocky Mountain Elk Foundation, volunteered or contributed an additional \$28,400 worth of resources. In total, 21 organizations, local, state, and federal agencies contributed in at least one assessment or reclamation operation. While all partners were willing to provide their promised contributions to meet shared reclamation goals; the highly generous contributions by USFS-LEI and other partners yielded the need for continued match unnecessary.

Table 12. Promised and received in-kind contributions from all project partners.

Entity	Promised	Received	Exceedance
Integral Ecology Research Center	\$ 6,210.00	\$ 21,721.48	\$ 15,511.48
The Nature Conservancy	\$ 15,000.00	\$ 28,650.00	\$ 13,650.00
USDA Forest Service - Law Enforcement and Investigations*	\$ 19,900.00	\$ 416,600.00	\$ 396,700.00
California Conservation Corps	\$ 79,120.00	\$ 34,289.00	\$ (44,831.00)
Hoopla Tribal Forestry	\$ 12,360.00	\$ 7,800.00	\$ (4,560.00)
CA Army National Guard Counter Drug Task Force	\$ -	\$ 20,800.00	\$ 20,800.00
Previous Funding Opportunities †	\$ -	\$ 44,417.49	\$ 44,417.49
CA Department of Fish and Wildlife - Law Enforcement Division	\$ -	\$ 28,205.24	\$ 28,205.24
Other‡	\$ -	\$ 28,400.00	\$ 28,400.00
	\$ 132,590.00	\$ 630,883.21	\$ 498,293.21

* Some reclamation labor was provided by USDA Forest Service - Fire and Aviation Crews through coordination of USDA Forest Service – Law Enforcement and Investigations.

† Matching grant funds were provided prior to the Agreement from the US Fish and Wildlife Service's Cooperative Endangered Species Conservation Fund/ Section 6 Grants program, The Nature Conservancy, and US Forest Service Region 5 Law Enforcement and Investigations.

‡ Other contributors include the local Sheriffs Departments, Rocky Mountain Elk Foundation volunteers, and volunteers from several local environmental non-profits.

Personnel and resources were contributed to the Project across all phases of the reclamation process, including assessment, staging, aviation, and manual removal. USFS-LEI, CDFW, and local Sheriffs offices provided law enforcement officers who assisted in assessment efforts by conducting initial TCCC entry and ensuring all areas were clear of any cultivators prior to the entry of IERC scientists. Additionally, officers investigated TCCC trails looking for additional infrastructure and effectively functioning as

preliminary assessment teams to maximize the assessment time of IERC personnel. As a result, IERC was able to a) increase the safety of team members, and b) assess multiple TCCC in a given day where only one assessment may have been possible without the matching personnel. All Project partners provided in-kind match in the form of personnel for reclamation staging and manual removal operations. Increases in experienced personnel, qualified to operate with appropriate situational awareness within TCCC, directly equates to increased effectiveness in their ability to more quickly stage and remove grow site infrastructure.

For aviation reclamation operations, the contribution of qualified personnel and aviation assets by USFS-LEI, CDFW-LED, Trinity County Sheriffs Office, and CA National Guard were paramount to the success of the Project. Multiple certifications and intensive training are required for both aviation management teams at landing zones and field teams operating beneath hovering helicopters to hook-up staged refuse. Access to sufficient quantities of qualified personnel is frequently the limiting factor when implementing reclamation operations and access to sufficient quantities of qualified personnel allowed IERC to develop and coordinate aviation operations incorporating up to 14 TCCS in a single day.

CONCLUSIONS AND RECOMMENDATIONS

Based on all metrics established within the Agreement, the Project met and exceeded all expectations and was considered a notable success. To our knowledge, this Project and the information outlined within this document represents the most in-depth examination of a large scale reclamation project within California or anywhere where trespass cultivation occurs in the United States. Statewide, a significant funding gap continues to limit the ability of land stewards and managers of fish and wildlife to mitigate toxicants, remove cultivation infrastructure, and scientifically quantify the potentially deleterious impacts to downstream aquatic species. The Project was a productive step in addressing the limitations associated with TCCC impacts within the bioregions of the limited Project Area; however additional, and sustained large-scale efforts will be necessary to address the impairments within these areas. Combined with the discussion of ecological benefits gained from TCCC reclamation activities highlighted within this document and future IERC/partner publications, it is our hope the information contained within this report may be utilized to expand funding mechanisms and further develop project implementation capacities of groups interested in conducting large-scale reclamation projects.

In addition to providing long-term environmental benefits, the Project appropriated \$372,518.26 to local environmental groups (see 'Expenditures'), providing financial support to these rural, low-income communities (ARB 2020). Furthermore, local community environmental groups have a vested interest in the conservation of their local natural resources and should be solicited to participate in future reclamation programs at a minimum as staging and manual removal personnel. Reclamation activities are labor-intensive and untrained volunteers may seem like an evident and accessible source of additional personnel. However, given the risks associated with operating within TCCC (e.g., dangerous terrain, hazardous materials), we recommend the use of paid employees covered by Workers Compensation Insurance and who have completed situational awareness training.

The foundation of Project successes is the immense match and intensive collaboration achieved by Project partners, particularly USFS LEI, working cooperatively as a force-multiplier to provide a broad array of resources and diversity of expertise. The complexity of safely and effectively reclaiming potentially contaminated TCCC hidden in remote and densely forested areas requires broad areas of specialized personnel ranging from research scientists and hazardous materials specialists to law enforcement officers, professional aviation crews, and situationally aware, yet efficient labor teams. This diversity of essential needs can only be met through robust and productive interagency collaboration. Accordingly, we strongly recommend the development of relationships with organizations qualified to perform essential duties required for assessment and reclamation operations. Also, as the timing of reclamation operations can shift rapidly due to weather patterns, re-allocation of aviation resources, the presence of adjacent active TCCC, and conflicting partner collaborator schedule, it is advised that each partner organization should allocate dedicated reclamation resources and personnel to be assigned to reclamation duties on short notice.

Accurate information on site locations and the efficient utilization of available personnel and aviation resources additionally contributed to the success of the project. The foundation of efficient resource management was the acquisition of broad datasets and the development of rigorous data entry and management structures. The acquisition of quality and thorough datasets of TCCC locations allowed the

development of comprehensive reclamation plans where multiple sites per day could be assessed or staged, and aviation assets could be shared for use at multiple complexes in a single day. This level of planning was again made possible through robust data-sharing partnerships with law enforcement and resource managers as most of these data are spread across multiple, disconnected databases housed within various agencies. To help facilitate future reclamation and planning efforts, a central and comprehensive inter-agency repository of TCCC locations should be developed and allowed to be updated by authorized agency and reclamation agency personnel. Through this approach, statewide reclamation progress can be tracked, and the quantity of sites remaining on our public lands can be quantified to support funding requests and environmental threat assessments.

To provide overarching direction to all necessary partner personnel during the reclamation implementation and planning process, the same organization, and hopefully the same personnel present for the assessment, should function as the primary organizer and reclamation lead. A lead organization, familiar with the refuse and personnel requirements for each TCCC, should lead reclamation planning activities with reliable personnel and resource commitments from each partner to best maximize efficiency with reclamation personnel and helicopter resources. TCCC can often consist of large and complex networks of infrastructure sprawled within densely vegetated and high relief forested areas. Accordingly, reclamation effectiveness is maximized by having reclamation efforts overseen by a member of the assessment team who is familiar with the layout and distribution of refuse and within each TCCC.

Once established, the logistics of removing a TCCC can be intensive and rapid reclamation may prove infeasible or cost-prohibitive; thus, we recommend additional funding avenues be investigated to aid in law enforcement reconnaissance and interdiction programs. These efforts will promote earlier detection and deterrence of TCCC establishment, thereby reducing associated impacts by eliminating environmental stressors before they are created.

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APPENDIX A: COMPLEX-LEVEL OVERVIEW OF RECLAIMED SITES

Appendix A provides a comprehensive complex-level review of all 129 reclaimed trespass cannabis cultivation complexes (TCCC) by management area including dates of assessment and reclamation, quantity of trespass cannabis cultivation sites (TCCS), total area affected in acres, total refuse removed in pounds, list of additional equipment found, and the method of reclamation.

Management Area ¹	TCCC Name	Assessment Date(s)	Reclamation Date(s) ²	# TCCS	Area Affected (Acres) ³	Refuse Removed (lbs.)	Other Equipment ⁴	Reclamation Method
KNF	5080SandyBarGrow	3/10/2017	8/16/2018	1	Unknown	275	S	Aerial Removal
SRNF	5Mile	3/9/2017	8/14/2018	9	54.07	3,782	PT	Aerial Removal
KNF	6MileMine	7/16/2019, 7/25/2019	8/13/2019	1	49.87	1,160	PT, S	Aerial Removal
STNF	AsianGrow.2015	2015	3/7/2019	1	Unknown	125	---	Manual Removal
STNF	BackBone1.2011	1/17/2018	11/15/2019	2	14.40	400	---	Aerial Removal
STNF	Bar717	8/14/2018	12/19/2018	1	6.18	3,255	PT, S	Manual Removal
KNF	BearPeak	7/24/2018	4/12/2019	1	1.33	1,360	T	Aerial Removal
SRNF	BeeTreeCreek	3/30/2017	11/28/2018	1	Unknown	400	T	Manual Removal
STNF	BertsGrow	12/13/2018	02/10/2020, 02/11/2020	3	62.51	1,864	S	Manual Removal
STNF	Big5	5/7/2019	5/10/2019	1	1.42	753	PT, S, T	Aerial Removal
STNF	BigCreek2	5/2/2018	8/20/2018	1	0.32	1,570	PT, S	Aerial Removal
STNF	BigFrench2.2016	7/7/2016	8/29/2019	1	5.72	760	B, PT, S	Aerial Removal
STNF	BigFrench4.2016	7/7/2016	8/28/2019	1	2.51	870	PT	Aerial Removal
STNF	BigFrenchCreek5.2017	8/28/2019	8/28/2019	1	0.15	510	PT, T	Aerial Removal
STNF	BigFrenchWild1.2015	9/9/2015	8/22/2019	2	Unknown	200	---	Aerial Removal
STNF	BigFrenchWild2.2015	8/23/2019	8/23/2019	1	Unknown	2,170	B	Aerial Removal
STNF	BlueDitch	1/29/2019	10/28/2019	1	0.61	1,332	PT, S	Manual Removal
SRNF	BlueHatRidge	11/18/2019	11/18/2019	1	Unknown	60	---	Manual Removal
STNF	BubbaGump	11/5/2018	11/29/2018	2	1.98	2,203	CS, PT, S	Manual Removal
KNF	BuckWoods	4/5/2019	4/30/2019	1	74.26	500	PT	Aerial Removal
STNF	Casava	3/6/2018	2/6/2019	1	0.34	60	---	Manual Removal
SRNF	Ccubed	11/18/2019	11/18/2019	1	Unknown	130	---	Manual Removal

Management Area ¹	TCCC Name	Assessment Date(s)	Reclamation Date(s) ²	# TCCS	Area Affected (Acres) ³	Refuse Removed (lbs.)	Other Equipment ⁴	Reclamation Method
STNF	CheapJeep	10/19/2018	10/25/2018	1	3.48	1,460	PT, S	Aerial Removal
STNF	ChickenWire	6/5/2019	10/10/2019	1	0.67	400	---	Manual Removal
STNF	ChinaPeak	7/6/2016	8/26/2019	3	1.66	620	PT	Aerial Removal
STNF	ChinaPeak.2018	9/25/2018	8/26/2019	1	11.27	1,160	---	Aerial Removal
KNF	CodyCreek	4/25/2019	9/24/2019	3	52.05	1,689	PT, S, T	Aerial Removal
KNF	CoonDog	3/5/2019	4/11/2019	1	4.05	400	---	Manual Removal
STNF	CorralCreek2	4/25/2018	5/9/2018	1	36.95	3,050	PT, S	Aerial Removal
KNF	CrapoCreek	11/7/2017	8/15/2018	2	1.56	1,231	S	Aerial Removal
STNF	CreekyTiki	11/30/2018	10/11/2019	1	0.99	650	PT, S	Aerial Removal
KNF	Deadweight	3/20/2019	4/12/2019	1	5.12	450	PT, S	Aerial Removal
KNF	Deadwood	3/20/2019	4/12/2019	1	1.31	100	---	Aerial Removal
HVIR	Deerhorn	7/7/2016	1/1/2020	2	8.15	995	---	Manual Removal
STNF	DoubleBar717	10/16/2018	4/23/2019	1	18.10	1,830	PT, T	Manual Removal
HVIR	Dowd.2017	7/13/2017, 9/18/2018	11/26/2018	2	10.24	1,520	B, CS, PT, S	Manual Removal
STNF	DubRap	1/29/2019	10/30/2019	1	0.49	1,250	---	Manual Removal
STNF	Duffman	4/22/2019	5/10/2019	1	0.17	659	CS, PT	Aerial Removal
STNF	ElOtroLado	4/22/2019	5/10/2019	1	1.88	848	B, CS, PT, T	Aerial Removal
KNF	ElSquato	3/5/2019	4/30/2019	1	17.86	600	PT	Aerial Removal
STNF	EyeInTheSky	7/17/2018, 7/26/2018	8/21/2018	6	400.68	5,503	PT, S	Aerial Removal
KNF	Flume	1/11/2019	4/12/2019	1	3.15	975	T	Aerial Removal
KNF	Fortilla	4/5/2018	8/17/2018	3	14.25	1,360	PT, S	Aerial Removal
STNF	GilmoreGirls	3/13/2019	11/15/2019	2	4.33	250	S	Aerial Removal
SRNF	GoRoad	6/6/2018	8/15/2018	1	Unknown	350	---	Aerial Removal
STNF	GrassyFlat1	12/14/2017	5/7/2018	2	Unknown	2,385	S	Aerial Removal
STNF	GrassyFlat2	12/14/2017	5/7/2018	2	Unknown	3,600	S	Aerial Removal
STNF	GreenMountain	8/12/2019	8/26/2019	1	1.75	440	B, PT, S	Aerial Removal

Management Area ¹	TCCC Name	Assessment Date(s)	Reclamation Date(s) ²	# TCCS	Area Affected (Acres) ³	Refuse Removed (lbs.)	Other Equipment ⁴	Reclamation Method
SRNF	Hawkins	1/19/2018	11/29/2018	1	2.06	440	PT	Manual Removal
STNF	HaylockRidge	5/29/2019	6/20/2019	1	3.45	750	CS, PT, S	Manual Removal
STNF	Hayshed4	5/8/2018	5/8/2018	1	0.54	200	---	Manual Removal
STNF	HayshedComplex	4/25/2018	5/8/2018	3	67.95	4,780	PT, S	Aerial Removal
HVIR	Hoopa2012	2/7/2019	2/28/2019	1	0.87	220	S	Manual Removal
	HorseMane*	7/9/2018	n/a	unknown	not calculated	800	---	n/a
KNF	IndianBottom	7/23/2018	9/25/2019	2	5.54	780	PT, S, F	Aerial Removal
STNF	JamesCreek.2016	4/17/2018, 5/3/2018	11/30/2018	1	32.53	360	PT	Aerial Removal
STNF	JamesCreek.2017	4/17/2018, 5/3/2018	11/30/2018	2	46.32	2,930	PT	Aerial Removal
STNF	JamesCreek2.2016	5/3/2018	11/30/2018	1	0.63	620	---	Aerial Removal
STNF	JamesCreek3.2016	12/19/2018	10/11/2019	2	3.75	300	PT	Aerial Removal
	JimJam.2018*	8/31/2018	n/a	unknown	not calculated	500	PT, S, T	n/a
SRNF	JonesRidge	7/5/2017, 8/16/2017	4/20/2018	3	24.06	4,810	PT, S	Aerial Removal
STNF	Kamorock	2/6/2018	11/27/2018	1	2.00	275	---	Manual Removal
STNF	KFrog	2/6/2018	11/27/2018	1	Unknown	70	CS	Manual Removal
SRNF	Knick5Nack	11/19/2018	11/28/2018	1	9.14	540	CS, PT, T, F	Manual Removal
STNF	KnotBowlin	5/2/2018	8/20/2018	1	Unknown	200	PT	Aerial Removal
KNF	LazyStanshaw	4/5/2018	8/16/2018	1	0.13	500	S	Aerial Removal
STNF	LilPlum	4/3/2019	5/10/2019	2	Unknown	251	PT, S	Aerial Removal
STNF	LimeDyke2	8/7/2017, 9/7/2017	5/8/2018	2	2.33	2,680	PT, S	Aerial Removal
STNF	Limeddyke3	9/1/2016	5/8/2018	1	Unknown	3,532	---	Aerial Removal + Manual Removal
STNF	LittleBritches	4/22/2019	5/10/2019	1	0.29	150	---	Manual Removal
STNF	LittleFrenchCreek	12/22/2017	8/19/2018	1	Unknown	1120	---	Aerial Removal
HVIR	LongRidge	9/1/2016	1/1/2020	1	Unknown	595	---	Manual Removal
STNF	LosPavos	4/17/2019	5/10/2019	5	45.05	1576	PT, S	Aerial Removal

Management Area ¹	TCCC Name	Assessment Date(s)	Reclamation Date(s) ²	# TCCS	Area Affected (Acres) ³	Refuse Removed (lbs.)	Other Equipment ⁴	Reclamation Method
STNF	ManzanitaRidge	3/26/2019	11/15/2019	2	34.32	550	B, PT, S	Aerial Removal
	MillerSprings2*	7/10/2018	n/a	unknown	not calculated	350	S	n/a
KNF	MossyMtn	1/11/2019	4/12/2019	1	1.97	660	S	Aerial Removal
KNF	MudCreek	4/3/2018	8/17/2018	2	16.98	690	PT	Aerial Removal
STNF	Nameless	10/16/2018	10/11/2019	3	62.52	2,920	PT, S, T	Aerial Removal
KNF	Needles	10/17/2018	10/25/2018	1	1.90	325	---	Manual Removal
STNF	NoName	10/16/2018	10/11/2019	2	31.13	3,030	B, PT, S, T	Aerial Removal
STNF	OakRidge	5/24/2018	10/24/2018	1	6.62	2,500	S	Manual Removal
KNF	OffieldMountain	5/22/2018	8/16/2018	1	0.34	460	PT, S, T	Aerial Removal
KNF	OffieldSaddle	8/25/2015	8/16/2018	1	Unknown	150	---	Aerial Removal
STNF	PattisonRanch	3/8/2018	8/18/2018	2	32.75	380	PT	Aerial Removal
SRNF	PattiWhackIt	11/28/2018	9/19/2019	2	0.89	140	S	Manual Removal
SRNF	PinkLower	1/23/2018	12/3/2018	1	0.01	990	PT, S	Aerial Removal
SRNF	PinkUpper	1/23/2018	12/3/2018	1	0.85	480	B	Aerial Removal
KNF	PlummerCreek	9/24/2019	9/24/2019	1	11.46	940	S	Aerial Removal
STNF	PlummerPeak.2018	8/24/2018, 9/10/2018	10/15/2019	5	88.73	6,100	B, PT, S	Aerial Removal
STNF	PlummerPeak2	4/3/2019	5/10/2019	4	33.43	2,192	PT, S	Aerial Removal
STNF	PrairieCreek1	7/11/2016	8/30/2019	1	0.31	830	PT	Aerial Removal
STNF	PrairieCreek2	7/11/2016, 8/30/2019	9/26/2019	1	15.46	680	CS, PT, S	Aerial Removal
KNF	PreBrush	4/3/2018	8/17/2018	1	1.33	210	---	Aerial Removal
HVIR	Pumplron	1/11/2019, 4/2/2019	1/1/2020	1	4.26	437	PT, S	Manual Removal
STNF	RaccoonFace.2018	8/23/2018	12/3/2018	1	4.80	3,900	PT, S	Aerial Removal
HVIR	RangerMountain	6/22/2012	11/19/2019	1	5.64	600	PT, S	Manual Removal
STNF	RaspberryDelight	7/13/2018	8/20/2018	2	4.29	600	PT	Aerial Removal
STNF	RaspberryDelight_DCESP	7/13/2018	8/20/2018	1	1.78	500	S	Aerial Removal

Management Area ¹	TCCC Name	Assessment Date(s)	Reclamation Date(s) ²	# TCCS	Area Affected (Acres) ³	Refuse Removed (lbs.)	Other Equipment ⁴	Reclamation Method
STNF	RaysPeak.2019	7/8/2019, 7/11/2019	10/11/2019	2	0.59	2560	S, T	Aerial Removal
SRNF	RedCap1.2013	9/1/2013	8/27/2018	1	Unknown	115	---	Manual Removal
SRNF	RedCap2.2016	9/1/2016	10/23/2018	1	Unknown	180	---	Manual Removal
STNF	RedMountain	1/30/2019	10/30/2019	1	1.42	888	S	Manual Removal
STNF	RockFinger	2/7/2018	11/27/2018	1	1.80	1,030	PT	Manual Removal
SRNF	RubyCreek	3/1/2019	3/1/2019	1	Unknown	210	---	Manual Removal
SRNF	SchoolHouse	1/19/2018	11/8/2018	1	0.68	340	PT	Manual Removal
KNF	ShadowCreek	7/17/2019	9/24/2019	1	7.75	800	PT, S	Aerial Removal
SRNF	ShadyNeighbor	3/1/2019	3/1/2019	1	Unknown	5	---	Manual Removal
STNF	ShiellGulch	11/5/2019	11/14/2019	1	6.96	1,089	CS, PT, S	Aerial Removal
STNF	ShiellGulch.2018	8/22/2018, 9/11/2018	11/14/2019	2	31.64	2,395	PT, S	Aerial Removal
STNF	ShiellGulch2	9/11/2018	11/14/2019	1	2.68	1,307	PT, S	Aerial Removal
STNF	ShiellGulch3	9/11/2018	11/14/2019	2	1.21	870	PT, S	Aerial Removal
STNF	Shotgun	11/5/2018	11/29/2018	1	1.61	389	PT, S	Manual Removal
KNF	SideWinder	6/8/2018	8/17/2018	2	6.09	900	PT	Aerial Removal
HVIR	SkidRow	1/18/2019	11/20/2019	1	1.13	220	---	Manual Removal
STNF	SmokeWater	11/13/2018	1/1/2020	2	35.53	1,785	S, F	Manual Removal
KNF	SquirrelCreek	4/3/2018	8/17/2018	1	6.87	970	PT, S	Aerial Removal
SRNF	SteepNDeep	10/31/2018	12/3/2018	1	3.88	920	S	Aerial Removal
STNF	StonewallPass1	5/29/2019	6/20/2019	1	1.16	650	PT, S	Manual Removal
STNF	StonewallPass2	5/29/2019	6/20/2019	1	82.91	750	PT	Manual Removal
STNF	STUTTER	12/13/2018, 7/18/2019	10/29/2019	1	8.05	1332	CS, PT, S, T	Manual Removal
STNF	SweetLion	10/10/2019	11/14/2019	1	24.58	218	---	Aerial Removal
STNF	Telephone.2018	8/18/2018	11/14/2019	2	3.03	1,161	S, F	Aerial Removal
STNF	ThompsonPeak_BigCreek	10/17/2018	11/28/2018	1	3.87	2,592	PT, S, T	Manual Removal
STNF	TickCheck	3/18/2019	11/15/2019	2	4.47	900	PT, S	Aerial Removal

Management Area ¹	TCCC Name	Assessment Date(s)	Reclamation Date(s) ²	# TCCS	Area Affected (Acres) ³	Refuse Removed (lbs.)	Other Equipment ⁴	Reclamation Method
KNF	TinkhamCreek	7/25/2018	4/12/2019	1	10.95	650	---	Aerial Removal
STNF	TripleBar717	12/19/2018	12/19/2018	1	Unknown	55	---	Manual Removal
STNF	TuleCreek	4/22/2019	5/7/2019	1	Unknown	350	---	Manual Removal
STNF	TuleDivide	5/20/2019	10/15/2019	2	44.45	770	PT, S	Aerial Removal
STNF	TwistedTree	7/19/2019	10/15/2019	1	Unknown	905	B, CS, PT, S	Aerial Removal
STNF	WhitesBarCreek	3/8/2018	8/18/2018	1	2.34	630	PT, S, T	Aerial Removal
STNF	Wildwood.ChinaGulch	7/14/2016	10/25/2018	2	14.53	2,270	PT	Aerial Removal
KNF	YellowJacket	1/10/2019	4/30/2019	1	2.18	890	S	Aerial Removal
				196	1796.6	148,203		

1. Acronyms are as follows: SRNF = Six Rivers National Forest, KNF = Klamath National Forest, STNF = Shasta-Trinity National Forest, HVIR = Hoopa Valley Indian Reservation
2. Only dates where refuse was removed are listed. Reclamation dates do not include staging efforts
3. Affected areas were unable to be calculated for small TCCC where fewer than three grow site features were identified during assessment.
4. Acronyms are as follows: B = large batteries (6-volt through car batteries), CS = camp stove, PT = propane tank, S = sprayer, T = tent

*Sites had refuse opportunistically removed during assessment or eradication efforts but are not currently fully reclaimed. Site data is only counted towards total weight of removed refuse

APPENDIX B: LETTERS OF SUPPORT

JARED HUFFMAN

2ND DISTRICT, CALIFORNIA

**COMMITTEE ON
NATURAL RESOURCES**

WATER, POWER, AND OCEANS – RANKING MEMBER

FEDERAL LANDS

**COMMITTEE ON TRANSPORTATION
AND INFRASTRUCTURE**

HIGHWAYS AND TRANSIT

WATER RESOURCES AND ENVIRONMENT

Congress of the United States
House of Representatives
Washington, DC 20515-0502

WASHINGTON OFFICE

1406 LONGWORTH HOUSE OFFICE BUILDING

WASHINGTON, DC 20515

PHONE: (202) 225-5161

FAX: (202) 225-5163

WEBSITE: huffman.house.gov

December 18, 2018

Charlton H. Bonham, Director
California Department of Fish and Wildlife
1416 9th Street, 12th Floor
Sacramento, CA 95814

Dear Mr. Bonham:

I am writing in support of the Integral Ecology Research Center's (IERC) application to the California Department of Fish and Wildlife's (CDFW) Cannabis Restoration Grant Program. IERC is a pioneering leader in the research and reclamation of trespass cultivation sites on California's public lands. Their work has led the reclamation efforts of more than 175 of these sites over the past five years and produced the majority of research publications on environmental impacts.

IERC's proposed project will reclaim a minimum of 35 trespass cultivation sites that are currently contaminating priority watersheds containing federally and state-protected species and species of concern. The project will also include a two-year water quality study to monitor the downstream impacts of pesticide use originating from such sites. This research will help inform government agencies and concerned communities working to reduce or eliminate impacts to natural resources and humans from trespass grows.

IERC's efforts to remediate public land trespass sites and evaluate the environmental impacts will result in improved habitat conditions, deter re-occupancy of sites, and inform resource management and policy. Thank you for your serious consideration of IERC's worthy request. If you have any questions, please contact my Eureka District Office at (707) 407-3585.

Sincerely,


JARED HUFFMAN
Member of Congress

SAN RAFAEL

999 FIFTH AVENUE, SUITE 290
SAN RAFAEL, CA 94901
PHONE: (415) 258-9657
FAX: (415) 258-9913

PETALUMA

206 G STREET, #3
PETALUMA, CA 94952
PHONE: (707) 981-8967
FAX: (415) 258-9913

UKIAH

559 LOW GAP ROAD
UKIAH, CA 95482
PHONE & FAX: (707) 671-7449

FORT BRAGG

430 NORTH FRANKLIN STREET
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FORT BRAGG, CA 95437
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FAX: (707) 962-0905

EUREKA

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CHAIR: HEALTH
BUDGET
JOINT LEGISLATIVE AUDIT
WATER, PARKS, AND WILDLIFE

SUBCOMMITTEE
BUDGET SUBCOMMITTEE NO. 1 ON HEALTH
AND HUMAN SERVICES

Assembly California Legislature



JIM WOOD
ASSEMBLYMEMBER, SECOND DISTRICT

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1036 5TH STREET, SUITE D
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(707) 445-7014
FAX (707) 455-6607

February 25, 2020

Mr. Charles Bonham, Director
CA Department of Fish and Wildlife
1812 9th Street
Sacramento, CA 95811

Dear Director Bonham:

I am writing in strong support of Integral Ecology Research Center's (IERC) success on their project-implementation of reclaiming trespass marijuana cultivation sites on Federal Public lands through the Cannabis Restoration Grant administered by the California Department of Wildlife.

Trespass cultivation on federal public lands is a significant concern. These sites contaminate and damage National Forest Lands through illegal pesticide use, water theft, and illegal timber harvest. IERC has been leading the research and reclamation of trespass cultivation on California's public lands since 2013 and through recent efforts, were able to remove 190 more public land cultivation sites just since 2018.

As part of a \$1.06 million California Department of Fish and Wildlife Cannabis Restoration Grant, IERC exceeded project objectives by 12% while managing to be more than \$100,000 under-budget. Their success is founded on their ability to bring together an interdisciplinary team of experts from federal, state and local agencies, Native American tribes, as well as other non-governmental organizations and academic institutions.

Efforts such as these are essential in conserving our federal public lands and I support IERC and other such organizations in working to keep our public lands safe and clean for future generations.

Respectfully,

A handwritten signature in blue ink that reads "Jim Wood".

JIM WOOD
Assemblymember, 2nd District

APPENDIX C: OUTLINE OF SAFETY AND SITUATIONAL AWARENESS TRAINING PRESENTATION

I. Introduction to TCCC

- a. Overview of problem and environmental impacts of TCCC
- b. Brief history of TCCC research
- c. Common Features of a TCCC
 - i. Camps
 - ii. Plots
 - iii. Trash Pits
 - iv. Source Lines
- d. Ongoing science, trends, and findings at TCCC
 - i. Quantity of TCCC within CA and presence of data gaps
 - ii. Rates of pesticide exposure to wildlife (e.g. fishers and owls)
 - iii. Preliminary findings of remote camera surveys
 - iv. Contamination prevalence of game species
 - v. Quantity of mean pesticides and fertilizers within TCCC
 - vi. Pesticide contamination rates of water and soil
 - vii. Wildlife mortality associated with TCCC
 - viii. Water diversions and use rates
 - ix. Introduction to carbofuran, TCCC application rates, and toxicity

II. Toxicology

- a. Introduction to Toxicology
 - i. Routes of exposure
 - ii. Physiological response to pesticide exposure
 - iii. Symptoms of exposure
- b. Examples of pesticides discovered at TCCC
 - i. Types of pesticides
 - 1. Common containers
 - ii. Forms of carbofuran and common indicators to look out for

III. Field Safety Protocols and Contamination Concerns

- a. Pre-reclamation preparation
 - i. Development of operational plans
 - 1. Identification and capabilities of nearest hospital / medical center
 - 2. Phone numbers for disease control
 - 3. Identification of HazWoper certified personnel
- b. Proper use practices of gloves
 - i. Donning and doffing procedures (nitrile gloves)
 - ii. Where and how to store used leather gloves
- c. Situational Awareness

- i. Assume all infrastructure is contaminated (e.g., cisterns, trash, irrigation line plants)
- d. Detailed discussion of water infrastructure
 - i. Common signs of contamination
 - ii. Best practices for removing irrigation pipes and cisterns
- e. Detailed discussion on 'cryptic' examples of repurposed contaminated items
 - i. Common application uses of restricted use pesticides
 - 1. Directly poison wildlife bait
 - 2. Application using sprayers to plant base and leaves
 - 3. Direct application using brushes
 - ii. Photos of repurposed container examples and common indicators
- f. Clothing and gear concerns
 - i. Exposure paths for gloves, pants, shirts, gear
 - ii. Non-alcohol based wipes for rapid field decontamination
 - iii. Use of field-based pesticide test kits (not enough sensitivity)
- g. Contamination concerns regarding use of helicopters
 - i. Rotor wash aerosolizing pesticide particles
 - ii. Contaminated nets

IV. Reclamation

- a. IERC reclamation experience
- b. Benefits of Reclamation
 - i. Removal of 97%+ of TCCC infrastructure
 - ii. 0% re-occupation rate by growers
- c. Best Reclamation Practices
 - i. Necessary equipment for staging (e.g., pipe cutters or knife, duct tape, garbage bags)
 - ii. Selection of staging locations
 - iii. Staging pipe for helicopter removal (i.e., rolling vs long-strand methods)
 - iv. Staging camp material for helicopter removal

APPENDIX D: COMPREHENSIVE LIST OF MEDIA ARTICLES AND PRESS RELEASES

1. April 27, 2018: **Redheaded Blackbelt** – “Large Trespass Marijuana Grow Cleaned Up”
<http://kymkemp.com/2018/04/27/large-trespass-marijuana-grow-cleaned-up/>
2. May 15, 2018: **Lost Coast Outpost** – “Multi-Agency Trinity County Marijuana Grow Site Clean Up; Helicopter Used to Remove 31 Miles of Irrigation Hose, 21,000+ lbs. of Equipment”
<https://lostcoastoutpost.com/2018/may/15/multi-agency-trinity-county-marijuana-grow-site-cl/>
3. May 16, 2018: **Mother Nature Network** (blog) – “Breaking Barriers in Wildlife Photography”
<https://www.mnn.com/lifestyle/arts-culture/blogs/morgan-heim-breaking-barriers-photography>
4. May 29, 2018: **CBS San Francisco** – “Toxic Pesticide Use Rising At Illegal California Pot Farms”
<https://sanfrancisco.cbslocal.com/2018/05/29/toxic-pesticide-carbofuran-illegal-pot-farms/>
5. May 29, 2018: **NBC Bay Area** – “Toxic Pesticide Use Increases at Illegal Pot Farms”
<https://www.nbcbayarea.com/news/local/study-deadly-pesticide-use-increases-at-illegal-pot-farms/2019413/>
6. May 29, 2018: **New York Post** – “This marijuana actually might kill you”
<https://nypost.com/2018/05/29/this-marijuana-actually-might-kill-you/>
7. June 04, 2018: **Ukiah Daily Journal** – “Feds, state seek crackdown on Mexican cartel pot grows on public lands”
<https://www.ukiahdailyjournal.com/2018/06/04/feds-state-seek-crackdown-on-mexican-cartel-pot-grows-on-public-lands/>
8. June 20, 2018: **Washington Post** – “Thirteen bald eagles were found dead in a field. This is what killed them”
<https://www.washingtonpost.com/news/animalia/wp/2018/06/20/thirteen-bald-eagles-were-found-dead-in-a-field-this-is-what-killed-them/>
9. June 22, 2018: **NPR** – “Officials Say Illegal Pesticide Caused Deaths Of 13 Bald Eagles In Maryland”
<https://www.npr.org/2018/06/22/622741047/officials-say-illegal-pesticide-killed-13-bald-eagles-in-maryland>
10. June 27, 2018: **EcoWatch** – “Vulnerable and Feisty Humboldt Marten Faces Extinction From Pot Cultivation, Climate Change”
<https://www.ecowatch.com/humboldt-marten-extinction-marijuana-2581830736.html>
11. June 27, 2018: **The Guardian** – “Cannabis growth is killing one of the cutest (and fiercest) creatures in the US”
<https://www.theguardian.com/environment/2018/jun/27/cannabis-humboldt-marten-california-endangered>
12. June 28, 2018: **Jornal O Globo** – “Plantações de maconha ameacam pequeno mamifero da California”
<https://oglobo.globo.com/sociedade/ciencia/meio-ambiente/plantacoes-de-maconha-ameacam-pequeno-mamifero-da-california-22829962>
13. July 03, 2018: **Newsweek** – “Marijuana Cultivation Could Drive This Furry Creature to Extinction”
<https://www.newsweek.com/marijuana-pot-cannabis-cultivation-marten-extinction-1005438>
14. July 19, 2018: **Jefferson Public Radio** – “Humboldt Group Sues Supervisors Over Pot Regs”
<https://www.ijpr.org/post/humboldt-group-sues-supervisors-over-pot-regs#stream/0>

15. Aug 22, 2018: **Earth.com** – “How the growth of the marijuana industry impacts the environment”
<https://www.earth.com/news/marijuana-industry-impacts-environment>
16. Aug 28, 2018: **Telemundo 52** – “Posibles pesticidas en cultivos ilegales de marihuana”
<https://www.telemundo52.com/noticias/local/vinculan-pesticidas-con-plantaciones-ilegales-de-marihuana/154981/>
17. Aug 28, 2018: **The Mercury News** – “Report: Most illegal pot farms tainted by toxic pesticides”
<https://www.mercurynews.com/2018/08/28/report-most-illegal-pot-farms-tainted-by-toxic-pesticides/>
18. Aug 29, 2018: **Business Insider** – “Toxic pesticides were found in most of California's illegal pot farms — pesticides so powerful that a teaspoon can kill a 300-pound bear”
<https://www.businessinsider.com/ap-toxic-pesticides-found-at-most-illegal-california-pot-farms-2018-8>
19. Aug 30, 2018: **Idyllwild Town Crier** – “Pot farm near Lake Fulmore eradicated”
<https://idyllwildtowncrier.com/2018/08/30/pot-farm-eradication-thursday-morning/>
20. Sept 04, 2018: **DVIS** – “California Receives Federal funds to Combat Illegal Marijuana on Public Lands”
<https://www.dvidshub.net/news/291334/california-receives-federal-funds-combat-illegal-marijuana-public-lands>
21. Oct 2, 2018: **National Geographic Australia** – “Small Weasel-Like Animals Are Taking Down Big Cats”
<https://www.nationalgeographic.com.au/animals/small-weasel-like-animals-are-taking-down-big-cats.aspx>
22. Oct 30, 2018: **Redheaded Blackbelt** – “Multiple State Agencies Coordinate to Remove Tons of Trash From Illegal Marijuana Grow in State Park”
<https://kymkemp.com/2018/10/30/multiple-state-agencies-coordinate-to-remove-tons-of-trash-from-illegal-marijuana-grow-in-state-park/>
23. Nov 21, 2018: **KCET** – “Tribe Acts to Restore Hunting Practices and Traditional Food Source”
<https://www.kcet.org/shows/tending-nature/tribe-acts-to-restore-hunting-practices-and-traditional-food-source>
24. Dec 07, 2018: **Eureka Times Standard** – “Huffman, Kamala Harris tout wilderness bill”
<https://www.times-standard.com/2018/12/07/huffman-joins-with-kamala-harris-to-push-wilderness-bill/>
25. Dec 12, 2018: **West Virginia Public Broadcasting** – “U.S. Attorney Mike Stuart Holds Invite-Only Anti-Marijuana Event”
<https://www.wvpublic.org/post/us-attorney-mike-stuart-holds-invite-only-anti-marijuana-event#stream/0>
26. Dec 17, 2018: **Redheaded Blackbelt** – “Multiple Illegal Marijuana Grows Cleaned Up on National Forest Land in Hayfork Burnt Ranch Area”
<https://kymkemp.com/2018/12/17/multiple-illegal-marijuana-grows-cleaned-up-on-national-forest-land/>
27. Feb 12, 2019: **Lost Coast Outpost** – “Rep. Huffman’s Big Wilderness Bill Passes the House as Part of Big New Regional Wildlands Package”
<https://lostcoastoutpost.com/2020/feb/12/huffmans-big-wilderness-bill-passes-house-part-big/>

28. Feb 25, 2019: **The Revelator** – “Endangered Wildlife Are Getting Dosed With Rat Poisons”
<https://therevelator.org/wildlife-rodenticides/>
29. April 08, 2019: **National Geographic** – “Illegal marijuana growers poison forests—these people fight back” <https://www.nationalgeographic.com/environment/2019/04/illegal-marijuana-growing-threatens-california-national-forests/>
30. April 10, 2019: **Lost Coast Outpost** – “(UPDATE) Rep. Huffman, Sen. Harris Reintroduce Great Big North Coast Wilderness Bill; Includes Plans for Restoration, Fire Prevention”
<https://lostcoastoutpost.com/2019/apr/10/rep-huffman-sen-harris-reintroduce-great-big-north/>
31. April 14, 2019: **Redheaded Blackbelt** – “National Geographic Features Humboldt County Couple Cleaning Poisons From Illegal Cannabis Grows” <https://kymkemp.com/2019/04/14/national-geographic-features-humboldt-county-couple-cleaning-poisons-from-illegal-cannabis-grows/>
32. April 23, 2019: **Redheaded Blackbelt** – “Over 400 Pounds of Trash Cleaned From Illegal Marijuana Complex in Klamath River Watershed But Crews Face Dilemma of How to Deal With Miles of Plastic Waterline” <https://kymkemp.com/2019/04/23/over-4000-pounds-of-trash-cleaned-from-illegal-marijuana-complex-in-klamath-river-watershed-but-crews-face-dilemma-of-how-to-deal-with-miles-of-plastic-waterline/>
33. June 18, 2019: **Ventura County Star** – “Sheep, foxes, bears found dead after marijuana raids in Los Padres, other state forests” <https://www.vcstar.com/story/news/special-reports/outdoors/2019/06/18/forest-service-cleans-marijuana-site-los-padres-dead-sheep-foxes-bears/1445228001/>
34. June 18, 2019: **JSTOR Daily** – “The Environmental Downside of Cannabis Cultivation”
<https://daily.jstor.org/the-environmental-downside-of-cannabis-cultivation/>
35. July 02, 2019: **Playboy.com** – “Inside the Fight for Safe Cannabis for All”
<https://www.playboy.com/read/protecting-pleasure-inside-the-fight-for-safe-cannabis>
36. July 09, 2019: **TheFix.com** – “Illegal Marijuana Growers Are Damaging The Environment”
<https://www.thefix.com/illegal-marijuana-growershttps://www.thefix.com/illegal-marijuana-growers>
37. July 15, 2019: **PoliceOne** – “Drug threats impacting police officers in 2019”
<https://www.policeone.com/police-products/narcotics-identification/articles/drug-threats-impacting-police-officers-in-2019-eMhm7WzRygGRWNjn/>
38. July 18, 2019: **North Coast Journal** – “Collateral Damage | The Week in Weed”
<https://www.northcoastjournal.com/humboldt/clam-beach-hike/Content?oid=14707956>
39. Aug 8, 2019: **KRCRTV** – “Two men arrested in Trinity County for illegal marijuana cultivation”
<https://krcrtv.com/north-coast-news/eureka-local-news/two-men-arrested-in-trinity-county-for-illegal-marijuana-cultivation>
40. Aug 12, 2019: **California Globe** – “Legalizing Marijuana Has Created a Black Market Plaguing Riverside County” <https://californiaglobe.com/section-2/legalizing-marijuana-has-created-a-black-market-plaguing-a-california-community/>

41. Aug 20, 2019: **KFSN-TV** – “2 arrested for marijuana grow in Madera County laced with dangerous chemicals” <https://abc30.com/2-arrested-for-marijuana-grow-laced-with-dangerous-chemicals/5482070/>
42. Aug 20, 2019: **Visalia Times-Delta** – “Illegal pot grows like a 'cancer,' local, state, federal law enforcement join forces” <https://www.visaliatimesdelta.com/story/news/2019/08/20/illegal-pot-grows-like-cancer-law-enforcement-join-forces/2056933001/>
43. Aug 20, 2019: **Fresno Bee** – “Mexican marijuana growers are poisoning Sierra with banned pesticide, task force says” <https://www.fresnobee.com/news/local/crime/article234162147.html>
44. Aug 21, 2019: **Los Angeles Times** – “Mexican marijuana traffickers are poisoning California forests with a banned pesticide, officials say” <https://www.latimes.com/environment/story/2019-08-21/mexican-marijuana-traffickers-banned-pesticide-carbofuran-california-forests>
45. <https://www.latimes.com/environment/story/2019-08-21/mexican-marijuana-traffickers-banned-pesticide-carbofuran-california-forests> Aug 22, 2019: **Phys.org** – “Mexican marijuana traffickers are poisoning California forests with a banned pesticide, officials say” <https://phys.org/news/2019-08-mexican-marijuana-traffickers-poisoning-california.html>
46. Aug 23, 2019: **Benzinga** – “Report: Illegal California Cannabis Farms Endangering Forests With Banned Pesticide” <https://www.benzinga.com/markets/cannabis/19/08/14319022/report-illegal-california-cannabis-farms-endangering-forests-with-banned-pesticide>
47. Aug 29, 2019: **L.A. Times** – “Illegal cannabis farms still scarring public lands, two years after Prop. 64” <https://www.latimes.com/environment/story/2019-08-28/cannabis-california-national-forests-environment>
48. Aug 29, 2019: **Los Angeles Times** – “Prop. 64 Didn’t Stop Illegal Cannabis Farms on Public Lands” <https://kymkemp.com/2018/10/30/multiple-state-agencies-coordinate-to-remove-tons-of-trash-from-illegal-marijuana-grow-in-state-park/>
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APPENDIX E: AVIATION AND RECLAMATION OPERATIONAL PLANNING DOCUMENTS

**Shasta - Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
China Peak Trespass Marijuana Cultivation Complex**



Prepared by:

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July 24, 2018

Background on China Peak Complex

This trespass marijuana grow complex is located on the Shasta-Trinity National Forest in Trinity County, within the New River watershed. The complex is situated within residual patches of mixed mature coniferous forest, oak woodland and second-growth stands. The China Peak cultivation complex has three large plots and a very small seed plot.

Access to China Peak 2016 Site

Park and Hike: XXXXXXXX

Additional Parking For 5-7 vehicles: XXXXXXXX

Personnel Required for Operation

This site will require a minimum of 10 personnel to clean and stage all of the trash and irrigation line.

1 Day Operation (Staging only): Team of 10 individuals

Trash Amount Estimate

Trash estimates are based on 45-55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

Approximately 20 - 25 garbage bags with a volume of 45-55 gallons each will be required for trash removal. Based on standard mixed refuse weight estimates of 40lbs of weight per bag, China Peak is estimated to have a minimum of 800 – 1000 lbs of trash including the sleeping bags, tents and other large items present. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line or large/ full propane tanks.

Camp and associated trash: XXXXXXXX

Irrigation Pipe Estimate

Estimates of irrigation pipe within the China Peak 2016 cultivation complex are preliminary and do not take into account any of the ¼” “spaghetti” line or the non-linear placement of irrigation pipe due to obstacles and meandering direction of much of the pipe.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots and source line at the China Peak complex is about 1 mile (~1600m). Based on an average pipe diameter of 1,” it is estimated that the pipe currently present at the complex weighs roughly 400 lbs.

Plot 1: [REDACTED]
Seed Plot: [REDACTED]
Plot 2: [REDACTED]
Plot 3: [REDACTED]
Top of source line: [REDACTED]

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that China Peak 2016 will have **2-3 net loads and 1-2 cobiner loads**.

Hazardous Materials

Carbofuran, Zinc Phosphide, Aluminum Phosphide, Diphacinone and a sprayer of suspected Carbofuran were all found within the site. Though most of these items have been previously removed, caution should be exercised when working in the plots and only qualified personnel should handle any new items found.

No infrastructure or cultivation tools/ materials that were tested were positive for hazardous chemicals.

Empty bottles of pesticides that are typically available at garden supply stores were found, but had no contents. Nevertheless, caution should always be used by all participants in handling trash and infrastructure.

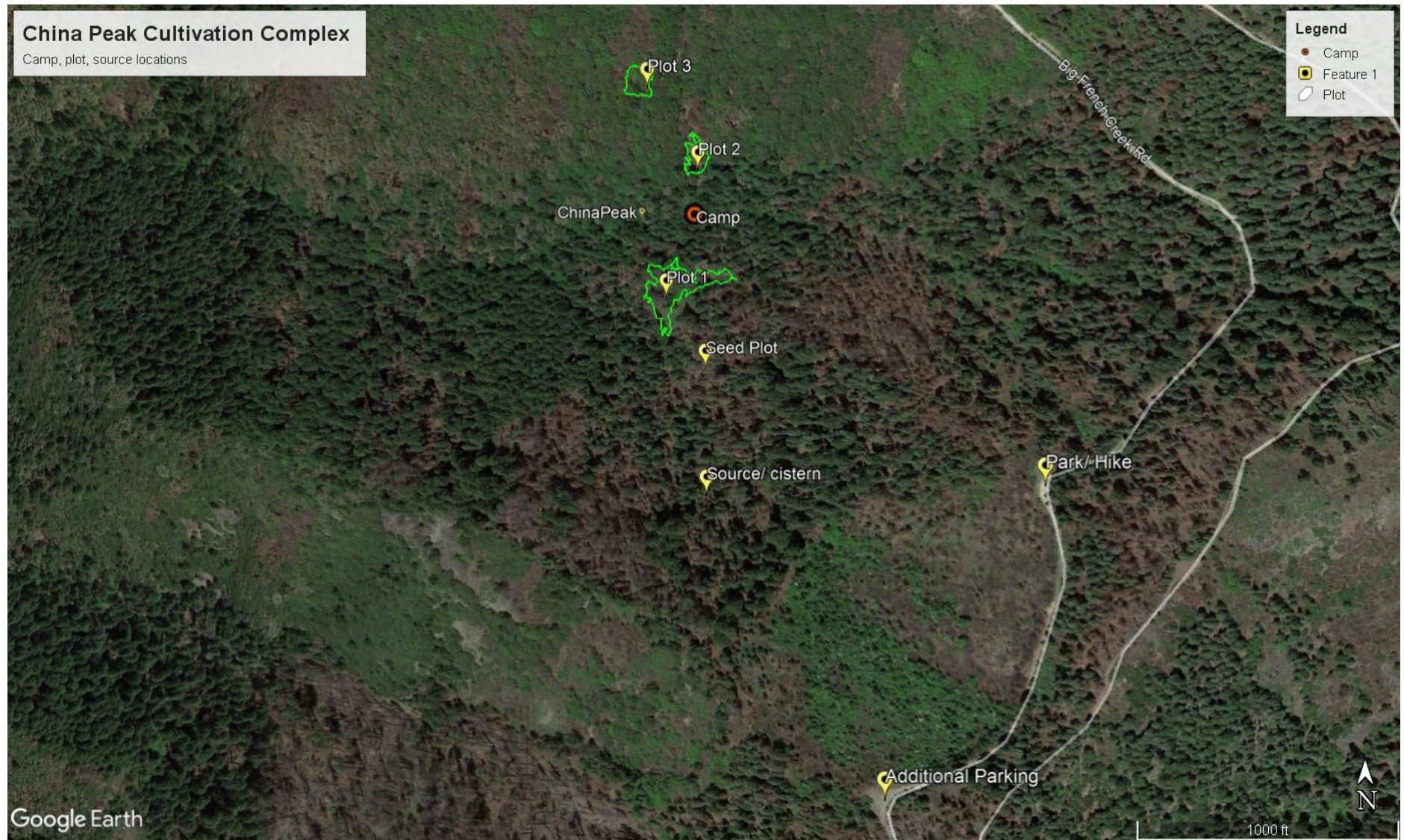
Trinity County RCD and Watershed Center Tasks:

- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

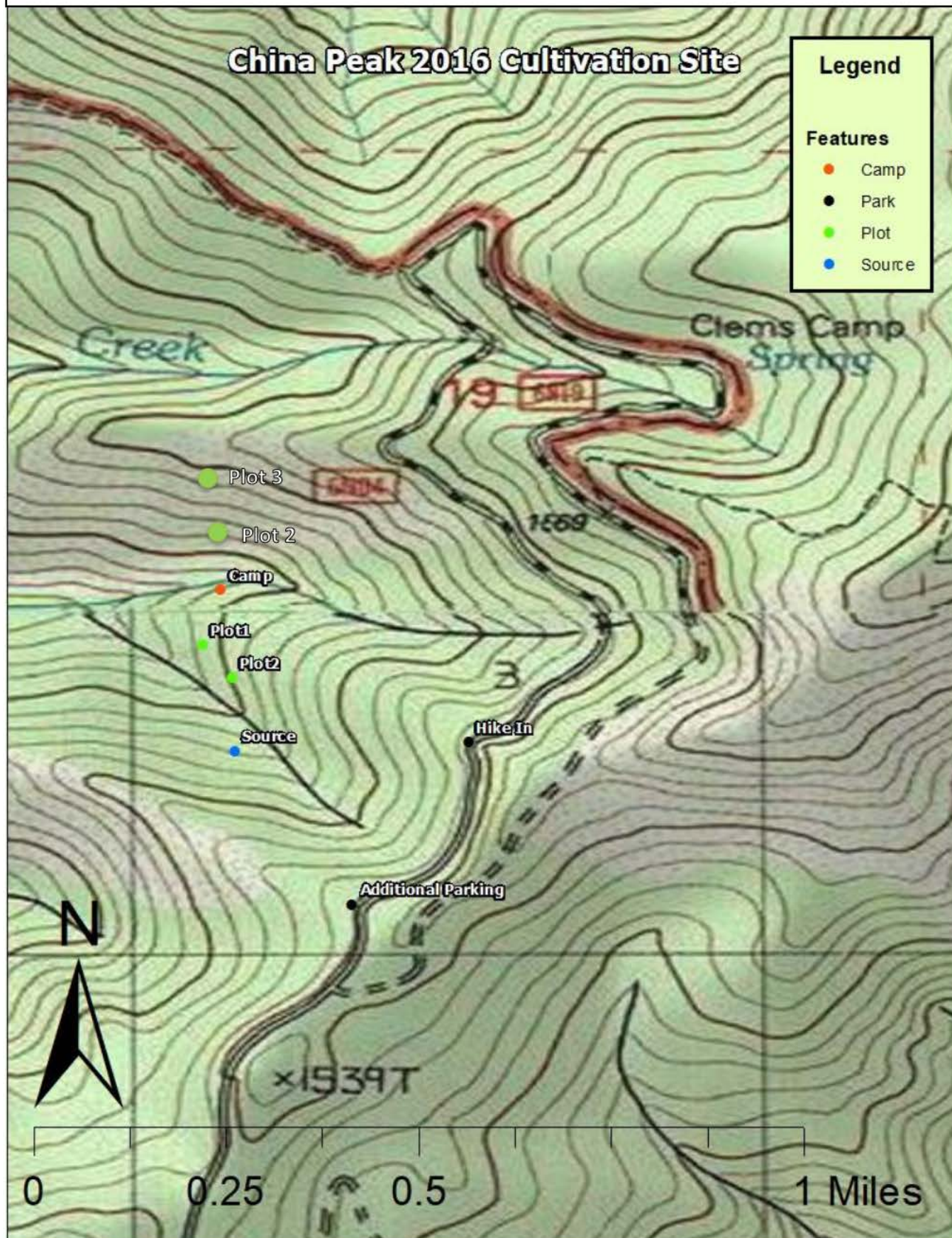
U.S. Forest Service Tasks:

- Provide law enforcement assistance for safety and LZ operations
The following tasks are required during air operations only (dates TBD in August):
- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide driver, truck and trailer with capacity to haul trash to dump

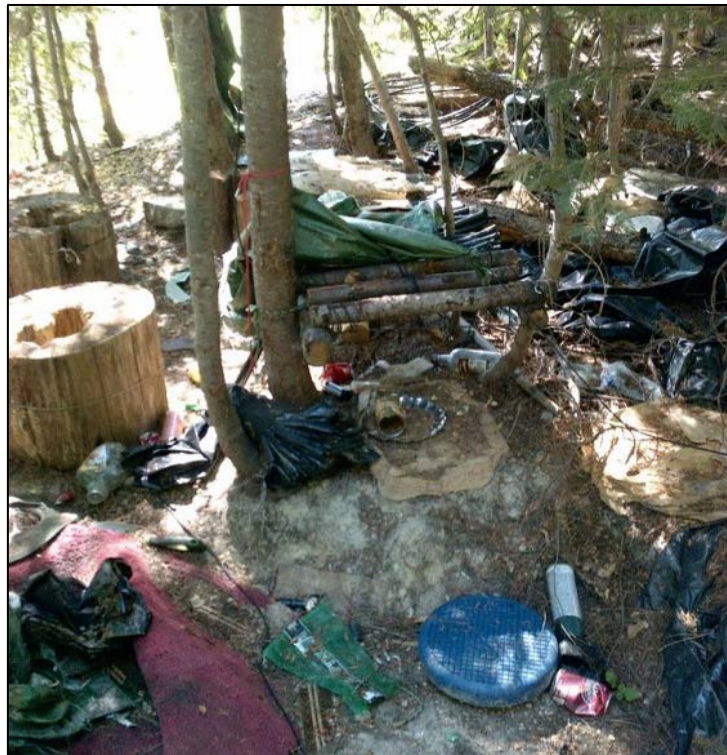
Map 1. General location and configuration of the China Peak 2016 cultivation plots, camp, source, and hike-in point on the Shasta-Trinity National Forest for reclamation planned for summer 2018.



Map 2. Detailed location and configuration of the China Peak 2016 cultivation plots, camp, source, and hike-in point on the Shasta-Trinity National Forest for reclamation planned for summer 2018.



**Shasta - Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
Eye in The Sky Trespass Marijuana Cultivation Site**



Prepared by:

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July 30, 2018

Eye in The Sky Site: Background

This large trespass marijuana cultivation complex is located on the Shasta-Trinity National Forest as well as on private timberland property adjacent to the National Forest. The cultivation complex is located in Trinity County, northwest of the town of Hyampom. Eye in The Sky was active in 2016 as well as 2017 and was previously undetected by law enforcement. The site was discovered by the DIMEC computer model. The Eye in The Sky cultivation complex was not active in 2018 and showed no signs of recent activity.

The Eye in The Sky complex is comprised of multiple sites including nine cultivation plots, six camps and two water cisterns. The complex is situated on an east facing slope, east of Forest Service Route 1 between Cold Springs Creek and Hitchcock Creek that both flow into the South Fork Trinity River. The sites range from approximately 3200 ft to 4700 ft in elevation. Most of the plots are in open burn scars with associated living quarters and trim camps located in bordering forested areas.

Access to Eye in The Sky

The Eye in the Sky Complex can be accessed off of Forest Service Route 1 on the Shasta-Trinity National Forest. Access through a privately-owned locked gate is required to reach each designated park/hike location. Hiking distances to cultivation sites vary from 0.25 to 0.75 miles over moderate terrain from any of the nearby road systems.

Park/Hike 1: [REDACTED]

Park/Hike 2: [REDACTED]

Park/Hike 3: [REDACTED]

Park/Hike 4: [REDACTED]

Personnel Required for Operation

The site is considered moderately difficult in terrain; it is plausible that personnel will hike an average of 2-3 miles in a day while conducting hard manual labor for this site. Productivity will depend on the percent of the reclamation team comprised of individuals experienced in the tasks and objectives, are in good standing health and the weather for the day. The reclamation team members will be separated into different teams to clean up the individual sites within the complex.

1 Day Operation (Staging only): Team of 20 individuals (minimum)

Trash Amount Estimate

Trash estimates are based on 45-55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

Approximately 80 garbage bags with a volume of 45-55 gallons each will be required for trash removal. There are numerous tarps and sleeping bags that can suffice as refuse containers within the campsites. Based on standard mixed refuse weight estimates of 40lbs of weight per bag, Eye in The Sky is estimated to have a minimum of **4,400 lbs** of trash including the sleeping bags, tents and other large items present. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line or large/ full propane tanks.

Location of camps and associated trash:

Camp 1: [REDACTED]

Camp 2: [REDACTED]

Camp 3: [REDACTED]

Camp 4: [REDACTED]

Camp 5: [REDACTED]

Camp 6: [REDACTED]

Trash 1: [REDACTED]

Trash 2/3: [REDACTED]

Trash 4: [REDACTED]

Trash 5: [REDACTED]

Trim Camp 1: [REDACTED]

Irrigation Pipe Estimate

Estimates of irrigation pipe within the grow site is preliminary and likely conservative. These pipe assessments are the estimated length of pipe present within grow plots; they do not take into account any of the ¼" "spaghetti" line. Unfortunately, a full source line and plot line assessment was not completed due to difficulties in following line under the brush. The below estimates should be considered minimum amounts.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots at the Eye in The Sky site is about 6 miles (~9,600m). Based on an average pipe diameter of 1," it is estimated that the pipe currently present at the complex weighs roughly **4,560 lbs**. The water source was not located during the initial site visit for Plot 6, the source for Plot 6 may add upwards of 0.5 miles (roughly **380 lbs.**) of source line.

Plot 1: [REDACTED]

Plot 2: [REDACTED]

Plot 3: [REDACTED]

Plot 4: [REDACTED]

Plot 5: [REDACTED]

Plot 6: [REDACTED]

Plot 7: [REDACTED]

Plot 8: [REDACTED]

Plot 9: [REDACTED]

Water Source 1: [REDACTED]

Water Source 2: [REDACTED]

Water Source 3: [REDACTED]

Water Source 4: [REDACTED]

Water Cistern 1: [REDACTED]

Water Cistern 2: [REDACTED]

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that the total complex will generate at a minimum **9 net loads of trash and 9 cobiner loads of pipe.**

Hazardous Materials

Suspected hazardous materials were detected at the complex and were submitted for pesticide testing. A suspected pesticide bottle containing Carbofuran was repurposed in a “Super Thrive” container which was located in Camp 1. Samples were taken of the residue and submitted for testing. Results for the suspect Carbofuran are still pending but container should be handled as hazardous material. Both sprayers located in the site were not sampled due to them being compromised and damaged by wildlife, however, they should be handled as potential hazardous material. There is a chance that other hazardous containers may be in the cultivation site, if any are located they should be handled separately and disposed of according to the refuse station’s household hazardous materials policies.

Suspect Carbofuran: [REDACTED]

Sprayer 1: [REDACTED]

Sprayer 2: [REDACTED]

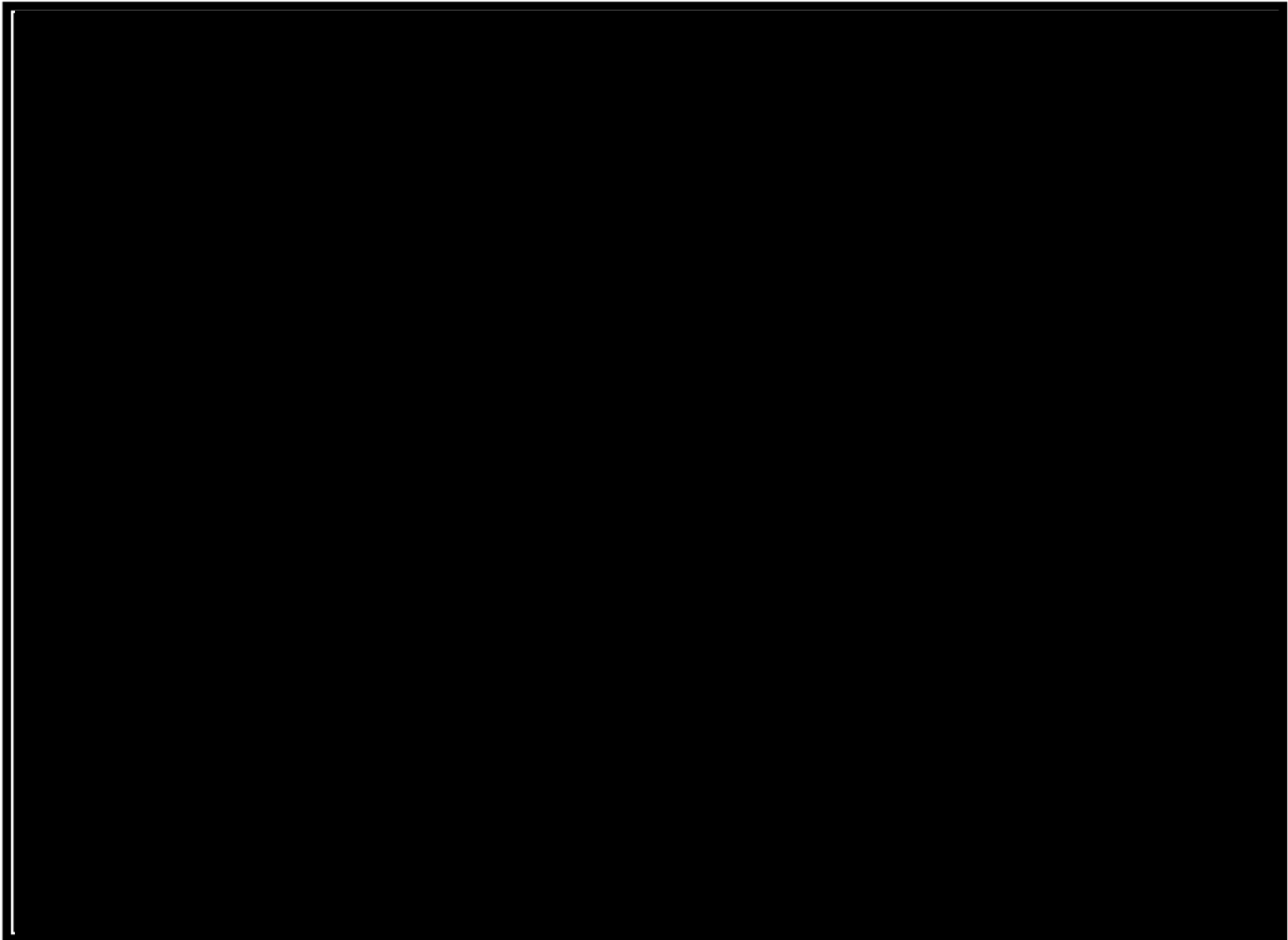
Trinity County RCD and Watershed Center Tasks:

- Provide labor for pre-staging material.
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

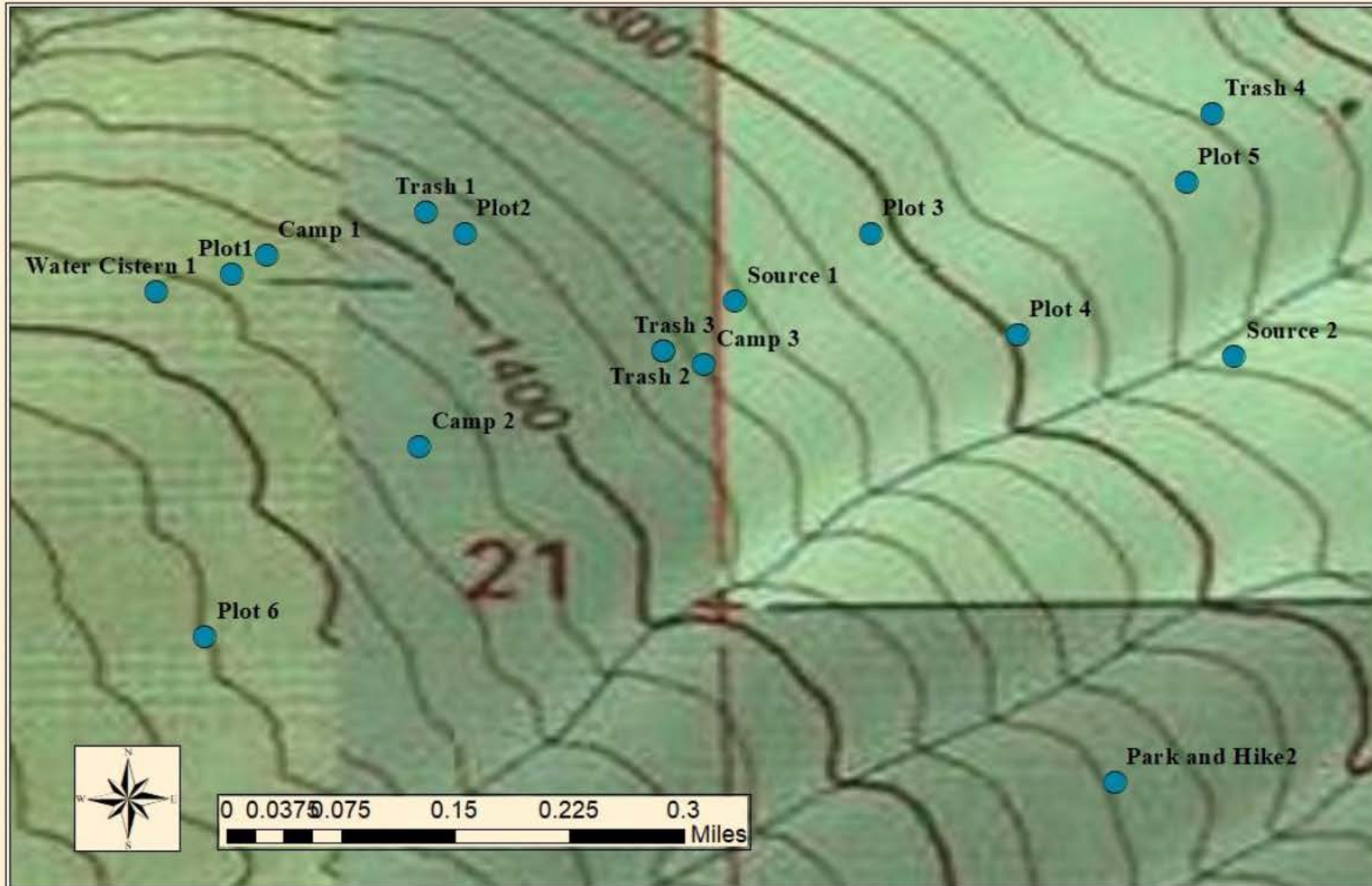
- Provide law enforcement assistance for safety and LZ operations.
The following tasks are required during air operations only (dates TBD in August):
- Secure use of helicopter and personnel to haul-out trash.
- Identify appropriate landing zones and communicate locations to all team leads.
- Provide nets and cobiners for hauling trash and irrigation pipe.
- Provide driver, truck and trailer with capacity to haul trash to dump

Map 3. Location and configuration of the entire Eye in The Sky cultivation complex site on the Shasta-Trinity National Forest and private timberland for reclamation planned for summer 2018.



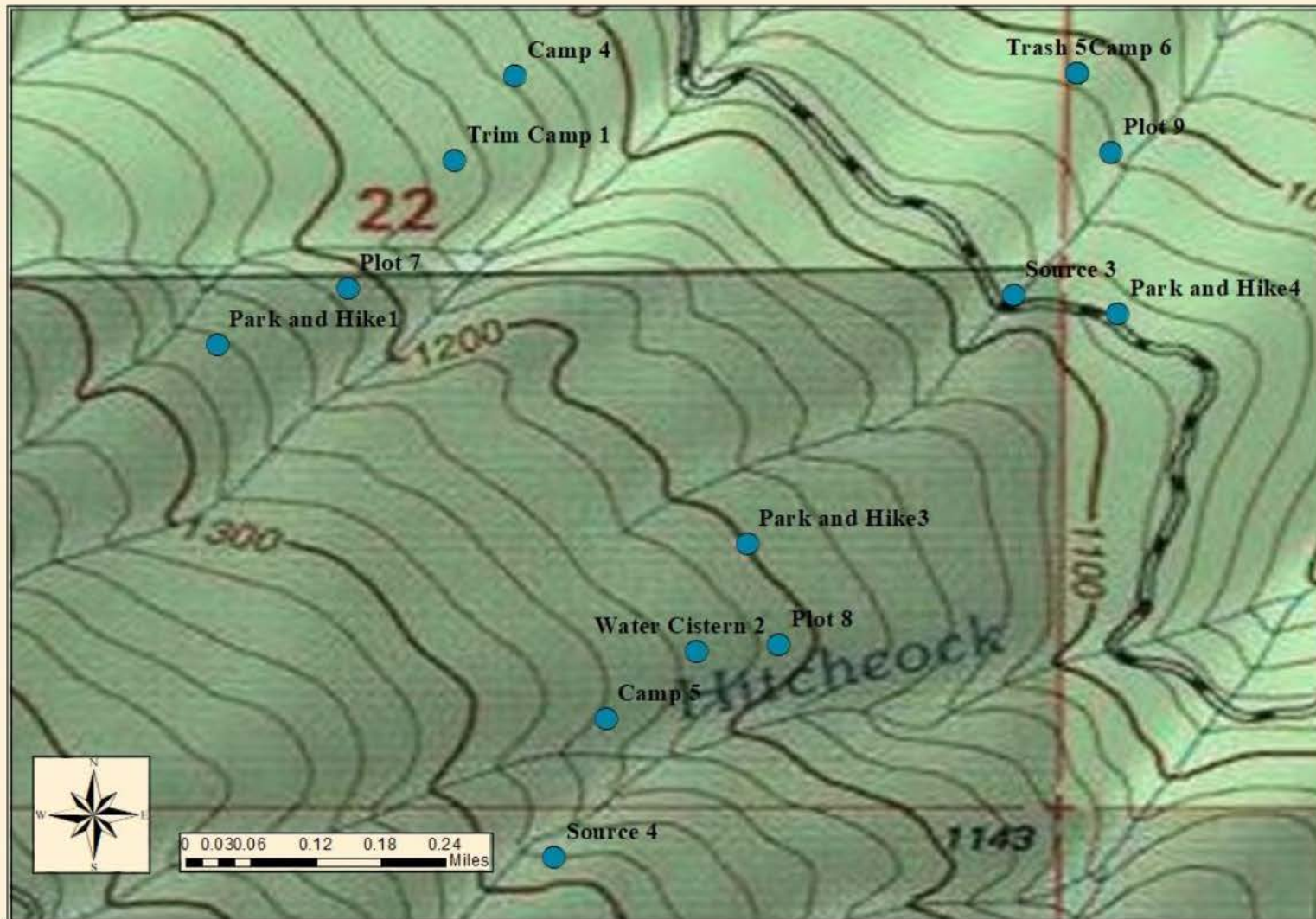
Map 2. Location and configuration of the northern section of Eye in The Sky cultivation complex site plots, camp, and hike-in points on the Shasta-Trinity National Forest and private timberland for reclamation planned for summer 2018.

Eye In The Sky Cultivation Complex



Map 3. Location and configuration of the southern section of Eye in The Sky cultivation Complex plots, camp, and hike-in points on the Shasta-Trinity National Forest and private timberland for reclamation planned for summer 2018.

The Eye In The Sky Cultivation Complex



**Shasta - Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
Little French Creek Trespass Marijuana Cultivation Site**



Prepared by:

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July 24, 2018

Little French Creek Site: Background

This mid-sized trespass marijuana cultivation site is located on the Shasta-Trinity National Forest, in Trinity County to the east of Big French Creek. Little French Creek was not eradicated by law enforcement but has been unoccupied for at least three years.

Little French Creek site is situated on a ridge between Big French Creek and Little Creek at approximately 1300 ft elevation. The camp lies on a ridgeline in an open pine forest. The plots are to the east of the camp on a south facing slope.

Access to Little French Creek

Enter the Little French Creek Complex off Highway 299 at the base of Little Creek. It requires a moderately difficult 1.2 mile (~1800m) hike up an old skid road, along a creek, then upslope approximately 800 – 1000 feet to the Little French Creek Cultivation Complex. Parking is available along a turnout on State Highway 299.

Park/Hike: [REDACTED]

Personnel Required for Operation

The site is considered moderately difficult in terrain; it is plausible that personnel will hike an average of 4-5 miles in a day while conducting hard manual labor for this site. Productivity will depend on the percent of the reclamation team comprised of individuals experienced in the tasks and objectives and are in good standing health.

1 Day Operation (Staging only): Team of 8 individuals (minimum)

Trash Amount Estimate

Trash estimates are based on 45-55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

Approximately 10-15 garbage bags with a volume of 45-55 gallons each will be required for trash removal. Based on standard mixed refuse weight estimates of 40lbs of weight per bag, Little French Creek is estimated to have a minimum of **600 lbs** of trash including the sleeping bags, tents and other large items present. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line or large/ full propane tanks.

Location of camp and associated trash:

Camp: [REDACTED]

Irrigation Pipe Estimate

Estimates of irrigation pipe within the grow site is preliminary and likely conservative. These pipe assessments are the estimated length of pipe present within grow plots; they do not take into account any of the 1/4" "spaghetti" line. Unfortunately, a full source line and plot line assessment was not completed due to difficulties in following line under the brush. The below estimates should be considered minimum amounts.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots at Little French Creek site is about 0.6 miles (~1000m). Based on an average pipe diameter of 1," it is estimated that the pipe currently present at the complex weighs roughly **360 lbs**. The water source was not located during the initial site visit, the source may add upwards of 1.25 miles (roughly **750 lbs.**) of source line.

Plot 1: [REDACTED]

Plot 2: [REDACTED]

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that the total complex will generate **2 net loads of trash and 2 cobiner loads of pipe.**

Hazardous Materials

Suspected hazardous materials were detected at the complex and tested for pesticide residues. One sprayer was located and tested at the camp: results are still pending. There is a chance that other full hazardous containers may be in the cultivation site, if any are located they should be handled separately and disposed of according to the refuse station's household hazardous materials policies.

Sprayer: [REDACTED]

Trinity County RCD and Watershed Center Tasks:

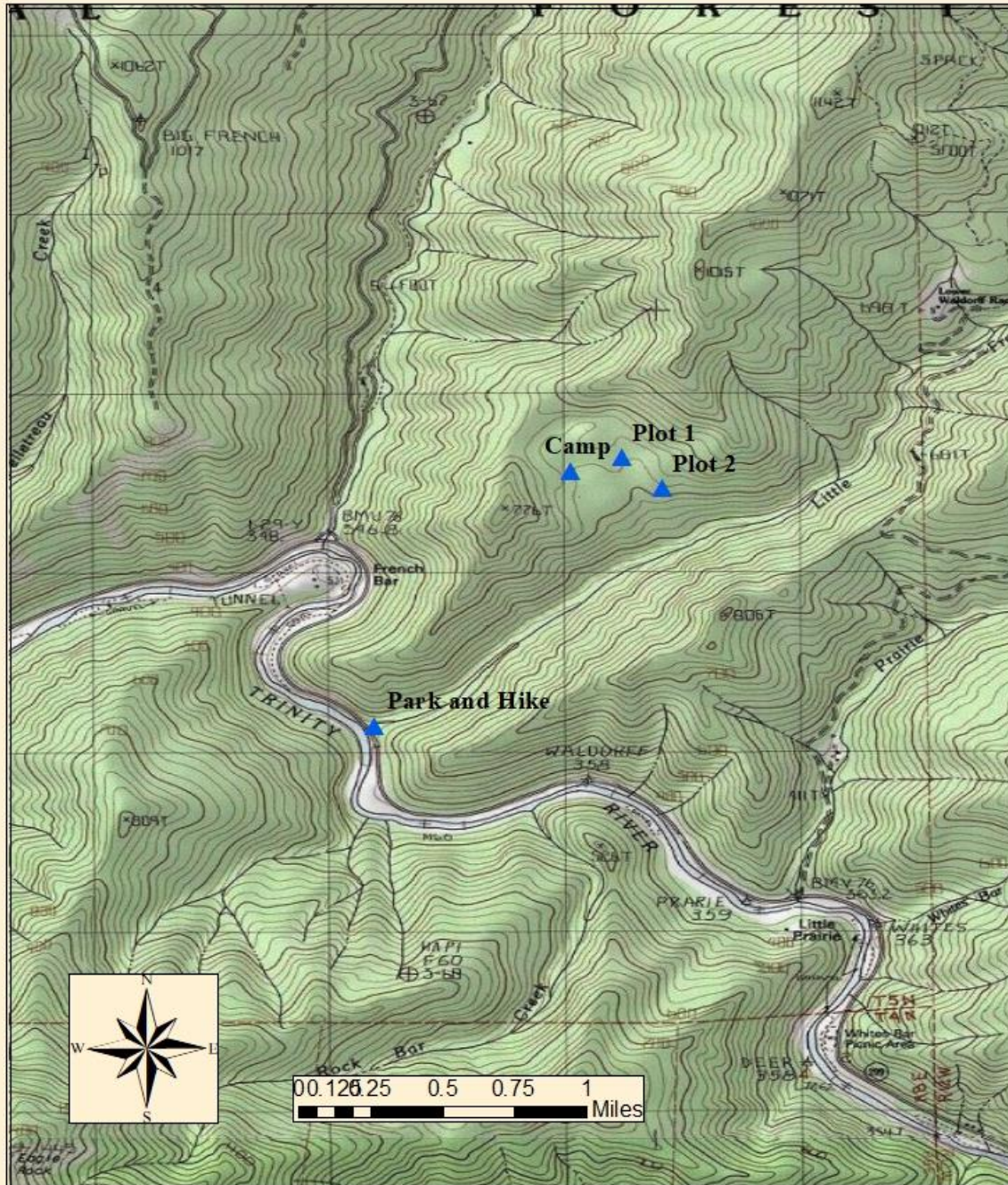
- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

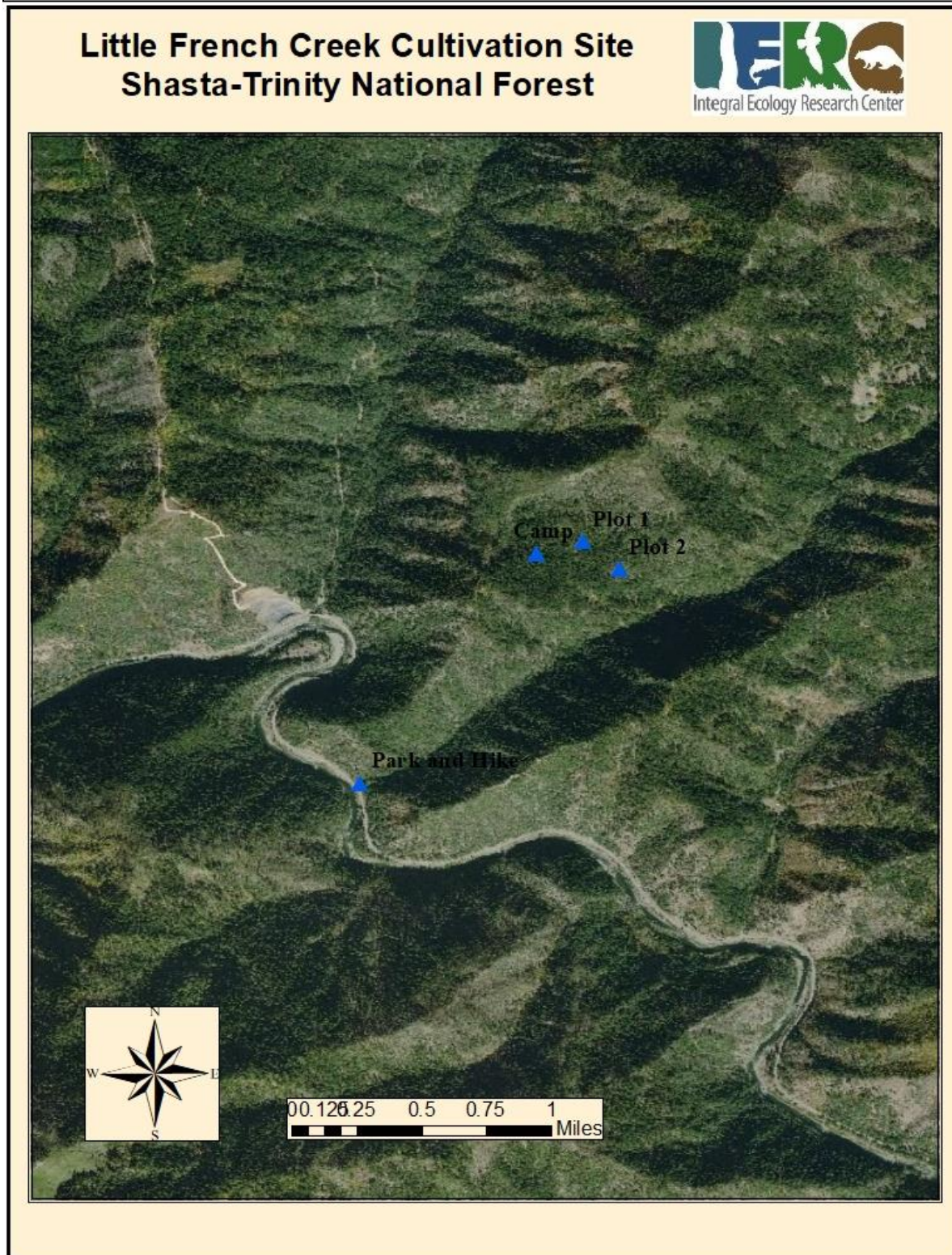
- Provide law enforcement assistance for safety and LZ operations
The following tasks are required during air operations only (dates TBD in August):
- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide driver, truck and trailer with capacity to haul trash to dump

Map 1. Location and configuration of the Little French Creek cultivation site plots, camp, and hike-in point on the Shasta-Trinity National Forest for reclamation planned summer 2018.

Little French Creek Cultivation Site Shasta-Trinity National Forest



Map 2. Location and configuration of the Little French Creek cultivation site plots, camp, and hike-in point on the Shasta-Trinity National Forest for reclamation planned summer 2018.



**Shasta –Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
Oak Ridge Trespass Marijuana Cultivation Site**



Prepared by:

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Oak Ridge Trespass Marijuana Cultivation Site: Background

This trespass marijuana grow site is located on the Shasta-Trinity National Forest in Trinity County within the Butler Creek watershed. The grow site is situated within residual patches of mixed mature coniferous forest and second-growth stands with moderate open/ brushy expanses leftover from recent wildfires. The growers cleared out the natural forest vegetation to open space for the cultivation plot.

The Oak Ridge site has one cultivation plot along a ridge between Oak Ridge Road and Butler Creek. There is one campsite and associated trash (Figures 1 and 2). The infrastructure and plots for this site are spread across a 75-yard-long expanse.

Access to Oak Ridge Site

Enter the Oak Ridge Site from Oak Ridge Rd. The hike in requires an easy 0.4 mile (~650m) hike along an old skid road with 200 feet of elevation gain. Hike-in time is estimated to be 10 minutes from the parking area on Oak Ridge Road. The parking area off Oak Ridge Rd. can accommodate up to 10 vehicles.

Park and Hike: 

Personnel Required for Operation

Due to the amount of refuse and pipe present in the site, a team of at least 10 trained personnel should assist with site reclamation. Due to the steep, strenuous terrain and amount of refuse present, a helicopter will be required for removal of refuse. It is estimated that the helicopter will be needed for 1/4 day (roughly 2-3 hours of air time) to remove all environmental and human risks. Proper personal protective equipment and reclamation equipment will be required for all personnel involved.

1 Day Operation (Staging only): Team of 10 individuals

Trash Amount Estimate

Trash estimates are based on 45 - 55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

It is estimated about 15 garbage bags with a volume of 45-55 gallons each will be required to remove what remains at the Oak Ridge site. Based on standard mixed refuse weight estimates of 40lbs of weight per bag, Oak Ridge is estimated to have a minimum of **600 lbs** of trash. This is a dry weight; if a rain event were to occur between assessment and collection the estimated weights and number of bags may increase 30-40%. This estimate does not account for the weight of irrigation line.

Camp: [REDACTED]

Irrigation Pipe Estimate

Estimates of irrigation pipe within the grow site are preliminary and likely conservative. These pipe assessments are the estimated length of pipe present within grow plots; they do not take into account any of the ¼" "spaghetti" line. Unfortunately, a full source line assessment was not completed due to difficulties in following the line under the brush. The below estimates should be considered minimum amounts.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the cultivation plot and source line at Oak Ridge is approximately 1 mile (~1600m). Based on an average pipe diameter of 1", it is estimated that the pipe currently present at the site weighs roughly **640 lbs**.

Cultivation plot: [REDACTED]

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that there will be **~2 net loads and ~3-5 cobiner loads**.

Hazardous Materials

Carbofuran was identified at eradication, but was not located on the initial assessment. Only a partial site assessment was conducted on the site visit following the eradication day. Safety leads and/ or IERC team members should be contacted immediately if containers are suspected of containing hazardous materials.

Two sprayers were located within the plot. The sprayers were flagged, but not sequestered in orange trash bags. Empty bottles of pesticides that are typically available at garden supply stores were found, but had no contents. Nevertheless, caution should always be used by all participants in handling trash and infrastructure.

Trinity County RCD and Watershed Center Tasks:

- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide law enforcement assistance for safety and LZ operations
- Provide driver, truck and trailer with capacity to haul trash to dump

Figure 1. General overview of Oak Ridge Cultivation Site.

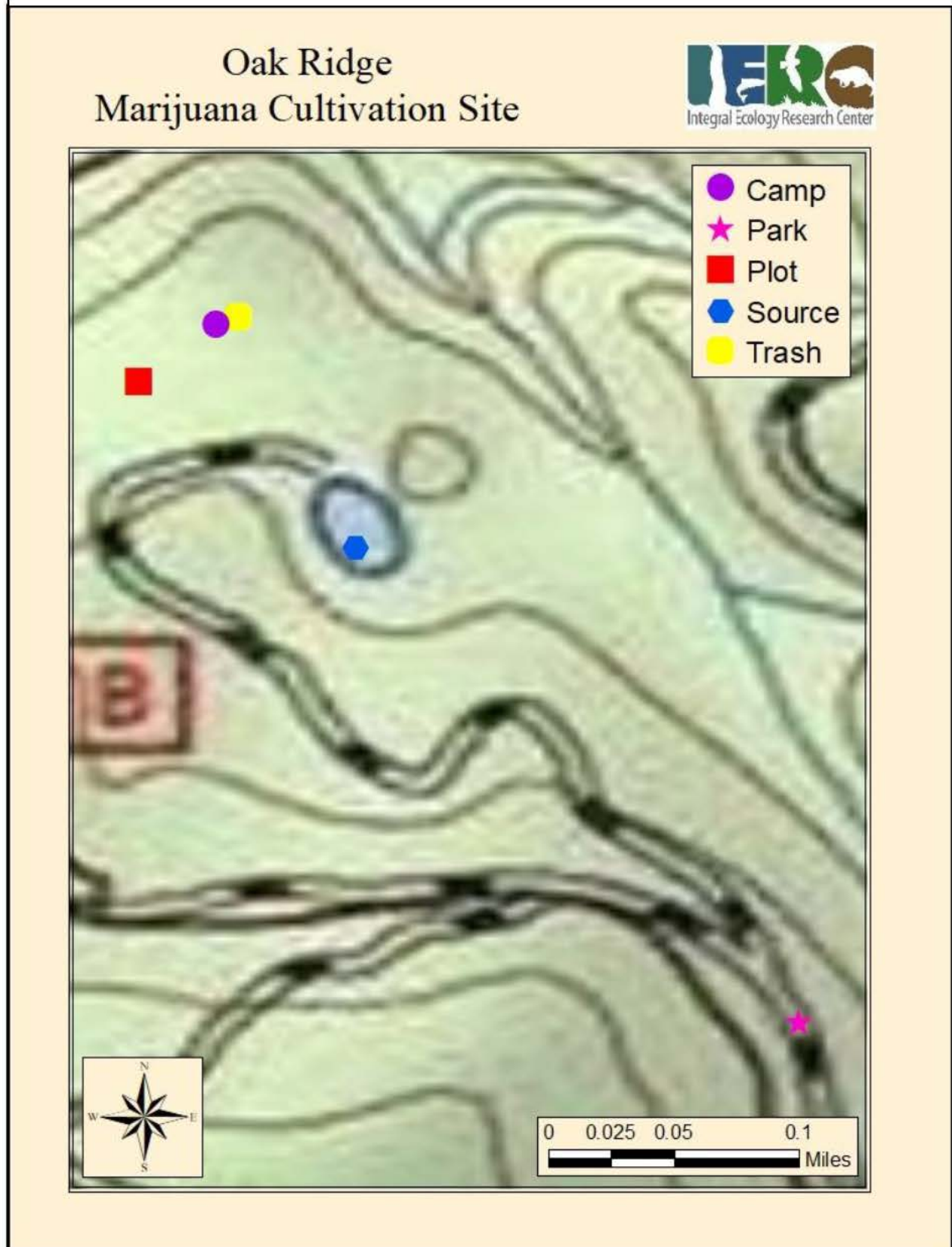
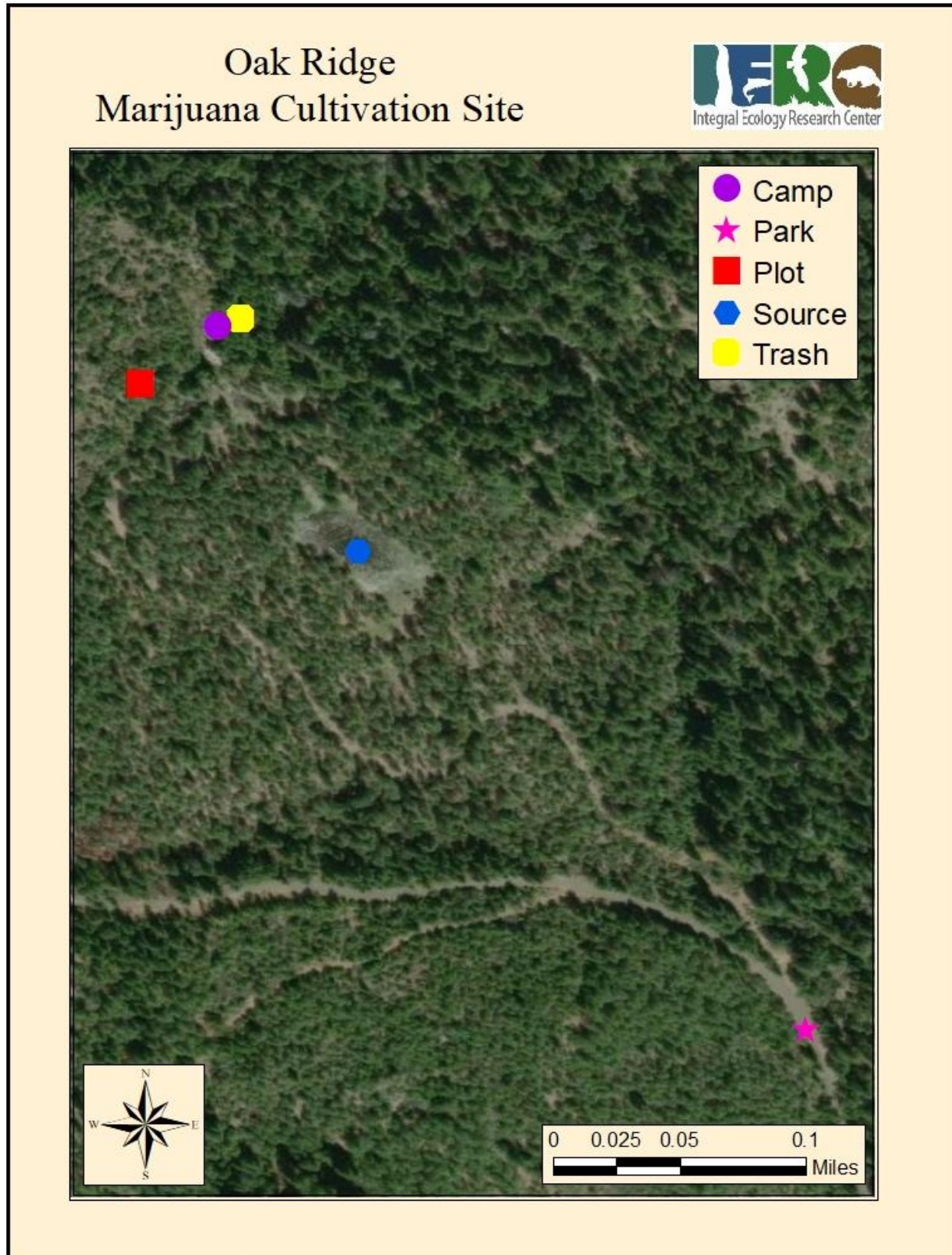


Figure 2. Configuration of the Oak Ridge grow site on the Shasta-Trinity National Forest.



**Shasta - Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
Pattison Ranch Trespass Marijuana Cultivation Complex**



**Prepared by:
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July 25, 2018

Pattison Ranch Complex: Background

This trespass marijuana grow complex is located on the Shasta-Trinity National Forest. It is located in the Main Stem Trinity River watershed, within Trinity County. The complex is composed of two independent sites, Upper Pattison Ranch and Lower Pattison Ranch. The grow sites are situated within residual patches of mixed mature coniferous forest and second-growth stands. The area was heavily burned in the past and the cultivation site is located within this burn scar.

The plots are heavily overgrown and difficult to determine the full size of the plot.

Access to Pattison Ranch Complex:

Enter the Pattison Ranch Complex off of Forest Service Road 16. It requires a moderately easy off-trail hike for approximately 3/5 mile (~600m) with 300 feet elevation change to the upper camp and plots. The parking area can accommodate approximately four vehicles.

Park and Hike: [REDACTED]

Personnel Required for Operation

The site is considered moderately easy in terrain; it is plausible that personnel will hike an average of 3-5 miles in a day while conducting hard manual labor for this site. Productivity will depend on the percent of the reclamation team comprised of individuals experienced in the tasks and objectives and are in good standing health.





1 Day Operation (Staging only): Team of 12 individuals (minimum)

Trash Amount Estimate

Trash estimates are based on 45-55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

It is estimated that about 10 garbage bags with a volume of 45-55 gallons each will be required to remove what remains at the Pattison Ranch complex. Based on standard mixed refuse weight estimates of 40lbs of weight per bag. Upper Pattison Ranch is estimated to have a **minimum of 400 lbs** of trash. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line.

Upper Pattison Camp:	
Lower Pattison Camp:	
Lower Pattison Trash #1:	
Lower Pattison Trash #2:	

Irrigation Pipe Estimate

Estimates of irrigation pipe within the grow site is preliminary and likely conservative. These pipe assessments are the estimated length of pipe present within grow plots; they do not take into account any of the ¼" "spaghetti" line. Unfortunately, a full source line and plot line assessment was not completed due to difficulties in following line under the brush. The below estimates should be considered minimum amounts.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots and source line at the Pattison Ranch complex is about **1 mile (~1600m)**. Based on an average pipe diameter of 1," it is estimated that the pipe currently present at the complex weighs roughly **400 lbs**.

Upper Pattison Plot:	
Lower Pattison Plot:	

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that Upper Pattison Ranch will have **~2 net loads and ~2-3 cobiner loads**.

Hazardous Materials

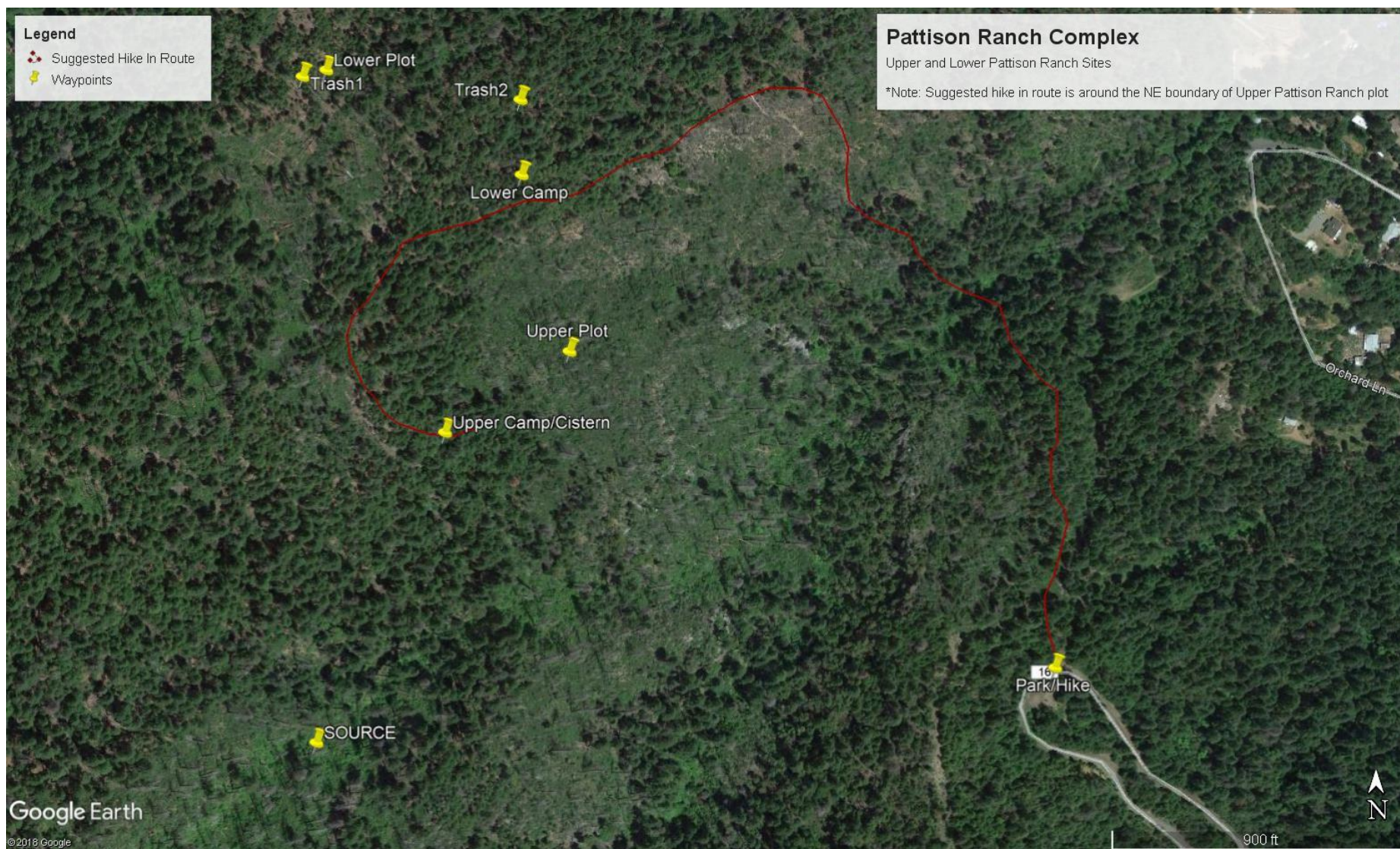
No hazardous materials were found at this site during the assessment, but caution should always be taken and any unknown materials or containers should only be handled by qualified personnel.

Trinity County RCD and Watershed Center Tasks:

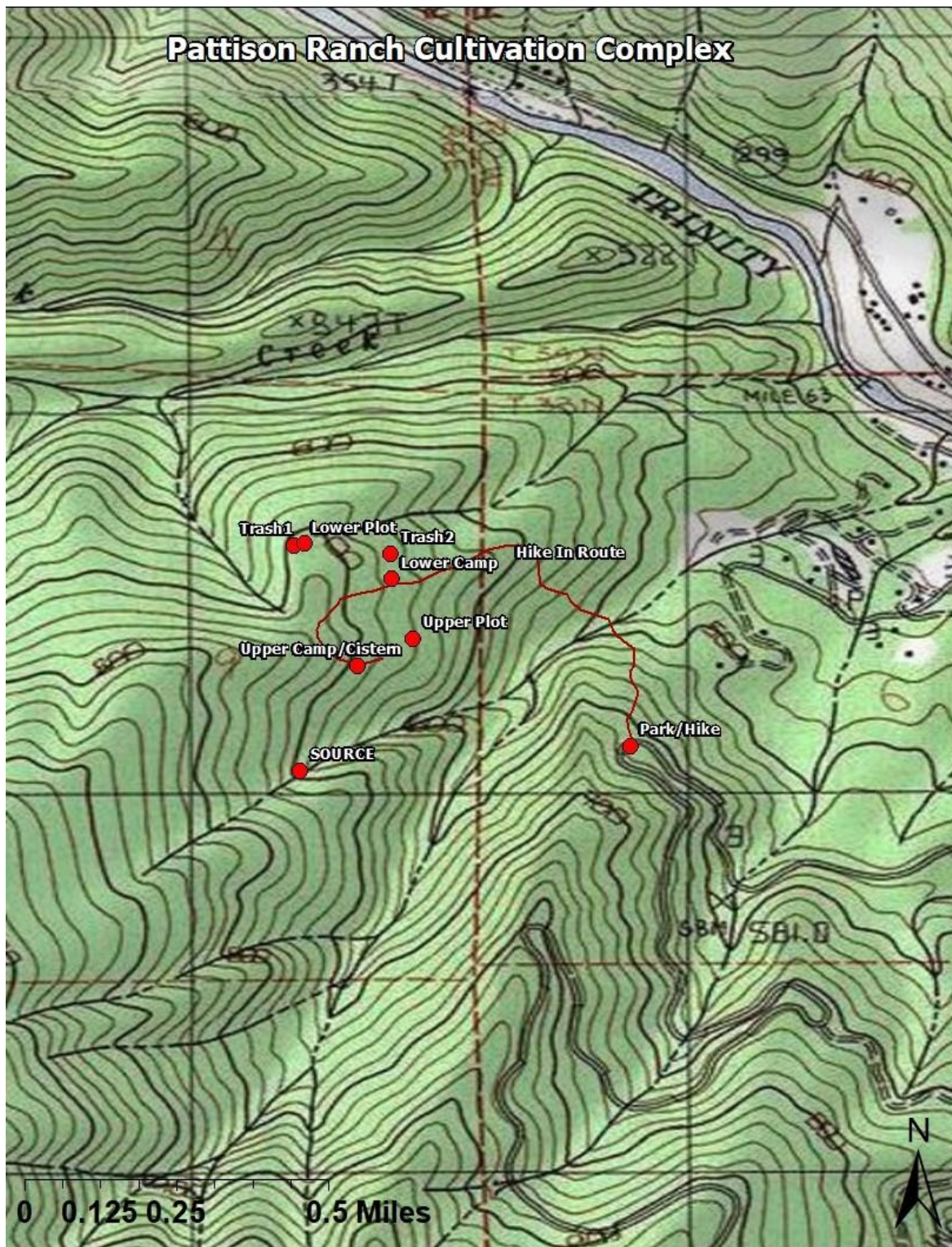
- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

- Provide law enforcement assistance for safety and LZ operations
The following tasks are required during air operations only (dates TBD in August):
- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide driver, truck and trailer with capacity to haul trash to dump



Map 1. General overview of the Pattison Ranch Complex with Upper and Lower Pattison Ranch Sites



**Raccoon Face Marijuana Cultivation Site
Shasta-Trinity National Forest
Reclamation Plan**



**Prepared by:
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July 25, 2018

Raccoon Face: Background

This trespass marijuana grow site is located on the Shasta-Trinity National Forest. It is located in the Trinity River watershed, within Trinity County. The grow site is situated within coniferous forest. In July 2013 law enforcement eradicated 6,347 plants at this site. This site is very close to Highway 299.

Access to Raccoon Face

Enter the Raccoon Face site off of State Highway 299. It requires a moderate off-trail hike for about 0.35 miles (~540m) with 600 foot elevation change. The parking area can accommodate approximately six vehicles:

Park and Hike: [REDACTED] [REDACTED]

Personnel Required for Operation

The site is considered moderate in terrain; it is plausible that personnel will hike an average of 2-3 miles in a day while conducting hard manual labor for this site. Productivity will depend on the percent of the reclamation team comprised of individuals experienced in the tasks and objectives and are in good standing health.

1 Day Operation (Staging only): 8 - 10 individuals

Trash Amount Estimate

It is estimated that about **15** garbage bags with a volume of 45-55 gallons each will be required to remove what remains at Raccoon Face. Based on standard mixed refuse weight estimates of 40lbs of weight per bag. Raccoon Face is estimated to have a minimum of **600 lbs** of trash. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line.

Camp:	[REDACTED]	[REDACTED]
Trash Pile #1:	[REDACTED]	[REDACTED]
Trash Pile #2:	[REDACTED]	[REDACTED]
Cistern:	[REDACTED]	[REDACTED]

Irrigation Pipe Estimate

Estimates of irrigation pipe within the grow site is preliminary and likely conservative. These pipe assessments are the estimated length of pipe present within grow plots; they do not take into account any of the ¼" "spaghetti" line. The below estimates should be considered minimum amounts.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots and source line at Raccoon Face is about 0.5 miles (~800m). Based on an average pipe diameter of 1," it is estimated that the pipe currently present at the complex weighs roughly **300 lbs**. The source was not found for this site, so more pipe may exist there.

Plot 1:		
Plot 2:		

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that Raccoon Face will have **~2-3 net loads and ~1-2 cobiner loads**.

Hazardous Materials

Three sprayers were found in the camp at this site during the assessment. Caution should always be taken and any unknown materials or containers should only be handled by qualified personnel.

Trinity County RCD and Watershed Center Tasks:

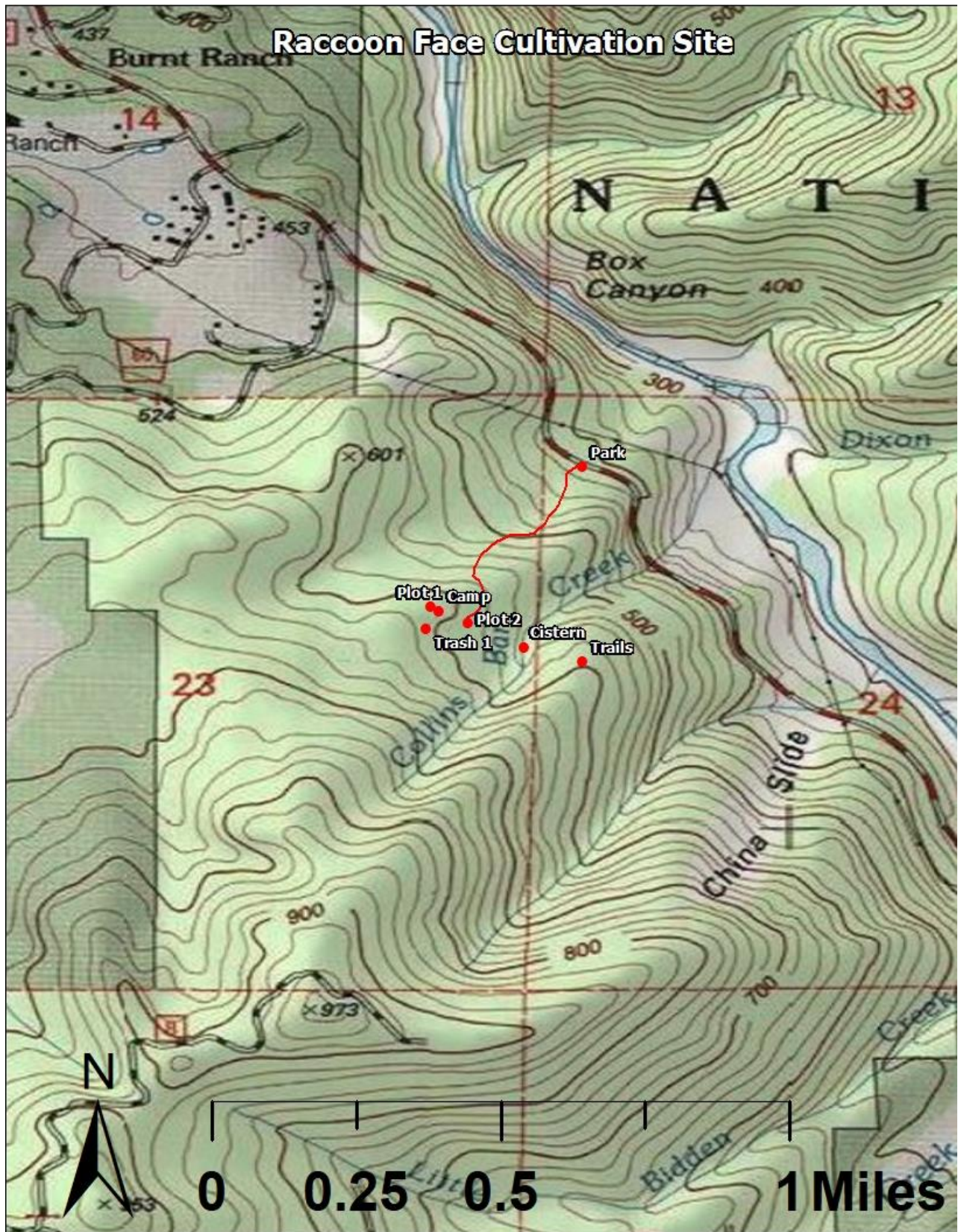
- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

- Provide law enforcement assistance for safety and LZ operations
The following tasks are required during air operations only (dates TBD in August):
- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide driver, truck and trailer with capacity to haul trash to dump



Map 1. General overview of the Raccoon Face site.



**Shasta - Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
Whites Bar Creek Marijuana Cultivation Site**



Prepared by:
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July 24, 2018

Whites Bar Creek Cultivation Site: Background

This trespass marijuana grow site is located on the Shasta-Trinity National Forest. It is located in the Trinity River watershed, within Trinity County. The grow site is situated within a small fire scar. There were 5,368 plants eradicated at this site in July 2013. This site lies within 250 yards of Highway 299.

Access to Whites Bar Creek

Enter the Whites Bar Creek cultivation site at the intersection of State Highway 299 and Prairie Creek Rd. It requires a moderate off-trail hike for about 3/5 mile (~1000m) with 500 foot elevation change to reach the camp area. The parking area can accommodate approximately 4 vehicles.

Park and Hike: [REDACTED] [REDACTED]

Personnel Required for Operation

The site is considered moderate in terrain; it is plausible that personnel will hike an average of 2-3 miles in a day while conducting hard manual labor for this site. Productivity will depend on the percent of the reclamation team comprised of individuals experienced in the tasks and objectives and are in good standing health.

1 Day Operation (Staging only): Team of 8 individuals (minimum)

Trash Amount Estimate

Trash estimates are based on 45-55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps may have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

It is estimated that about 8 garbage bags with a volume of 45-55 gallons each will be required to remove what remains at Whites Bar Creek. Based on standard mixed refuse weight estimates of 40lbs of weight per bag, the site is estimated to have a **minimum of 320 lbs** of trash. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line.

Camp: [REDACTED] [REDACTED]
Trash Pile #1: [REDACTED] [REDACTED]
Trash Pile #2: [REDACTED] [REDACTED]
Trash Pile #3: [REDACTED]
Trash Pile #4: [REDACTED]

Irrigation Pipe Estimate

Estimates of irrigation pipe within the Whites Bar cultivation site are preliminary and do not take into account any of the ¼" "spaghetti" line or the non-linear placement of irrigation pipe due to obstacles and meandering direction of much of the pipe.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots and source line at Whites Bar Creek is about **0.5 miles (~300m)**. Based on an average pipe diameter of 1," it is estimated that the pipe currently present at the complex weighs roughly **125 lbs**. The source line was not followed all the way to the source point, so more line is likely present that was not documented.

Plot: [REDACTED] [REDACTED]
Furthest point followed on source line: [REDACTED] [REDACTED]

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that Whites Bar Creek will have **~1-2 net loads and ~1-2 cobiner loads**.

Hazardous Materials

A sprayer was found near Trash Pile 3 during the assessment. Caution should always be taken and any unknown materials or containers should only be handled by qualified personnel.

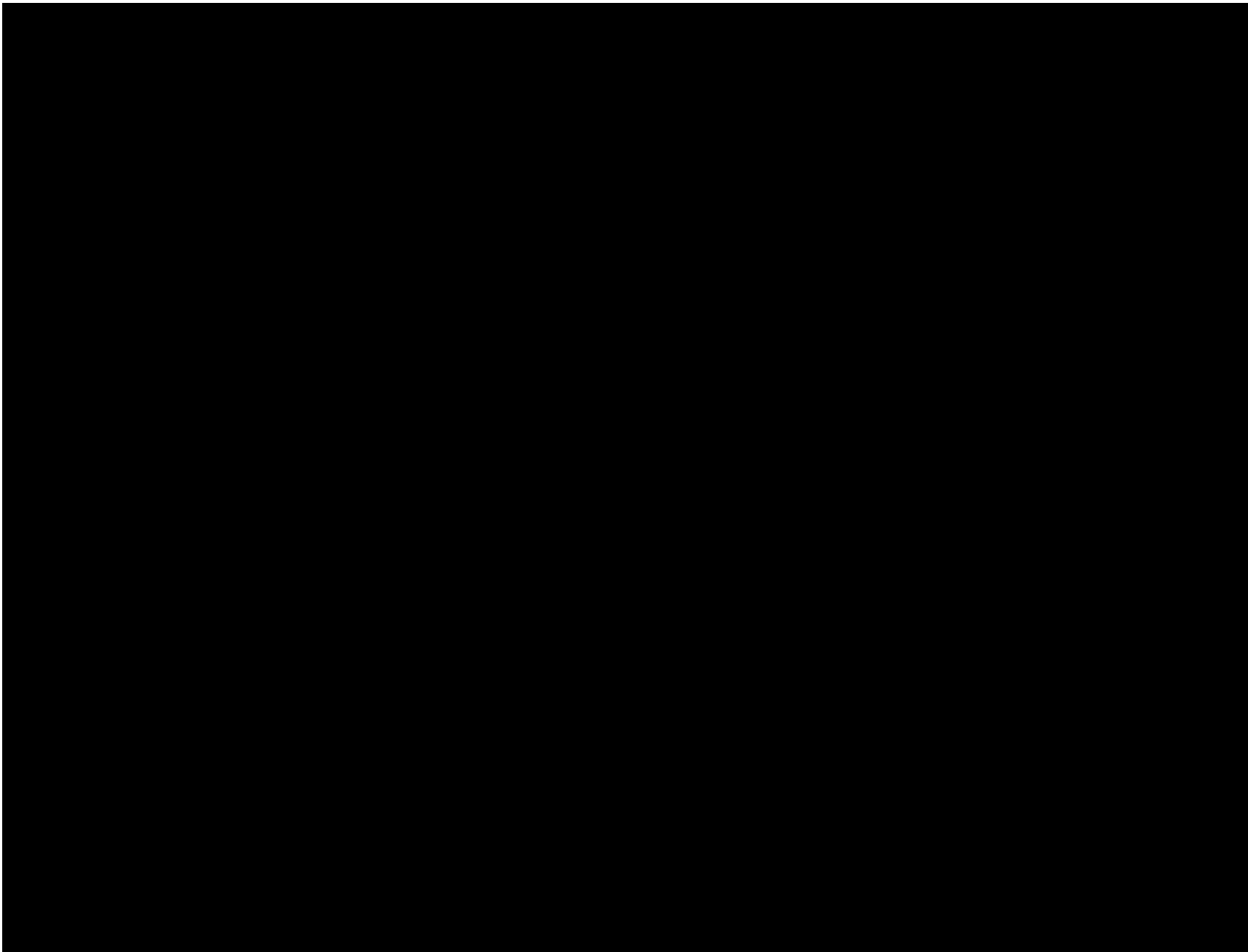
Sprayer:  

Trinity County RCD and Watershed Center Tasks:

- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

- Provide law enforcement assistance for safety and LZ operations
The following tasks are required during air operations only (dates TBD in August):
- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide driver, truck and trailer with capacity to haul trash to dump



**Map 1. General overview of
the White's Bar Creek site**



Map 2. More detailed overview of the White's Bar Creek site

**Shasta - Trinity National Forest Trespass Marijuana Cultivation Site
Reclamation Plan and Preliminary Environmental Assessment Report
Wildwood/ China Gulch Cultivation Complex**



Prepared by:

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Ivan Medel**

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July 23, 2018

Wildwood/ China Gulch Cultivation Site: Background

This mid-sized trespass marijuana cultivation site is located on the Shasta-Trinity National Forest, in the South Fork Trinity River hydrologic unit. The site was eradicated on July 14, 2016 of 9,874 plants. It is located approximately 7.5 air miles southeast of Hayfork. There has been no confirmed activity since the eradication of the site.

Wildwood/ China Gulch is situated on a tributary of the east fork of Hayfork Creek at approximately 4000 ft elevation. The site lies within open areas in south facing pine habitat while the camp sits in a stand of mixed coniferous forest. The site has 13 small cultivation plots, located in a line to the southeast of the campsite and associated trash.

Access to Wildwood/ China Gulch Complex

Enter the Wildwood/ China Gulch Complex off of Forest Service Road 31N69D. It requires a moderate off-trail hike for about 1/5 mile (~350m) with 300 foot elevation change to reach the upper plot. An additional 1/3 mile (~500m) hike along well-established trails will be required for teams working within the lowest plots. The coordinates of the parking area and hike-in point on the side road are:

Park and Hike:



Personnel Required for Operation

The site is considered moderate in terrain; it is plausible that personnel will hike an average of 2-3 miles in a day while conducting hard manual labor for this site. Productivity will depend on the percent of the reclamation team comprised of individuals experienced in the tasks and objectives and are in good standing health.

1 Day Operation (Staging only): Team of 12 - 15 individuals

Trash Amount Estimate

Trash estimates are based on 45-55 gallon refuse bags but are preliminary and likely conservative. Furthermore, the camps have large items like sleeping cots, large sleeping bags, and 20 to 40lb propane tanks that will not fit into trash bags.

Total Trash Estimate and Weight

Approximately 30 - 40 garbage bags with a volume of 45-55 gallons each will be required for trash removal. Based on standard mixed refuse weight estimates of 40lbs of weight per bag, Wildwood/ China Gulch Complex is estimated to have a minimum of **1400 - 1600 lbs** of trash including the sleeping bags, tents and other large items present. This is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase 30-40%. This also does not take into account the weight of irrigation line or large/ full propane tanks. Additionally, three cisterns were located right next to each other in the same location.

Location of camp and water source, and associated trash:

Camp: [REDACTED]
Trim Camp: [REDACTED]
Cistern: [REDACTED]

Irrigation Pipe Estimate

Estimates of irrigation pipe within the Wildwood/ China Gulch cultivation complex are preliminary and do not take into account any of the 1/4" "spaghetti" line or the non-linear placement of irrigation pipe due to obstacles and meandering direction of much of the pipe.

Total Pipe Amount and Weight

Total irrigation pipe estimate for the plots and source line at the Wildwood/ China Gulch cultivation complex is about **1.35 miles (~2200m)**. Based on an average pipe diameter of 1," it is estimated that the pipe currently present at the complex weighs roughly **700 - 800 lbs**.

Locations of plot centers:

Plot 1: [REDACTED]
Plot 2: [REDACTED]

Plot 3: [REDACTED]
Plot 4: [REDACTED]
Plot 5: [REDACTED]
Plot 6: [REDACTED]
Plot 7: [REDACTED]
Plot 8: [REDACTED]
Plot 9: [REDACTED]
Plot 10: [REDACTED]
Plot 11: [REDACTED]
Plot 12: [REDACTED]
Plot 13: [REDACTED]

Net (trash) and cobiner (pipe) loads

Using an average of 500lb net and cobiner load capacity, it is estimated that the total complex will generate **2 - 3 net loads of trash and 2 - 3 cobiner loads of pipe.**

Hazardous Materials

Suspected hazardous materials were detected at the complex and tested for pesticide residues. Two sprayers were located and tested within plots 3 and 4, a composite sample from all sprayers tested positive for carbofuran and carbaryl. Sprayers should be handled as hazardous material. Carbofuran was also confirmed within multiple repurposed containers located throughout the site warranting extreme caution by reclamation teams when handling cleaning up trash sites. Safety leads and/ or IERC team members should be contacted immediately if containers are suspected of containing hazardous materials.

Sprayer 1: [REDACTED]
Sprayer 2: [REDACTED]
Sprayer 3: [REDACTED]

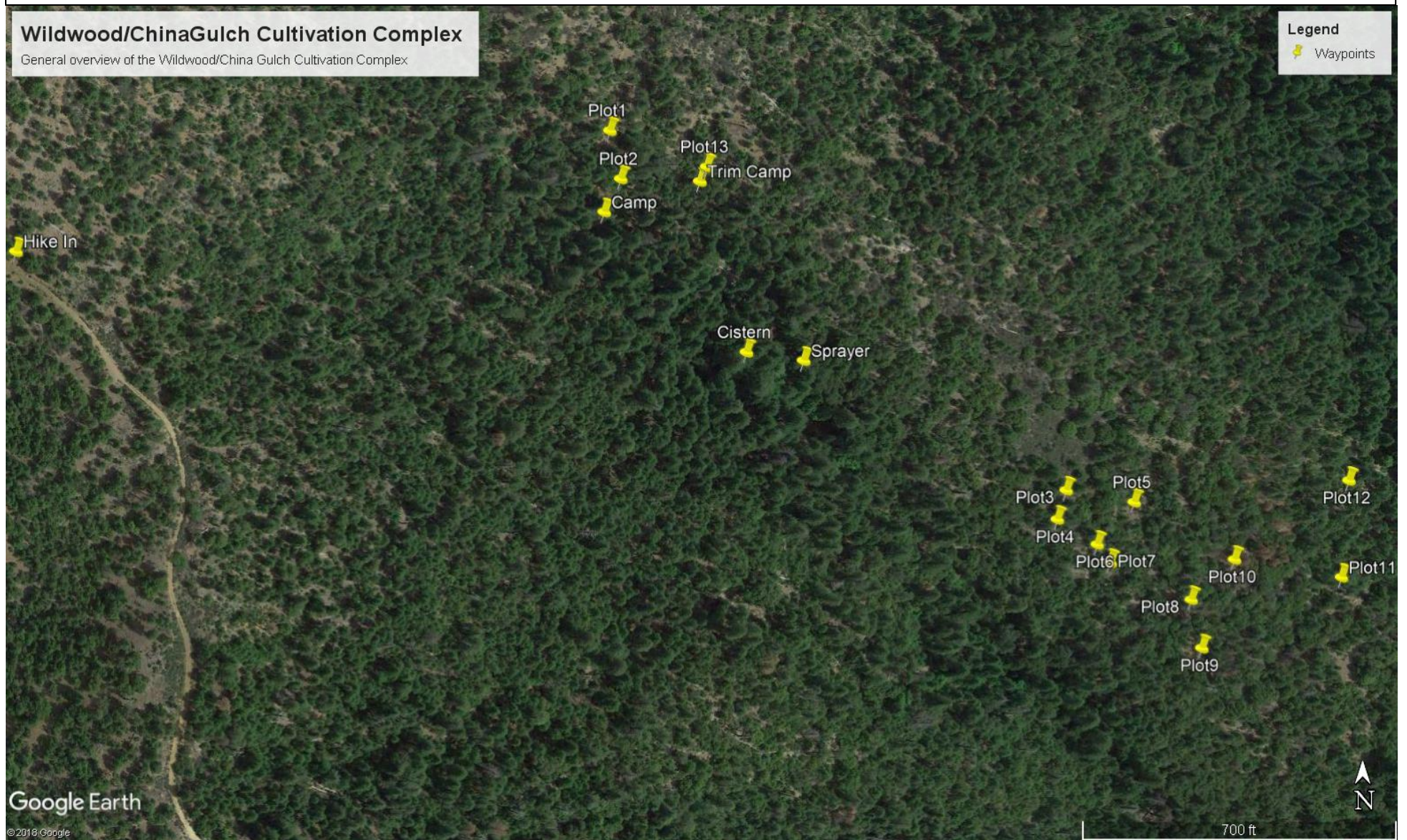
Trinity County RCD and Watershed Center Tasks:

- Provide labor for pre-staging material
- Provide personal protective equipment for all organizational personnel

U.S. Forest Service Tasks:

- Provide law enforcement assistance for safety and LZ operations
The following tasks are required during air operations only (dates TBD in August):
- Secure use of a helicopter and personnel to haul-out trash
- Identify appropriate landing zones and communicate locations to all team leads
- Provide nets and cobiners for hauling trash and irrigation pipe
- Provide driver, truck and trailer with capacity to haul trash to dump

Map 1. General location and configuration of the Wildwood/ China Gulch cultivation plots, camp, cistern, and hike-in point on the Shasta-Trinity National Forest for reclamation planned for summer 2018.



Map 2. Detailed location and configuration of the Wildwood/ China Gulch cultivation plots, camp, cistern, and hike-in point on the Shasta-Trinity National Forest for reclamation planned for summer 2018.



Integral Ecology Research Center
Comprehensive Summary of Field Efforts Through September 2018
Synopsis provided to the California Department of Fish and Wildlife
10/9/2018



Between January 01, 2018 and September 30, 2018, Integral Ecology Research Center (IERC) visited 68 potential trespass marijuana cultivation site (TMCS) locations in partial fulfillment of California Department of Fish and Wildlife's Cannabis Restoration Grant Program Agreement #P1796020. Per the grant agreement, all TMCSs are located within select portions of the Klamath Basin and visited to achieve one of two explicit objectives: 1) to perform scientific assessments ascertaining the magnitude of environmental impacts associated with the TMCS, including the inventory and sequestration of hazardous materials to reduce the risk of chemical exposure during reclamation efforts; and 2) to implement reclamation activities utilizing a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees. This document and the included summary table provides a comprehensive, general synopsis of these field efforts to date.

Field visits to all 68 locations were made over 75 unique dates (38.6% of possible non-holiday weekdays); some locations required up to four site visits to complete the required activities. Accounting for visiting multiple locations in a single day and some locations requiring multiple visits, IERC made a total of 116 site visits. Site assessments were conducted at 54 locations on 44 unique dates; however, TMCSs were not identified at five of these locations (i.e. 49 total TMCSs assessed; 62 total TMCSs visited) and reclamation activities were carried out at 34 TMCSs on 34 unique dates.

The 68 locations are distributed across three counties within five different land parcels. Two-thirds of the field locations (i.e. 45) were located within Trinity County, followed by 16 in Siskiyou County and five in Humboldt. Additionally, Shasta-Trinity National Forest was the most visited land parcel accounting for 60.6% of visited locations (i.e. 40); 21 locations were visited within the Six Rivers National Forest.

The United States Geologic Survey delineates drainage boundaries into hydrologic unit codes (HUC) at various spatial scales ranging from large regions to small subwatersheds. To determine the distribution of field efforts across drainage networks, all 62 TMCSs were categorized at the HUC 10 (watershed) and HUC 12 (subwatershed) spatial scales. TMCS field efforts were conducted within 31 HUC 12 drainage areas within 15 individual HUC 10 watershed areas.

SiteName	Land Parcel	County	*HUC 10 Watershed	*HUC 12 Subwatershed	Number of Plants	2018 Assessment Date(s)	2018 Reclamation Date(s)	Number of Visits
5080SandyBarGrow	Six Rivers	Siskiyou	Rock Creek-Klamath River	Reynolds Creek-Klamath River	5080	Assessed previous to 2018	06/10/2018; 08/16/2018	2
5Mile	Six Rivers	Humboldt	Bluff Creek-Klamath River	Boise Creek-Klamath River	Unknown	Assessed previous to 2018	06/12/2018; 06/12/2018; 08/14/2018	3
BackBone1.2011	Shasta-Trinity	Trinity	North Fork Trinity River	East Fork North Fork Trinity River	42686	01/17/2018	---	1
Bar717	Shasta-Trinity	Trinity	Lower Hayfork Creek	Olsen Creek-Hayfork Creek	270	08/14/2018	---	1
Bear Peak	Klamath	Siskiyou	Ukonom Creek-Klamath River	Titus Creek-Klamath River	Unknown	07/24/2018	08/26/2018	2
BigCreek2	Shasta-Trinity	Trinity	Lower South Fork Trinity River	Pelletreau Creek-South Fork Trinity River	Unknown	05/02/2018	08/20/2018	2
Casava	Shasta-Trinity	Trinity	Big French Creek-Trinity River	McDonald Creek-Trinity River	10436	03/06/2018	---	1
ChinaPeak.2016	Shasta-Trinity	Trinity	New River	Big Creek	10293	Assessed previous to 2018	07/31/2018	1
ChinaPeak.2018	Shasta-Trinity	Trinity	New River	Big Creek	Unknown	09/25/2018	---	1
CorralCreek2	Shasta-Trinity	Trinity	Lower Hayfork Creek	Corral Creek	8000	04/25/2018	05/09/2018	2
Crapo Creek	Klamath	Siskiyou	Salmon River	Crapo Creek-Salmon River	Unknown	Assessed previous to 2018	06/09/2018; 08/15/2018	2
Dowd.2017	Hoopla	Humboldt	Horse Linto Creek-Trinity River	Deerhorn Creek-Trinity River	5000	Assessed previous to 2018	09/18/2018	2
Eye In The Sky	Shasta-Trinity	Trinity	Middle South Fork Trinity River	Sulphur Glade Creek-South Fork Trinity River	Unknown	07/17/2018; 07/26/2018	08/01/2018; 08/21/2018	4
Fortilla	Six Rivers	Siskiyou	Dillon Creek	Copper Creek-Dillon Creek	15000	04/05/2018	06/10/2018; 06/11/2018; 08/17/2018	4
Friend Mountain.2018	Shasta-Trinity	Trinity	Middle South Fork Trinity River	Plummer Creek	900	08/24/2018	---	1

SiteName	Land Parcel	County	*HUC 10 Watershed	*HUC 12 Subwatershed	Number of Plants	2018 Assessment Date(s)	2018 Reclamation Date(s)	Number of Visits
Go Road	Six Rivers	Humboldt	Bluff Creek-Klamath River	Camp Creek	122	06/06/2018	06/06/2018; 08/15/2018	3
GrassyFlat1	Shasta-Trinity	Trinity	Lower Hayfork Creek	Olsen Creek-Hayfork Creek	Unknown	Assessed previous to 2018	05/07/2018	1
GrassyFlat2	Shasta-Trinity	Trinity	Lower Hayfork Creek	Olsen Creek-Hayfork Creek	Unknown	Assessed previous to 2018	05/07/2018	1
Hawkins	Six Rivers	Trinity	Big French Creek-Trinity River	Sharber Creek-Trinity River	Unknown	01/19/2018	---	1
Hayshed4	Shasta-Trinity	Trinity	Lower Hayfork Creek	Corral Creek	361	05/08/2018	05/08/2018	2
Hayshed Complex	Shasta-Trinity	Trinity	Lower Hayfork Creek	Corral Creek	8143	04/25/2018	05/07/2018; 05/08/2018	3
Horse Mane	Sierra Pacific	Trinity	Browns Creek	Upper Browns Creek	1800	07/09/2018	---	1
Indian Bottom	Six Rivers	Siskiyou	Salmon River	Butler Creek-Salmon River	1500	07/23/2018	---	1
JamesCreek.2016	Shasta-Trinity	Trinity	Lower Hayfork Creek	Rusch Creek-Hayfork Creek	3160	04/17/2018; 05/03/2018	---	2
JamesCreek.2017	Shasta-Trinity	Trinity	Lower Hayfork Creek	Olsen Creek-Hayfork Creek	Unknown	04/17/2018; 05/03/2018	---	2
Jimbo Smoked Jam	Shasta-Trinity	Trinity	New River	East Fork New River	653	04/10/2018	---	1
Jim Jam.2018	Shasta-Trinity	Trinity	New River	Devils Canyon	1671	08/31/2018	---	1
Jones Ridge	Six Rivers	Trinity	North Fork Eel River	Red Mountain Creek	3205	Assessed previous to 2018	04/19/2018; 04/20/2018	2
Kamorock	Shasta-Trinity	Trinity	Big French Creek-Trinity River	McDonald Creek-Trinity River	5577	02/06/2018	---	1
K Frog	Shasta-Trinity	Trinity	Big French Creek-Trinity River	McDonald Creek-Trinity River	231	02/06/2018	---	1
Knot Bowlin	Shasta-Trinity	Trinity	Lower South Fork Trinity River	Pelletreau Creek-South Fork Trinity River	Unknown	05/02/2018	08/20/2018	2
Lazy Stanshaw	Six Rivers	Siskiyou	Rock Creek-Klamath River	Reynolds Creek-Klamath River	15000	04/05/2018	06/10/2018; 08/16/2018	3

SiteName	Land Parcel	County	*HUC 10 Watershed	*HUC 12 Subwatershed	Number of Plants	2018 Assessment Date(s)	2018 Reclamation Date(s)	Number of Visits
Limedyeke 2	Shasta-Trinity	Trinity	Middle South Fork Trinity River	Butter Creek	2596	Assessed previous to 2018	05/08/2018	1
Limedyeke 3	Shasta-Trinity	Trinity	Middle South Fork Trinity River	Butter Creek	Unknown	Assessed previous to 2018	05/08/2018	1
Little French Creek	Shasta-Trinity	Trinity	Big French Creek-Trinity River	Little French Creek-Trinity River	Unknown	Assessed previous to 2018	07/31/2018	1
Miller Springs2	Shasta-Trinity	Trinity	Middle South Fork Trinity River	Sulphur Glade Creek-South Fork Trinity River	3952	07/10/2018	---	1
Mud Creek	Six Rivers	Siskiyou	Rock Creek-Klamath River	Ti Creek-Klamath River	572	04/03/2018	06/08/2018; 06/11/2018; 08/17/2018	4
Oak Ridge	Shasta-Trinity	Trinity	Middle South Fork Trinity River	Butter Creek	3942	05/24/2018	08/03/2018	2
Offield Mountain	Six Rivers	Siskiyou	Rock Creek-Klamath River	Reynolds Creek-Klamath River	Unknown	05/22/2018	06/07/2018; 08/16/2018	2
Offield Saddle	Six Rivers	Siskiyou	Salmon River	Somes Creek-Salmon River	263	Assessed previous to 2018	06/07/2018; 08/16/2018	2
Pattison Ranch	Shasta-Trinity	Trinity	Big French Creek-Trinity River	Little French Creek-Trinity River	1723	03/08/2018	08/02/2018; 08/18/2018	3
Pink Lower	Six Rivers	Trinity	Big French Creek-Trinity River	Sharber Creek-Trinity River	Unknown	01/23/2018	---	1
Pink Upper	Six Rivers	Trinity	Big French Creek-Trinity River	Sharber Creek-Trinity River	Unknown	01/23/2018	---	1
Plummer Peak.2018	Shasta-Trinity	Trinity	Lower Hayfork Creek	Salt Creek	1546	08/24/2018; 09/10/2018	---	3
Pre Brush	Six Rivers	Siskiyou	Rock Creek-Klamath River	Ti Creek-Klamath River	Unknown	04/03/2018	06/08/2018; 08/17/2018	3
Raccoon Face.2018	Shasta-Trinity	Trinity	Big French Creek-Trinity River	McDonald Creek-Trinity River	1960	08/23/2018	---	1
Raspberry Delight	Shasta-Trinity	Trinity	Lower South Fork Trinity River	Pelletreau Creek-South Fork Trinity River	Unknown	07/13/2018; 08/14/2018	08/14/2018; 08/20/2018	4

SiteName	Land Parcel	County	*HUC 10 Watershed	*HUC 12 Subwatershed	Number of Plants	2018 Assessment Date(s)	2018 Reclamation Date(s)	Number of Visits
Red Cap1.2013	Six Rivers	Humboldt	Bluff Creek-Klamath River	Red Cap Creek	Unknown	Assessed previous to 2018	06/13/2018	1
Red Cap2.2016	Six Rivers	Humboldt	Bluff Creek-Klamath River	Red Cap Creek	42	Assessed previous to 2018	06/13/2018; 08/27/2018	2
Rock Finger	Shasta-Trinity	Trinity	Big French Creek-Trinity River	McDonald Creek-Trinity River	15240	02/07/2018	---	1
School House	Six Rivers	Humboldt	Horse Linto Creek-Trinity River	Campbell Creek-Trinity River	Unknown	01/19/2018	---	1
Shiell Gulch.2018	Shasta-Trinity	Trinity	Upper Hayfork Creek	Dubakella Creek-Hayfork Creek	6544	08/22/2018; 09/11/2018	---	2
Shiell Gulch2	Shasta-Trinity	Trinity	Upper Hayfork Creek	Dubakella Creek-Hayfork Creek	3000	09/11/2018	---	1
Shiell Gulch3	Shasta-Trinity	Trinity	Upper Hayfork Creek	Dubakella Creek-Hayfork Creek	1019	09/11/2018	---	1
Side Winder	Six Rivers	Siskiyou	Dillon Creek	Copper Creek-Dillon Creek	1083	06/08/2018	06/21/2018; 08/17/2018	3
Sledge Hammer	Shasta-Trinity	Trinity	Big French Creek-Trinity River	Little French Creek-Trinity River	9100	07/19/2018	---	1
Squirrel Creek	Six Rivers	Siskiyou	Rock Creek-Klamath River	Ti Creek-Klamath River	66578	04/03/2018	06/08/2018; 08/17/2018	3
Steep Buffet	Shasta-Trinity	Trinity	Big French Creek-Trinity River	Little French Creek-Trinity River	600	07/18/2018	---	1
Taiwan	Shasta-Trinity	Trinity	Lower South Fork Trinity River	Pelletreau Creek-South Fork Trinity River	Unknown	07/13/2018	---	1
Telephone.2018	Shasta-Trinity	Trinity	Lower Hayfork Creek	Salt Creek	10000	08/18/2018	---	1
Tinkham Creek	Klamath	Siskiyou	Ukonom Creek-Klamath River	Titus Creek-Klamath River	Unknown	07/25/2018	---	1
Whites Bar Creek	Shasta-Trinity	Trinity	Big French Creek-Trinity River	Little French Creek-Trinity River	5368	03/08/2018	07/31/2018; 08/18/2018	3
Wildwood/ China Gulch	Shasta-Trinity	Trinity	Upper Hayfork Creek	East Fork Hayfork Creek	9874	Assessed previous to 2018	07/30/2018	1

SiteName	Land Parcel	County	*HUC 10 Watershed	*HUC 12 Subwatershed	Number of Plants	2018 Assessment Date(s)	2018 Reclamation Date(s)	Number of Visits
**NOT SITES								
75K.2011	Six Rivers	Siskiyou	Wooley Creek	Lower Wooley Creek	75130	05/10/2018	---	1
Hudson					Unknown	03/07/2018	---	1
Site129	Shasta-Trinity	Trinity	Big French Creek-Trinity River	McDonald Creek-Trinity River	6595	02/06/2018	---	1
Site145	Six Rivers	Siskiyou	Rock Creek-Klamath River	Reynolds Creek-Klamath River	31	04/13/2018	---	1
Site156	Six Rivers	Siskiyou	Rock Creek-Klamath River	Reynolds Creek-Klamath River	Unknown	05/10/2018	---	1
TOTAL SITE VISITS								116

*Indicates the 10- and 12-digit hydrologic unit codes (HUC) as delineated by the United States Geologic Survey as part of the National Watershed Boundary Dataset.

**Locations were visited but no evidence of marijuana cultivation activity was discovered. Reasons nothing was discovered included the site being burned in a wildfire with little to no evidence remaining, size of the cultivation site was too small with no infrastructure having been used during cultivation, or the site was actually a private grow on private land.



Trespass Marijuana Cultivation Complex

Reclamation Operation Synopsis:

Northwestern California, Summer 2018



October 19, 2018



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Northwestern California Trespass Marijuana Cultivation Sites

Reclamation Operation Overview

Summer 2018

Prepared by:

Integral Ecology Research Center

IERCecology.org

During summer 2018 (May through September), Integral Ecology Research Center (IERC) and project partners implemented reclamation efforts at 33 trespass marijuana cultivation complexes (TMCC) composed of 59 independent sites (Table 1) within Six Rivers, Shasta-Trinity, and Klamath National Forests in northern California (Figures 1 and 2). Within these areas, human refuse and grow site related infrastructure was completely removed at 51 sites totaling 41,264 lbs. of trash and 159,723 feet of irrigation pipe. Refuse was staged for future removal at six additional sites but was unable to be removed due to time and logistical constraints, and safety concerns in the immediate areas. Staging is still required at two sites within these TMCCs. Refuse at these locations will be staged (if needed) and removed via manual or aerial extraction during a future reclamation operation.

Thirty of the TMCCs were eradicated by federal, state and/or local Law Enforcement between summer 2011 and summer 2017 to disrupt the continued misuse of these public lands. Three TMCCs (nine independent sites), previously unknown to law enforcement officials, were identified by the Detection and Interdiction of Marijuana to aid Enforcement and Conservation (DIMEC) model, a deep learning image recognition model developed to identify TMCCs based on high-resolution aerial imagery by collaborators at the Pacific Southwest Research Station. Research scientists from IERC visited all TMCCs between August 2015 (prior to the initiation of this grant) and August 2018 to document and ascertain the magnitude of impacts caused by these TMCCs. During initial documentation of the site, IERC estimated the length of irrigation line, quantity of refuse, and recorded all identifiable water diversions, fertilizers and pesticides.

All complexes lie within tributaries of the Klamath River, a Hydrological Unit with a population of sensitive and federally listed salmonids, including steelhead (*Oncorhynchus mykiss*) and chinook (*Oncorhynchus tshawytscha*). All but three complexes, are located within United States Fish and Wildlife Service delineated Critical Habitat for the northern spotted owl (NSO) that is listed as Threatened under the Endangered Species Act (ESA). The remaining three complexes are located within one kilometer of NSO critical habitat.

A multi-prong approach was utilized for the scale of reclamation and coordination efforts based on site- / area- specific needs to maximize efficiency and leverage the strengths of project partners ranging from large, multi-day, targeted operations to single-day, multi-organization efforts to low-scale, opportunistic, single-day operations undertaken with just IERC staff. This



document is structured to: provide operational synopses for two large staging operations conducted with California Conservation Corps (CCC), Trinity County Resource Conservation District (TCRCD), and the Watershed Research and Training Center (WRTC), and one large air removal operation performed in cooperation with United States Forest Service (USFS); an additional summary for smaller single site efforts; and site-level breakdowns displaying summary statistics for each site.

Staging Operation 1: June 06 – June 13, 2018 (CCC)

IERC, subcontracting to CCC, staged a collection of 13 TMCCs (Figure 1, Table 1) on the Six Rivers and Klamath National Forests managed by USFS at 35 individual sling locations around the Somes Bar Area between June 6 and June 13, 2018. The TMCCs encompass 24 individual sites each with camps, associated growing plots and infrastructure. The operation was implemented on sites specifically within the Lower Klamath and Salmon River watersheds, reclaiming areas where a total of 4,500 pounds of fertilizer and 55 pounds of pesticides were recorded by IERC researchers during pre-reclamation site assessments.

Thirty-three people participated in the operation, including two California Department of Fish and Wildlife (CDFW) Wardens and nine USFS Law Enforcement Officers (LEO) (contributes to Federal cost-share match) to clear sites prior to entry by reclamation teams and provide general site security. Total active operational time (does not include travel, briefing, or coordination times) equaled 726 person hours.

Staging Operation 2: July 30 – August 03, 2018 (TCRCD and WRTC)

IERC, subcontracting to TCRCD and WRTC, staged a collection of seven TMCCs (Figure 1, Table 1) on the Shasta-Trinity National Forest managed by USFS at 31 individual locations between July 30 and August 03, 2018. The TMCCs encompass 14 individual sites each with camps, associated growing plots and infrastructure. The operation was implemented on sites specifically within the East Fork Hayfork Creek, Big Creek, Little French Creek, Butter Creek, and Sulfur Glade Creek watersheds reclaiming areas where a total of 2,884 pounds of fertilizer and 86 pounds of pesticides were recorded by IERC researchers during pre-reclamation site assessments.

Twenty-eight people participated in the operation, including three USFS Law Enforcement Officers (contributes to cost-share match) to clear sites prior to entry by reclamation teams and provide general site security. Total active operational time (does not include travel, briefing, or coordination times) equaled 434.5 person hours.



Refuse Removal Aerial Operation: August 14 – August 21, 2018 (USFS)

Between August 14 and August 21, 2018, grow site refuse and infrastructure was removed via helicopter from 19 public land TMCCs totalling 38 individual grow sites (Table 1, Figure 1) on the Six Rivers, Shasta-Trinity, and Klamath National Forests managed by USFS. IERC led staging efforts for every site during the staging operations summarized above, except three, between June and August 2018. The last three complexes (Raspberry Delight, Knot Bowlin, and Big Creek 2) were staged on the day of the aerial removal and overseen by IERC staff.

Over 20,000 pounds of human-generated trash, refuse, and grow site infrastructure, including 97,555 feet of irrigation pipe was removed from 61 individual staging locations through 67 long line loads by helicopter (Table 2), with an additional staging location removed via truck (62 total staging locations). The reclaimed TMCCs encompass 38 individual sites each with camps, associated growing plots and infrastructure.

Thirty-one total people participated in the operation, including fifteen USFS Law Enforcement Officers and six California National Guardsmen (CaNG) to be included as cost-share match. Additionally, all helicopter flight time was donated by USFS as cost-share match under a cooperative agreement between IERC and USFS. Total active operational time (does not include travel, briefing, or coordination times) equaled 565.1 person hours. All helicopter flight time and USFS LEO staff time combined for nearly \$70,000 in federal cost-share match during the operation.

Miscellaneous Reclamation Efforts: Summer 2018

During the late spring and summer 2018 (May through September) IERC led, or significantly contributed, to reclamation efforts at an additional 13 TMCCs comprised of 20 independent sites on the Six Rivers, Shasta-Trinity, and Klamath National Forests managed by USFS. The operation was implemented on sites specifically within the Ukonom Creek, Lower Hayfork Creek, Horse Linto Creek, Lower South Fork Trinity River, and Middle South Fork Trinity River watersheds reclaiming areas where a total of 11,360 pounds of fertilizer and 114 pounds of pesticides were recorded by IERC researchers during pre-reclamation site assessments.

These efforts were undertaken either as individual, one-off operations, or material was staged and removed during aerial helicopter refuse removal operations of nearby staged sites. Across all individual operations, approximately 22,885 pounds of human-generated trash, refuse, and grow site infrastructure, including 70,618 feet of irrigation pipe was removed.



Table 1. Summary information by complex listed by staging date for quantity of site per complex and current status of complexes with reclamation efforts led by Integral Ecology Research Center during summer 2018.

Staging Operation	Map ID	Complex Name	Stage Date(s)	# of Independent Sites Reclaimed	# of Sites Still Need Assessment/ Staging	Total # Sites	Aerial removal during USFS Operation	Status
Other	1	Grassy Flat 1	5/7/2018	2	0	2		Complete
	2	Grassy Flat 2	5/7/2018	1	0	1		Complete
	3	HayshedComplex	05/07/2018, 05/08/2018	3	0	3		Complete
	4	LimeDyke2	5/8/2018	2	0	2		Complete
	5	Hayshed 4	5/8/2018	1	0	1		Complete
	6	CorralCreek2	5/9/2018	1	0	1		Complete
CCC	7	Go Road	6/6/2018	1	0	1	X	Complete
	8	Offield Mountain	6/7/2018	1	0	1	X	Complete
	9	Offield Saddle	6/7/2018	1	0	1	X	Complete
	10	Mud Creek	6/8/2018	2	0	2	X	Complete
	11	Pre Brush	6/8/2018	1	0	1	X	Complete
	12	Squirrel Creek	6/8/2018	1	0	1	X	Complete
	13	Crapo Creek	6/9/2018	1	0	1	X	Complete
	14	Lazy Stanshaw	6/10/2018	1	0	1	X	Complete
	15	Sandy Bar	6/10/2018	1	0	1	X	Complete
	16	Fortilla	6/11/2018	3	0	3	X	Complete
	17	5Mile	6/12/2018, 6/19/2018, 7/8/2018	9	0	9	X	Complete
	18	RedCap1	6/13/2018	1	0	1	X	Complete
	19	RedCap2	6/13/2018	1	0	1		Staged
Other	20	SideWinder	6/21/2018	2	0	2	X	Complete
	21	LimeDyke3	7/10/2018	1	0	1		Complete



Staging Operation	Map ID	Complex Name	Stage Date(s)	# of Independent Sites Reclaimed	# of Sites Still Need Assessment/ Staging	Total # Sites	Aerial removal during USFS Operation	Status
TCRCD/ WRTC	22	Wildwood.ChinaGulch	7/30/2018	2	0	2		Staged
	23	Little French Creek	7/31/2018	1	0	1	X	Complete
	24	Whites Bar	7/31/2018	1	0	1	X	Complete
	25	ChinaPeak	7/31/2018	2	0	2		Staged
	26	Eye In The Sky	8/1/2018	5	*1	6	X	Complete
	27	Pattison Ranch	8/2/2018	2	0	2	X	Complete
	28	OakRidge	8/3/2018	1	0	1		Staged
Other	29	BigCreek2	8/20/2018	1	0	1	X	Complete
	30	KnotBowlin	8/20/2018	1	0	1	X	Complete
	31	Raspberry Delight	8/20/2018	2	0	2	X	Complete
	32	Bear Peak	8/26/2018	1	0	1		Staged
	33	Dowd	9/20/2018	1	*1	2		Complete
# COMPLETED				51	2	53		
# STAGED				6	0	6		
GRAND TOTAL				57	2	59		

* At least one site remains to be staged but complex is categorized as 'Complete' for this report as at least 80% of fully reclaimed.

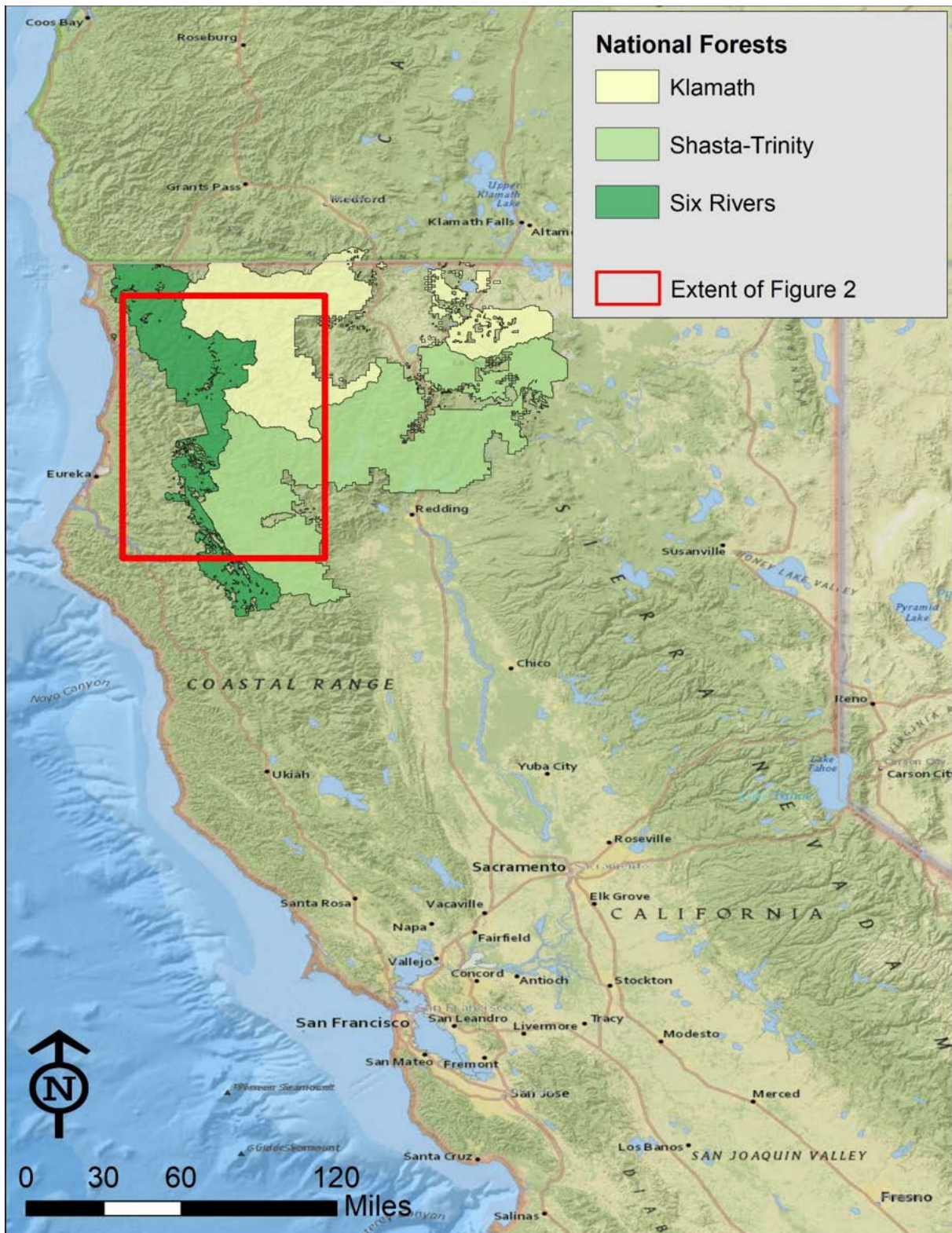


Figure 1. General overview of reclamation locations led by Integral Ecology Research Center during summer 2018 within the Shasta-Trinity, Six Rivers, and Klamath National Forests. Note the red square indicates the spatial extent of Figure 2.

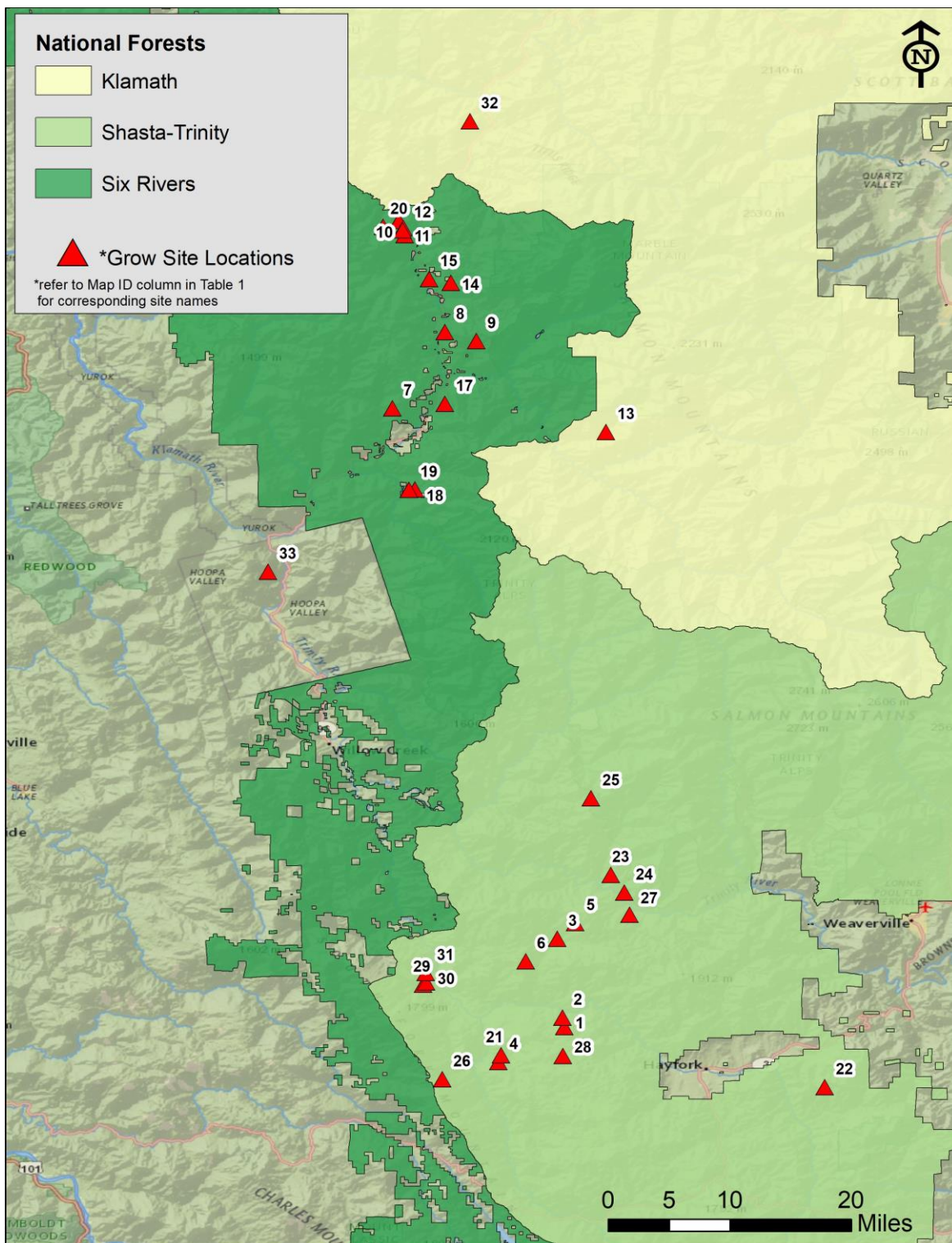


Figure 2. Locations of all complexes with reclamation efforts led by Integral Ecology Research Center during summer 2018 within the Shasta-Trinity, Six Rivers, and Klamath National Forests. Complex no. 33 (i.e. Dowd) is located on the Hoopa Valley Indian Reservation.



Table 2. Summary of all complexes, refuse quantities, and helicopter resources used during the August 14 – 21, 2018 reclamation air operation within Six Rivers, Klamath, and Shasta-Trinity National Forests. Note the person hours only include active operation time and do not account for travel, briefings, or coordination times

Complex Name	Date	People	Person Hours	Location	Total (Pounds)	Pipe (feet)	# Nets (trash)	# Cobiners (pipe)	Long Line Loads: HazMat Staged	# Sites
5-Mile	08/14/2018	19	88.35		3,375	8,770	12	9	11: Yes	9
Crapo Creek	08/15/2018	16	62.93		1,231	8,000	2	6	5: No	2
Go Road					350	1,300	2	0	1: Yes	1
Sandy Bar					275	685	1	3	3: Yes	1
Lazy Stanshaw	08/16/2018	22	76.88		500	4,000	1	1	1: Yes	1
Offield Mountain					460	1,200	1	2	1: Yes	1
Offield Saddle					150	250	1	1	1: No	1
Fortilla					1,360	8,700	7	4	3: Yes	3
Mud Creek	08/17/2018	21	78.74		690	1,600	3	2	4: No	2
Pre-Brush					210	-	2	0	2: No	1
Side Winder					900	7,900	2	3	2: Yes	2
Squirrel Creek					970	5,000	1	3	3: Yes	1
Pattison Ranch					380	700	2	0	2: No	2
Whites Bar Creek	08/18/2018	13	23.18		630	2,500	3	2	3: Yes	1
Little French Crk	08/19/2018	13	19.93		1,120	3,900	3	3	4: Yes	1
Big Creek 2	08/20/2018	19	101.33		1,570	3,800	6	3	5: Yes	1
Knot Bowlin					200	150	1	0	1: Yes	1
Raspberry Delight					1,100	4,400	3	4	3: Yes	2
Eye In The Sky	08/21/2018	19	113.75		4,950	34,700	9	12	12: Yes	5
TOTAL					20,421	97,555	62	58	67	38



Fully Reclaimed Complexes

Site-specific information summarizing site background and each reclamation effort is provided within this section. Sites are arranged based on the first staging date and match the exact order of Table 1 for quick reference.

Grassy Flat 1 and 2

Grassy Flat includes two moderate-sized cultivation sites in the Shasta-Trinity National Forest within the Lower Hayfork Creek watershed in Trinity County. The sites were comprehensively staged by IERC and USFS on 2/07/2018. Staged refuse was air lifted via helicopter on 5/07/2018, resulting in the removal of 5,885 pounds of trash and grow site related infrastructure using seven nets and 12 cobiners.

Location:

1: [REDACTED]

2: [REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

17

Total Refuse Removed:

5,885 pounds

Total Pipe Length:

22,500 feet

Number of Cobiners:

12

Number of Nets:

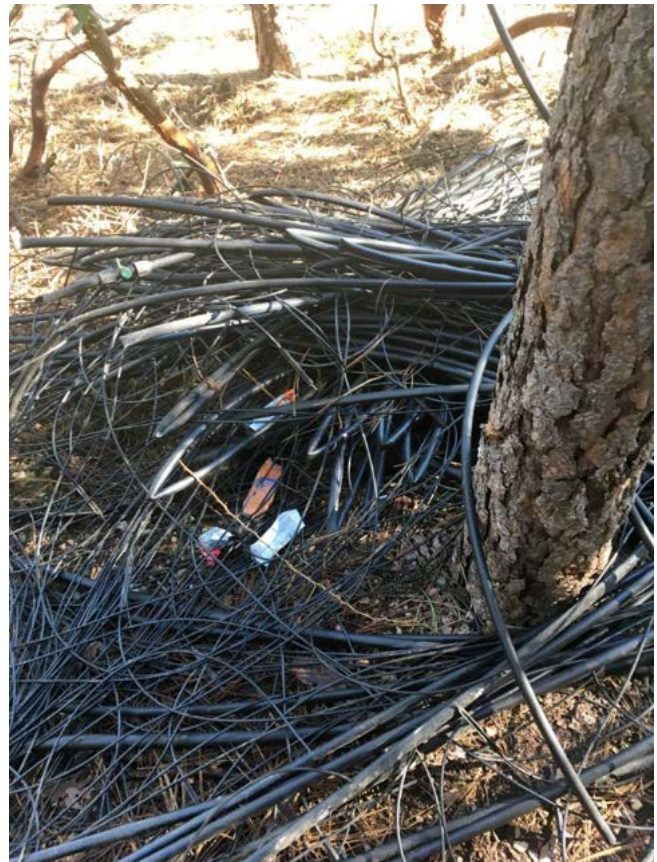
7

Amount of fertilizer detected on site:

2,353 pounds

Amount of pesticides detected on site:

62 pounds





Hayshed Complex

Hayshed Complex includes several sites in the Shasta-Trinity National Forest within the Corral Creek tributaries of the Lower Hayfork Creek watershed in Trinity County. The complex was eradicated by law enforcement in 2017, with 8,143 plants present. The site was comprehensively staged by IERC, USFS, WRTC, and TCRCD over two days on 5/07/2018 and 5/08/2018. Staged refuse was air lifted via helicopter on 5/10/2018, resulting in the removal of 4,780 pounds of trash and grow site related infrastructure using six cobiners and five nets.

Location:

[REDACTED]

Number of Individual Sites:

3

Number of Longline Loads:

8

Total Refuse Removed:

4,780 pounds

Total Pipe Length:

15,000 feet

Number of Cobiners:

6

Number of Nets:

5

Amount of fertilizer detected on site:

1,217 pounds

Amount of pesticides detected on site:

15 pounds





Lime Dyke 2

Lime Dyke 2 is a large cultivation site in the Shasta-Trinity National Forest within the Butter Creek tributaries of the Trinity River in Trinity County. This site was eradicated in 2017 with 2,596 plants present. The site was comprehensively staged by IERC, WRTC and USFS on 1/30/2018. Staged refuse was air lifted via helicopter on 5/08/2018, resulting in the removal of 2,680 pounds of trash and grow site related infrastructure using four cobiners and six nets.

Location:

[REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

7

Total Refuse Removed:

2,680 pounds

Total Pipe Length:

17,688 feet

Number of Cobiners:

4

Number of Nets:

6

Amount of fertilizer detected on site:

1,788 pounds

Amount of pesticides detected on site:

No containers found. Restricted-use pesticides of unknown quantities detected through environmental sampling.





Hayshed 4

Hayshed 4 is a small cultivation site in the Shasta-Trinity National Forest within the Corral Creek tributaries of the Lower Hayfork Creek watershed in Trinity County. The site was eradicated by law enforcement in 2017 with 361 plants present. The site was comprehensively staged and reclaimed by IERC, USFS, WRTC, and TCRCD on 5/08/2018. Staged refuse was manually removed by personnel and transported via truck, resulting in the removal of 200 pounds of trash and grow site related infrastructure.

Location:

[REDACTED]

Number of Individual Sites:

1

Total Refuse Removed:

200 pounds

Total Pipe Length:

1,800 feet

Amount of fertilizer detected on site:

18 pounds

Amount of pesticides detected on site:

No containers found.





Corral Creek 2

Corral Creek 2 is a cultivation site in the Shasta-Trinity National Forest within the Corral Creek tributaries of the Lower Hayfork Creek watershed in Trinity County. The site was eradicated by law enforcement in 2017 with an approximated 8,000 plants present, and believed to be last active in 2017. The site was comprehensively staged by IERC, TCRCD, WRTC, and USFS on 4/25/2018. Staged refuse was air lifted via helicopter on 5/09/2018, resulting in the removal of 3,050 pounds of trash and grow site related infrastructure using six cobiners and one nets.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

9

Total Refuse Removed:

3,050 pounds

Total Pipe Length:

5,280 feet

Number of Cobiners:

6

Number of Nets:

1



Amount of fertilizer detected on site:

818 pounds

Amount of pesticides detected on site:

8 pounds



Go Road

Go Road is a small cultivation site in the Six Rivers National Forest in Humboldt County, last active in 2015. One hundred and twenty-two (122) plants were eradicated in 2015 by law enforcement. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/6/2018. Staged refuse was air lifted via helicopter on 8/15/2018, resulting in the removal of 350 pounds of trash and grow site related infrastructure using two nets.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

1

Total Refuse Removed:

350 pounds

Total Pipe Length:

1,300 feet

Number of Cobiners:

0

Number of Nets:

2

Amount of fertilizer detected on site:

150 pounds

Amount of pesticides detected on site:

No containers found. Restricted-use pesticides of unknown quantities detected through environmental sampling.





Offield Mountain

Offield Mountain is a moderately-sized cultivation site in the Six Rivers National Forest, Siskiyou County, that was occupied in 2015. The site was eradicated by law enforcement in 2015. The site was comprehensively staged by IERC, CCC, CDFW-LED and USFS-LEI on 6/7/2018. Staged refuse was air lifted via helicopter on 8/16/2018, resulting in the removal of 460 pounds of trash and grow site related infrastructure using two cobiners and one net.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

1

Total Refuse Removed:

460 pounds

Total Pipe Length:

1,200 feet

Number of Cobiners:

2

Number of Nets:

1

Amount of fertilizer detected on site:

157 pounds

Amount of pesticides detected on site:

11 pounds





Offield Saddle

Offield Saddle is a small cultivation site in the Six Rivers National Forest in Siskiyou County, last active in 2015. Two hundred and sixty-three (263) plants were eradicated in 2015 by law enforcement. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/7/2018. Staged refuse was air lifted via helicopter on 8/16/2018, resulting in the removal of 150 pounds of trash and grow site related infrastructure using one cobiner and one net.

Location:



Number of Individual Sites:

1

Number of Longline Loads:

1

Total Refuse Removed:

150 pounds

Total Pipe Length:

250 feet

Number of Cobiners:

1

Number of Nets:

1

Amount of fertilizer detected on site:

Unknown

Amount of pesticides detected on site:

Unknown. No containers found.





Mud Creek

Mud Creek is a cultivation site in the Klamath National Forest in Siskiyou County likely occupied in 2013. Mud Creek was eradicated by law enforcement. The site was comprehensively staged by IERC, CCC, CDFW-LED and USFS-LEI over two days on 6/8/2018 and 6/11/2018. Staged refuse was air lifted via helicopter on 8/17/2018, resulting in the removal of 690 pounds of trash and grow site related infrastructure using two cobiners and three nets.

Location:

[REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

4

Total Refuse Removed:

690 pounds

Total Pipe Length:

1,600 feet

Number of Cobiners:

2

Number of Nets:

3

Amount of fertilizer detected on site:

50 pounds

Amount of pesticides detected on site:

3 pounds





Pre-Brush

Pre-Brush is a small cultivation site in the Klamath National Forest in Siskiyou County. It was estimated to have only 50 plants, likely last active in 2013. Pre-Brush was not eradicated by law enforcement. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/8/2018. Staged refuse was air lifted via helicopter on 8/17/2018, resulting in the removal of 210 pounds of trash and grow site related infrastructure using two nets.

Location:

██████████ ██████████

Number of Individual Sites:

1

Number of Longline Loads:

2

Total Refuse Removed:

210 pounds

Total Pipe Length:

0 feet

Number of Cobiners:

0

Number of Nets:

2

Amount of fertilizer detected on site:

7 pounds

Amount of pesticides detected on site:

2 pounds





Squirrel Creek

Squirrel Creek is a moderately-sized cultivation site in the Klamath National Forest in Siskiyou County. It was likely occupied between 2010 and 2014 and was eradicated by law enforcement. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/8/2018. Staged refuse was air lifted via helicopter on 8/17/2018, resulting in the removal of 970 pounds of trash and grow site related infrastructure using three cobiners and one net.

Location:

██████████ ██████████

Number of Individual Sites:

1

Number of Longline Loads:

3

Total Refuse Removed:

970 pounds

Total Pipe Length:

5,000 feet

Number of Cobiners:

3

Number of Nets:

1

Amount of fertilizer detected on site:

200 pounds

Amount of pesticides detected on site:

3 pounds





Crapo Creek

Crapo Creek is a moderately-sized cultivation complex in the Klamath National Forest in Siskiyou County and is located on a tributary of the Salmon River. It was active and eradicated by law enforcement in 2017. The site was staged by IERC, CCC, CDFW-LED and USFS-LEI on 6/9/2018. Staged refuse was air lifted via helicopter on 8/15/2018, resulting in the removal of 1,231 pounds of trash and grow site related infrastructure using six cobiners and two nets.

Location:

[REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

5

Total Refuse Removed:

1,231 pounds

Total Pipe Length:

8,000 feet

Number of Cobiners:

6

Number of Nets:

2

Amount of fertilizer detected on site:

404 pounds

Amount of pesticides detected on site:

Unknown. No containers found.





Lazy Stanshaw

Lazy Stanshaw is a moderately-size cultivation site on the Klamath National Forest in Siskiyou County. Lazy Stanshaw was eradicated by law enforcement in 2012 and had 15,000 plants. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/10/2018. Staged refuse was air lifted via helicopter on 8/16/2018, resulting in the removal of 500 pounds of trash and grow site related infrastructure using one cobiner and one net.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

1

Total Refuse Removed:

500 pounds

Total Pipe Length:

4,000 feet

Number of Cobiners:

1

Number of Nets:

1

Amount of fertilizer detected on site:

980 pounds

Amount of pesticides detected on site:

8.5 pounds





Sandy Bar Grow

Sandy Bar is a moderately-sized cultivation site in the Six Rivers National Forest in Siskiyou County, occupied in 2012 where 5,080 plants were eradicated by law enforcement. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/10/2018. Staged refuse was air lifted via helicopter on 8/16/2018, resulting in the removal of 275 pounds of trash and grow site related infrastructure using three cobiners and one net.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

3

Total Refuse Removed:

275 pounds

Total Pipe Length:

685 feet

Number of Cobiners:

3

Number of Nets:

1

Amount of fertilizer detected on site:

1325 pounds

Amount of pesticides detected on site:

6 pounds





Fortilla

Fortilla is a moderate-sized cultivation site in the Klamath National Forest in Siskiyou County likely occupied most recently in 2016 - 2017. Fortilla was eradicated by law enforcement in an earlier year. The site was comprehensively staged by IERC, CCC, CDFW-LED and USFS-LEI over two days on 6/10/2018 and 6/11/2018. Staged refuse was air lifted via helicopter on 8/17/2018, resulting in the removal of 1,360 pounds of trash and grow site related infrastructure using four cobiners and seven nets.

Location:

[REDACTED]

Number of Individual Sites:

3

Number of Longline Loads:

3 *Plus one load removed by truck

Total Refuse Removed:

1,360 pounds

Total Pipe Length:

8,700 feet

Number of Cobiners:

4

Number of Nets:

7

Amount of fertilizer detected on site:

462 pounds

Amount of pesticides detected on site:

9 pounds





Five-mile

Five-mile is a large cultivation complex in the Six Rivers National Forest in Humboldt County. Five-mile was eradicated by law enforcement in 2016. The site was comprehensively staged by IERC, California Conservation Corps (CCC), and USFS-LEI over two days on 6/12/2018 and 6/19/2018. Staged refuse was air lifted via helicopter on 8/14/2018, resulting in the removal of 3,315 pounds of trash and grow site related infrastructure using nine cobiners and twelve nets. IERC reclamation teams removed an additional 60 pounds of infrastructure during pre-staging activities for a gross total complex weight of 3,375 pounds of removed trash.

Location:

██████████ 687W

Number of Individual Sites:

9

Number of Longline Loads:

11

Total Refuse Removed:

3,375 pounds

Total Pipe Length:

8,170 feet



Number of Cobiners:

9

Number of Nets:

12

Amount of fertilizer detected on site:

683 pounds

Amount of pesticides detected on site:

12 pounds



Red Cap 1

Red Cap 1 is a small cultivation site in the Six Rivers National Forest in Humboldt County. The site was staged by IERC, CCC, and USFS-LEI on 6/13/2018, refuse and grow site related infrastructure was staged but will be carried to the road at a future date and not airlifted from the site. This site had one dead fisher and one dead gray fox detected on the day of eradication.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

0; manual removal of refuse

Total Refuse Removed:

115 pounds

Total Pipe Length:

150 feet

Amount of fertilizer detected on site:

0 pounds

Amount of pesticides detected on site:

No containers found. Restricted-use pesticides detected through environmental sampling.





Sidewinder

Sidewinder is a moderately-sized cultivation complex in the Six Rivers National Forest in Humboldt County. One thousand eighty-three (1,083) plants were eradicated by law enforcement at Sidewinder in August 2015. The site was comprehensively staged by IERC on 6/21/2018. Staged refuse was air lifted via helicopter on 8/17/2018, resulting in the removal of 900 pounds of trash and grow site related infrastructure using three cobiners and two nets.

Location:

[REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

2

Total Refuse Removed:

900 pounds

Total Pipe Length:

7,900 feet

Number of Cobiners:

3

Number of Nets:

2

Amount of fertilizer detected on site:

50 pounds

Amount of pesticides detected on site:

3 pounds





Lime Dyke 3

Lime Dyke 3 is a moderately-sized cultivation complex in the Shasta-Trinity National Forest in Trinity County. The site was comprehensively staged and approximately half the refuse (1860 lbs.) removed via helicopter on 5/8/2018 using four cobiners and two nets. The remainder of staged material (1673 lbs.) was manually removed and transported via truck and trailer. While weights were recorded for removed refuse, estimates were not collected for the length of irrigation piping.

Location:



Number of Individual Sites:

1

Number of Longline Loads:

4; plus manual removal

Total Refuse Removed:

3533 pounds

Total Pipe Length:

Unknown

Number of Cobiners:

4

Number of Nets:

2

Amount of fertilizer detected on site:

Unknown

Amount of pesticides detected on site:

Unknown





Little French Creek

Little French Creek is a moderately-sized cultivation site in the Shasta-Trinity National Forest in Trinity County, east of Big French Creek. This site was not eradicated by law enforcement but detected by IERC, but has been unoccupied for at least three years. The site was comprehensively staged by IERC, USFS-LEI, and TCRCD on 7/31/2018. Staged refuse was air lifted via helicopter on 8/19/2018, resulting in the removal of 1,120 pounds of trash and grow site related infrastructure using three cobiners and three nets.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

4

Total Refuse Removed:

1,120 pounds

Total Pipe Length:

3,900 feet

Number of Cobiners:

3

Number of Nets:

3

Amount of fertilizer detected on site:

50 pounds

Amount of pesticides detected on site:

Unknown. No containers found.





Whites Bar Creek

Whites Bar Creek is a cultivation site in the Shasta-Trinity National Forest, in the Trinity River Watershed, within Trinity County. This site is situated within a small fire scar. There were 5,368 plants eradicated at this site in July 2013. The site was comprehensively staged by IERC and WRTC on 7/30/2018. Staged refuse was air lifted via helicopter on 8/18/2018, resulting in the removal of 630 pounds of trash and grow site related infrastructure using two cobiners and three nets.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

3

Total Refuse Removed:

630 pounds

Total Pipe Length:

2,500 feet

Number of Cobiners:

2

Number of Nets:

3

Amount of fertilizer detected on site:

250 pounds

Amount of pesticides detected on site:

Unknown. No containers found.





Eye in the Sky

Eye in the Sky is a large cultivation complex in the Shasta-Trinity National Forest and private timberland property adjacent to the National Forest. This cultivation complex is located in Trinity County, northwest of the town of Hyampom. This site was active in 2016 and 2017, and previously undetected by law enforcement, but was discovered by the DIMEC computer model. The site was comprehensively staged by IERC, TCRCD, WRTC, and USFS-LEI on 8/1/2018. Staged refuse was air lifted via helicopter on 8/21/2018, resulting in the removal of 4950 pounds of trash and grow site related infrastructure using ten cobiners and nine nets.

Location:

[REDACTED]

Number of Individual Sites:

5

Number of Longline Loads:

12

Total Refuse Removed:

4,950 pounds

Total Pipe Length:

3,4700 feet

Number of Cobiners:

12

Number of Nets:

9

Amount of fertilizer detected on site:

2,803 pounds

Amount of pesticides detected on site:

50 pounds





Pattison Ranch

Pattison Ranch is a moderately-sized cultivation complex in the Shasta-Trinity National Forest in the mainstem Trinity River watershed, within Trinity County. The site was staged by IERC, Trinity County Resource Conservation District (TCRCD), Watershed Research and Training Center (WRTC), and USFS-LEI on 8/2/2018. Staged refuse was air lifted via helicopter on 8/18/2018, resulting in the removal of 380 pounds of trash and grow site related infrastructure using two nets.

Location:

Upper: [REDACTED]

Lower: [REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

2

Total Refuse Removed:

380 pounds

Total Pipe Length:

700 feet

Number of Cobiners:

0

Number of Nets:

2

Amount of fertilizer detected on site:

145 pounds

Amount of pesticides detected on site:

Unknown. No containers found.





Big Creek 2

Big Creek 2 is a small cultivation site in the Shasta-Trinity National Forest within the Big Creek watershed in Trinity County. Big Creek 2 was not eradicated by law enforcement and likely has not been active since 2016. The site was comprehensively staged by IERC and USFS-LEI on 8/20/2018 during the air removal operation. Staged refuse was air lifted via helicopter on the same day, resulting in the removal of 1,570 pounds of trash and grow site related infrastructure using three cobiners and six nets.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

5

Total Refuse Removed:

1,570 pounds

Total Pipe Length:

3,800 feet

Number of Cobiners:

3

Number of Nets:

6

Amount of fertilizer detected on site:

230 pounds

Amount of pesticides detected on site:

9 pounds





Knot Bowlin

Knot Bowlin is a small cultivation site in the Shasta-Trinity National Forest within the Big Creek watershed in Trinity County. Knot Bowlin was not eradicated by law enforcement and was located while attempting to access a different cultivation site. The site was comprehensively staged by IERC and USFS-LEI on 8/20/2018 during the air removal operation. Staged refuse was air lifted via helicopter on the same day, resulting in the removal of 200 pounds of trash and grow site related infrastructure using one net.

Location:

[REDACTED]

Number of Individual Sites:

1

Number of Longline Loads:

1

Total Refuse Removed:

200 pounds

Total Pipe Length:

150 feet

Number of Cobiners:

0

Number of Nets:

1



Amount of fertilizer detected on site:

0 pounds

Amount of pesticides detected on site:

0 pounds



Raspberry Delight

Raspberry Delight is a small cultivation site in the Shasta-Trinity National Forest within the Big Creek watershed in Trinity County. The site was not eradicated by law enforcement and it is believed the last activity was 2014. This site was discovered by the Detection and Interdiction of Marijuana to aid Enforcement and Conservation Model (DIMEC). The site was comprehensively staged by IERC and USFS over two days on 8/14/2018 and 8/20/2018. Staged refuse was air lifted via helicopter on 8/20/2018, resulting in the removal of 1,100 pounds of trash and grow site related [REDACTED]

[REDACTED]
[REDACTED]
Number of Individual Sites:

2

Number of Longline Loads:

3

Total Refuse Removed:

1,100 pounds

Total Pipe Length:

4,400 feet

Number of Cobiners:

4

Number of Nets:

3

Amount of fertilizer detected on site:

2,405 pounds

Amount of pesticides detected on site:

4.5 pounds





Dowd

Dowd is a cultivation site in the Shasta-Trinity National Forest within the Horse Linto Creek watershed in Humboldt County. The site was eradicated by law enforcement in 2017 with approximately 5000 plants present. The site was staged and refuse for the bottom camp and plot manually removed by IERC and Hoopa Tribal Forestry employees on 7/20/2018.

Location:

[REDACTED]

Number of Individual Sites:

2

Number of Longline Loads:

0; manual removal of refuse

Total Refuse Removed:

700 pounds

Total Pipe Length:

800 feet

Number of Cobiners:

0

Number of Nets:

0

Amount of fertilizer detected on site:

1,283 pounds

Amount of pesticides detected on site:

26 pounds

Proportion of site completed:

80%





Staged Complexes

Red Cap 2

Red Cap 2 is a very small cultivation site in the Six Rivers National Forest occupied between 2013 and 2016. The site was eradicated both in 2013 and in 2016 by law enforcement. The site was comprehensively staged by IERC, CCC, and USFS-LEI on 6/13/2018, resulting in 1 net of refuse and grow site related infrastructure.

Location:

[REDACTED]

Number of Individual Sites:

1

Amount of fertilizer detected on site:

100 pounds

Amount of pesticides detected on site:

No containers found. Restricted-use pesticides detected through environmental sampling.





China Peak

China Peak is a cultivation complex in the Shasta-Trinity National Forest in Trinity County, within the New River watershed, eradicated by law enforcement in 2016. The complex was comprehensively staged by IERC, TCRCD, WRTC, and USFS-LEI on 7/31/2018, resulting in the collection of 3 nets and 4 cobiners of refuse and grow site related infrastructure.

Location:

[REDACTED]

Number of Individual Sites:

3

Amount of fertilizer detected on site:

75 pounds

Amount of pesticides detected on site:

30.5 pounds





Oak Ridge

Oak Ridge is a cultivation site in the Shasta-Trinity National Forest in Trinity County, within the Butler Creek watershed. The site was eradicated in 2017 of 3,942 plants by law enforcement. The site was comprehensively staged by IERC, TCRCD, and USFS-LEI on 8/3/2018 during an outreach and media effort with California Assemblyman Jim Wood. The effort resulted in the staging of 2 nets and 3 cobiners worth of refuse and grow site related infrastructure.

Location:

[REDACTED]

Number of Individual Sites:

1

Amount of fertilizer detected on site:

1,263 pounds

Amount of pesticides detected on site:

3 pounds





Wildwood/ China Gulch

Wildwood/ China Gulch is a mid-sized cultivation site in the Shasta-Trinity National Forest, in the South Fork Trinity River hydrologic unit. The site was eradicated on July 14, 2016 of 9,874 plants. The site was comprehensively staged by IERC, TCRCD, WRTC, and USFS-LEI on 7/31/2018 resulting in the collection of 3 – 4 net loads and 5-7 cobiners of refuse and grow site related infrastructure.

Location:

[REDACTED]

Number of Individual Sites:

2

Amount of fertilizer detected on site:

195 pounds

Amount of pesticides detected on site:

2 pounds





Bear Peak

Bear Peak is a cultivation site in Klamath National Forest within the Ukonom Creek watershed of the Klamath River in Siskiyou County. The site was comprehensively staged by IERC and USFS over two days on 7/24/2018 and 8/26/2018 resulting in the staging of approximately one net and three cobiners of refuse and grow site related infrastructure.

Location:

[REDACTED]

Number of Individual Sites:

1

Amount of fertilizer detected on site:

572 pounds

Amount of pesticides detected on site:

8 pounds



QUARTERLY PROGRESS SUMMARY

AGREEMENT # P1796020

Reclaiming our Public Lands and Watersheds from the Environmental Threats of
Trespass Cannabis Cultivation

Dates Covered: October 01, 2018 – December 31, 2018



Prepared by: Integral Ecology Research Center



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January 14, 2019

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Quarter 4 Progress Summary

In partial fulfillment of California Department of Fish and Wildlife's Cannabis Restoration Grant Program Agreement #P1796020, this document provides a quarterly summary of grant progress-to-date and includes documents developed by Integral Ecology Research Center (IERC) during the 4th Quarter of grant implementation (01 October 2018 through 31 December 2018). Supplementary documents include reclamation plans for 25 trespass marijuana cultivation complexes (TMCC) covered by four independent operations, a plan for two aerial helicopter operations, and a reclamation statistics summary that was provided to media outlets, state and federal congressional members and other project supporters. Due to the law enforcement sensitivity of clandestine cannabis operation locations, and their ongoing potential to contain environmental and human health hazardous materials, the exact locations have been redacted from the aforementioned documents; however, broad scale maps have been left to allow the identification of the regional scope and distribution of reclamation activities.

Per the grant agreement, all TMCCs are located within select portions of the Klamath Basin and visited with the express objective of implementing one of three activities:

1. **Assessment:** perform scientific assessments and evaluations ascertaining the magnitude of environmental impacts associated with the TMCS, including the inventory and sequestration of hazardous materials to reduce the risk of exposure during reclamation efforts.
2. **Staging:** the collection, bagging and preparation of non-hazardous grow site refuse and infrastructure into areas accessible to helicopter long-lines.
3. **Reclamation:** the manual or helicopter removal of grow site refuse and infrastructure utilizing a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.

Quarter 4 was IERC's most productive-to-date in regards to total TMCCs reclaimed (25 composed of 28 independent sites), and removed gross refuse weight (30,434 lbs.) and irrigation line length (115,407 ft.). Through the entire duration of the grant, IERC has assessed 74 potential TMCC locations. Of these, 54 TMCCs have been fully reclaimed composing 82 independent cultivation sites which tracks to a 48.2% completion rate of the 170 independent sites outlined in the grant agreement at the end of Year 1 of a two and a half year contract. From these areas, IERC has cumulatively removed 83,690 lbs. of refuse and 295,641 ft. (56 miles) of irrigation piping.

Grant Quarter	Activities			Removed Refuse and Grow Site Infrastructure		
	Assessment	Staging	Reclamation	Independent Sites	Total Refuse (lbs)	Irrigation Line (ft)
1: Jan – March 2018	11	0	0	0	0	0
2: April – June 2018	19	16	8	22	24,850	76,173
3: July – Sep 2018	19	10	21	32	23,266	100,561
4: Oct – Dec 2018	25	21	25	28	30,434	115,407
TOTAL	74	47	54	82	83,690[†]	295,641[†]

[†]Totals do not match quarterly summaries as refuse removed opportunistically is counted towards the total, but is only included in the quarterly summary following complete reclamation of the TMCC. In essence, the discrepancies are associated with TMCCs where refuse has been removed but have not been fully reclaimed.

**Shasta-Trinity, Klamath, and Six Rivers National Forests
Trespass Marijuana Cultivation Complex Reclamation**

RECLAMATION PLAN FOR OCTOBER 22 - 25, 2018 OPERATION



Integral Ecology Research Center



www.IERCecology.org

October 20, 2018

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Background

All trespass marijuana cultivation complexes (TMCCs) scheduled for reclamation efforts from October 22 - 25, 2018 are located on the Klamath, Six Rivers, and Shasta-Trinity National Forest in Trinity County (Figure 1). This reclamation plan includes nine different TMCCs that have been assessed by IERC prior to reclamation (Table 1). During assessments IERC personnel collected all information pertinent to planning reclamation efforts for each TMCC, including access information, calculations of refuse volume and irrigation pipe lengths, and an estimation of the quantity of labor required to reclaim the TMCC. Additionally, an inventory of confirmed and suspected hazardous materials was collected to reduce exposure risk to reclamation teams. Collected information are described in further detail below in the 'Description of Reclamation Summary Information' section and summarized for each TMCC to aid planning and coordination for reclamation team leaders.

This document summarizes TMCC reclamation planning information for two separate reclamation efforts: 1) reclamation activities on the Klamath National Forest TMCCs (one site on Six Rivers National Forest) to be implemented by members of the California Conservation Corps (CCC) and 2) the Shasta-Trinity National Forest sites to be reclaimed by employees of the Trinity County Resource Conservation District (TCRCD) and the Watershed Research Training Center (WRTC). This document is structured to treat each operation independently; a standalone section is included for each operation summarizing the necessary reclamation information for each TMCC provided in daily chronological order.

Reclamation efforts at large TMCCs must often be performed in multiple phases to properly assess, stage, and extract the large quantities of refuse and grow site infrastructure. As such, reclamation activities for operations described within this document will vary depending on the current status of the TMCC. Activities will range from trail cutting to provide access to reclamation teams, refuse staging and manual removal, to assisting IERC and their LE partners in the removal of refuse via aviation support. Reclamation activities listed chronologically by TMCC for each operation are summarized in Table 1 and provided in the summary description of each TMCC.

Table 1: Summary of the nine trespass marijuana cultivation complexes prepared for reclamation, site coordinates, schedule and activities to be performed.

Day	Date	TMCC Name	Location	Activity
Klamath Operation				
1	10/22/2018	Tinkham Creek		Trail Cutting; 1/2 Day
2	10/23/2018	Red Cap2		Manual Refuse Removal
3	10/24/2018	Tinkham Creek		Staging
4	10/25/2018	Needles		Staging and Manual Refuse Removal; 1/2 Day
Shasta-Trinity Operation				
1	10/22/2018	James Creek2016		Staging
2	10/23/2018	Nameless		Staging
2/3	10/23/2018 10/24/2018	No Name		Staging
3	10/24/2018	Oak Ridge		Manual Refuse Removal
4	10/25/2018	Wildwood/ China Gulch		Helicopter Refuse Removal
4	10/25/2018	Cheap Jeep		Staging and Helicopter Refuse Removal

Operational Information

Operational dates for reclamation efforts: October 22 - 25, 2018.

Klamath National Forest Sites: California Conservation Corps

Day 1 (October 22, 2018) Initial Meeting Time and Location: Somes Bar Turnout, Somes Bar, CA at 1030 hrs

Shasta-Trinity National Forest Sites: Watershed Center and Trinity County RCD

Day 1 (October 22, 2018) Initial Meeting Time and Location: Sheriff Substation, Hayfork, CA at 0900 hrs

****Meeting times and locations for all other days will be determined and announced at least one day prior to the reclamation date.**

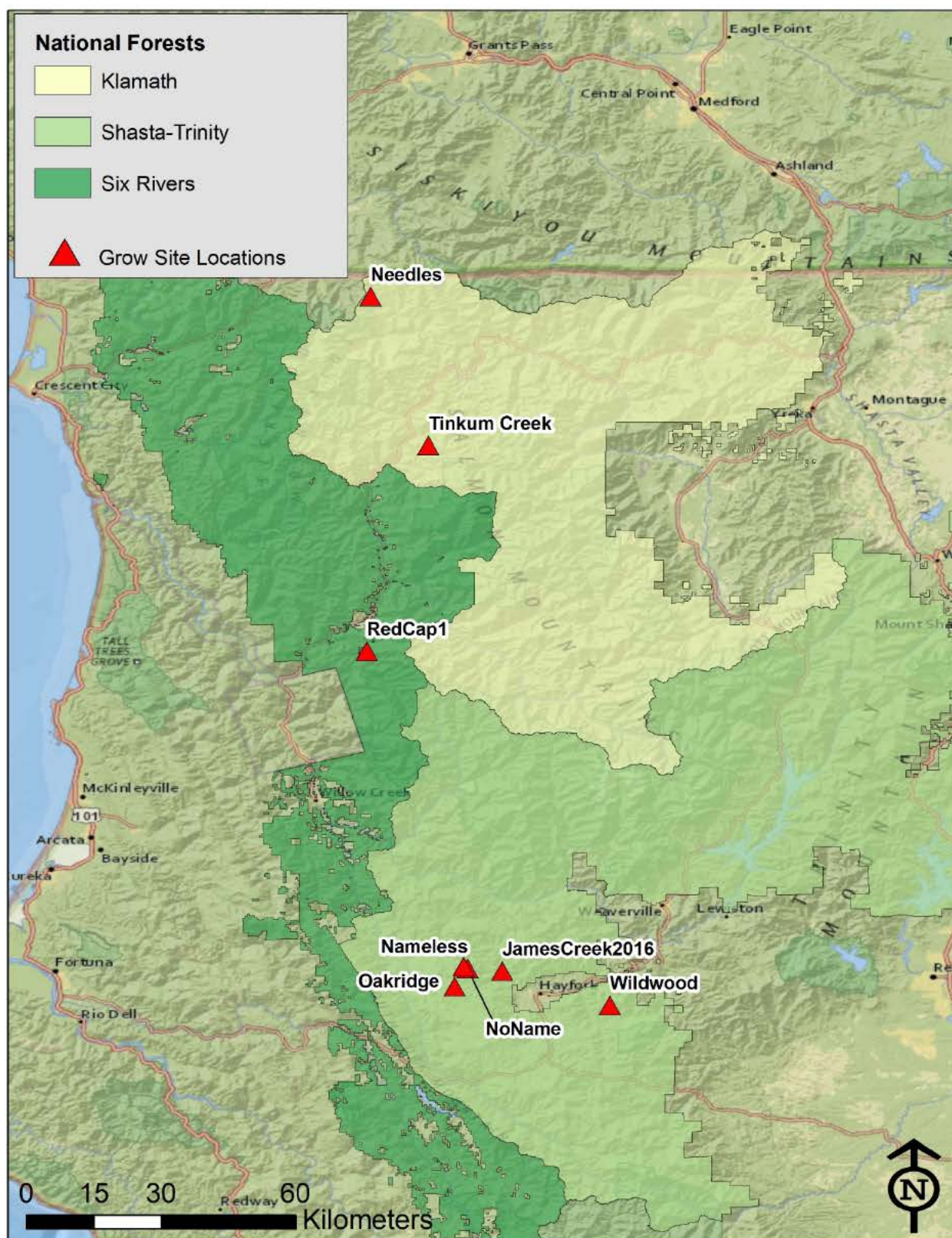


Figure 1. Map of trespass marijuana cultivation complex general locations scheduled for reclamation October 22 - 25, 2018 on the Klamath, Six Rivers, and Shasta-Trinity National Forests.

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass marijuana cultivation sites scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates are conservative and do not take into account of any 1/4" "spaghetti" line that may be present in the site.

Net (trash) and cobiner (pipe) loads

A typical Type 23 helicopter can carry various weight loads that are dependent on the current environmental conditions. On average, a long-line load of 500lb is typically within average single load capacity. Estimated number of net and cobiner loads can be calculated using the estimated amount of trash and pipe within a site. The trash weight is calculated with an estimate of 40lbs of weight per one full 55-gallon garbage bag of trash. The pipe weight is calculated with an estimate of 400lbs of weight per one mile of pipe.

Hazardous Materials

IERC collected several samples during the assessment of the cultivation sites to test for a suite of pesticides; however, results will likely not be available by the initial pre-staging reclamation date. IERC will make sure that all sprayers and other hazardous material will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged nearby but away from any reclamation activity for removal and disposal of at a later date by the land agency or qualified personnel. All staged suspected or confirmed material are clearly marked with bright orange bags, flagged with orange "Danger" flagging, and communicated with land agency managers and any personnel before and on the day of reclamation. Nevertheless, all participants should always use caution when handling trash and infrastructure.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

Klamath National Forest Reclamation Complexes
California Conservation Corps

Day One: October 22, 2018

Tinkham Creek Access Trail

Tinkham Creek is a moderate-sized cultivation site on the Klamath National Forest in Siskiyou County, last active in 2016. The site is accessed via a moderate, but extremely brushy ½-mile hike with 600-foot elevation gradient. Due to the extreme dense brush understory, the Tinkham Creek TMCC is considered currently inaccessible for a large reclamation team; thus, Day One of reclamation efforts will be one half-day dedicated to cutting a trail for site access. Reclamation staging efforts will be undertaken on Day Three.

Location of TMCC Features

Plot 1	[REDACTED]
Source 1	[REDACTED]
Source 2	[REDACTED]
Camp	unknown

Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

10 trash bags (350 – 450 lbs.)
Significantly more if camp is located

Irrigation Pipe Estimate:

500 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Day Two: October 23, 2018

Red Cap 2

Red Cap 2 is a small cultivation site on the Six Rivers National Forest in Humboldt County, that was active in 2013 and 2016. It was eradicated in both years by law enforcement. Red Cap 2 was staged by CCC crews in June 2018. Reclamation activities for this operation will involve manually removing staged material and transferring it into truck beds. Refuse will then be transported to the Hoopa transfer station for disposal no later than 1700 hours.

Location:

[REDACTED]

Access:

Forest Service Road 10N01, Red Cap Road

[REDACTED]

Staging Areas:

[REDACTED]

Several trash bags, 50-gallon drum, ~200m irrigation pipe

Hazardous Materials:

No hazardous materials were visually confirmed.



Day Three: October 24, 2018

Tinkham Creek

Tinkham Creek is a moderate-sized cultivation site on the Klamath National Forest in Siskiyou County, last active in 2016. The site is accessed via a moderate, extremely brushy ½-mile hike with 600-foot elevation gradient. Following trail-cutting efforts on Day One, refuse at the Tinkham Creek TMCC will be collected and staged for future aerial removal on Day Three.

Location of TMCC Features

Plot 1	████████████████████
Source 1	████████████████████
Source 2	████████████████████
Camp	unknown

Access:

████████████████████

Estimated Personnel Required:

12

Trash Estimate:

10 trash bags (350 – 450 lbs.)
Significantly more if camp is located

Irrigation Pipe Estimate:

500 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Day Four: October 25, 2018

Needles

Needles is a moderate cultivation site on the Klamath National Forest in Siskiyou County, last active in 2016. Ten thousand three hundred fifty-five (10,355) plants were eradicated by law enforcement in 2016. The site is accessed via an easy 1/3-mile hike on fairly flat terrain. Reclamation activities will span only one-half day and will include the manual removal of all grow site infrastructure. Removed refuse will be placed in trucks for disposal at the Orleans, CA transfer station no later than 1600.

Location of TMCC Features

Plot 1

Plot 2

Access:

Estimated Personnel Required:

6 or 12 for half-day

Trash Estimate:

3 trash bags (100 - 150 lbs.)

Irrigation Pipe Estimate:

250 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Shasta-Trinity National Forest Reclamation Complexes

TCRCD and WRTC

Day One: October 22, 2018

James Creek 2016

James Creek 2016 is a moderate-sized cultivation site on the Shasta-Trinity National Forest in Trinity County, last active in 2016. Three thousand one hundred sixty (3,160) plants were eradicated by law enforcement in 2016. Access requires an approximate 20-minute hike up a decommissioned road before descending downslope to the adjacent nose at [REDACTED].

Location of TMCC Features:

Plot 1 [REDACTED]

Plot 2 [REDACTED]

Source [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

14

Trash Estimate:

5 trash bags (200-300 lbs) = 1 net load

Irrigation Pipe Estimate:

1100 meters

Hazardous Materials:

No hazardous materials were visually confirmed



Day Two: October 23, 2018

Nameless

Nameless is a moderate-sized cultivation site on the Shasta-Trinity National Forest in Trinity County. Access requires a moderate-to-difficult one-mile hike with an approximate 800-foot elevation gradient.

Location of TMCC Features:

Plot 1	
Plot 2	
Source 2	
Source 1	
Camp	
Trash	

Access:

Estimated Personnel Required:

10

Trash Estimate:

13 trash bags (520 - 650 lbs)

Irrigation Pipe Estimate:

775 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



Day Three: October 24, 2018

No Name

No Name is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County Access requires an easy, approximate 10-minute hike. TMCC refuse staging of the No Name TMCC should begin on Day Two following the completion of Nameless TMCC at the discretion of the IERC Team Leader.

Assuming a decent portion of the site is staged on Day Two, only ½ crew (5-6 people) will be required on Day Three.

Location of TMCC Features:

Plot 1	
Source 1	
Source 2	
Camp 1	
Camp 2	
Camp 3	

Access:

Estimated Personnel Required:

10

Trash Estimate:

20 trash bags (800 - 1000 lbs)

Irrigation Pipe Estimate:

1025 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



Day Three: October 24, 2018 CONTINUED

Oak Ridge

Oak Ridge is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County. Access requires an easy 0.4-mile hike along an old skid road with 200 feet of elevation gain. Oak Ridge was staged in August 2018; reclamation activities will involve the manual removal of refuse for off-site transport via truck and will require only ½ crew (5 – 6 people). Staging areas 1 and 3 are located immediately off the road and require no hiking. A large trailer will be required for this operation.

Access:



Staging Areas and Material:

Staging Area	Location	HazMat
1		
2		confirmed carbofuran in sprayer
3		

Hazardous Materials:

The presence of carbofuran has been confirmed within one of the sprayers.



Day Four: October 25, 2018: Helicopter Operations

Wildwood / China Gulch

Wildwood/ China Gulch is a moderate-sized cultivation site on the Shasta-Trinity National Forest in Trinity County last active in 2016. Nine thousand eight hundred seventy-four (9,874) plants were eradicated by law enforcement in 2016. The TMCC was staged in August 2018 and reclamation activities will include assisting CDFW aurally remove refuse via helicopter. Access requires a moderate difficulty off-trail hike for about 1/5 mile (~350m) with 300-foot elevation change to reach the upper plot. An additional 1/3 mile (~500m) hike along well-established trails will be required for teams working staging areas within the lower plots. A trailer will be required for this operation.

Access:



Staging Areas and Material:

Hazardous Materials:

Two sprayers and a bottle of suspected carbofuran are located at staging locations.



Day Four: October 25, 2018 CONTINUED

Cheap Jeep

This site is a moderate-sized cultivation site on the Shasta-Trinity National Forest in Trinity County last active in 2010. This site is scheduled to be staged and hauled-out by helicopter on the same day on October 25, 2018. A trailer will be required for this operation.

Location:



Estimated Personnel Required:

8

Trash Estimate:

20 trash bags (800 – 900 lbs)

Irrigation Pipe Estimate:

1500 meters

Hazardous Materials:

Two sprayers were sampled and staged and should be avoided by reclamation personnel. IERC lead will handle these sprayers.

**Shasta-Trinity National Forest
Trespass Marijuana Cultivation Complex Reclamation**

Reclamation Plan for October 30 – November 2, 2018 Operation



Integral Ecology Research Center



www.IERCecology.org

October 28, 2018

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Background

All trespass marijuana cultivation complexes (TMCCs) scheduled for reclamation efforts from October 30 – November 2, 2018 are located on the Shasta-Trinity National Forest in Trinity County (Table 1; Figure 1). This reclamation plan includes seven different TMCCs; all will be assessed by IERC prior to reclamation (Table 1). During assessments IERC personnel collected all information pertinent to planning reclamation efforts for each TMCC, including access information, calculations of refuse volume and irrigation pipe lengths, and an estimation of the quantity of labor required to reclaim the TMCC. Additionally, an inventory of confirmed and suspected hazardous materials was collected to reduce exposure risk to reclamation teams. Collected information are described in further detail below in the 'Description of Reclamation Summary Information' section and summarized for each TMCC to aid planning and coordination for reclamation team leaders.

Day 1 (October 30, 2018) and Day 4 (November 02, 2018)

Table 1: Summary of the seven trespass marijuana cultivation complexes prepared for reclamation, site coordinates, schedule and activities to be performed.

Day	Date	TMCC Name	Location	Activity
1	10/30/2018	Thompson Peak Big Creek (Possible)		Staging
2	10/31/2018	Raccoon Face		Staging
3	11/01/2018	Bar 717 Double Bar 717		Staging
4	11/01/2018	Rock Finger Casava (Possible)		Staging and Removal (Casava Only)

Operational Information

Operational dates for reclamation efforts: October 30 – November 2, 2018.

Shasta-Trinity National Forest Sites:

Day 1 (October 30, 2018) Initial Meeting Time and Location: Sheriff Substation, Hayfork, CA at 0830 hrs

Day 2 (October 31, 2018): Westbound 299 turnout near Under Mountain Rd/ 299 intersection
(40 48.373N 123 28.236W) at 0830 hrs

Day 3 (November 01, 2018): Sheriff Substation, Hayfork, CA at 0830 hrs

Day 4 (November 02, 2018): Underwood Mountain Rd and Forest Route 5N09 intersection
(40 47.503N 123 30.199W) at 0830 hrs

****Meeting times and locations for all other days will be determined and announced at least one day prior to the reclamation date.**

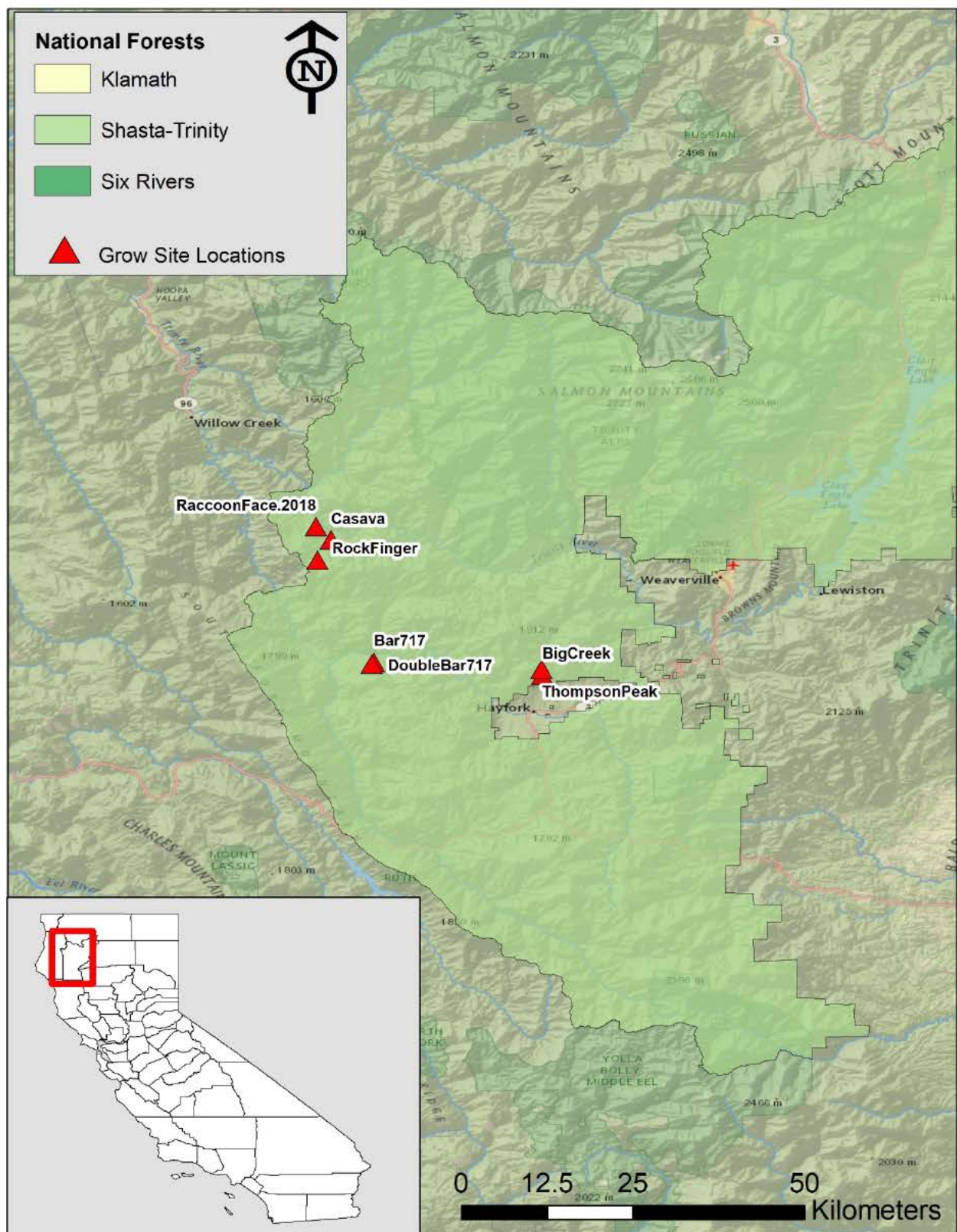


Figure 1. Map of trespass marijuana cultivation complex general locations scheduled for reclamation October 30 – November 02, 2018 on Shasta-Trinity National Forest.

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass marijuana cultivation sites scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates do not take into account of any 1/4" "spaghetti" line that may be present in the site.

Net (trash) and cobiner (pipe) loads

A helicopter can haul an average of 500lb net load or cobiner capacity. Estimated number of net and cobiner loads can be calculated using the estimated amount of trash and pipe within a site. The trash weight is calculated with an estimate of 40lbs of weight per one full 55-gallon garbage bag of trash. The pipe weight is calculated with an estimate of 400lbs of weight per one mile of pipe.

Hazardous Materials

IERC collected several samples during the assessment of the cultivation sites to test for a suite of pesticides; however, results will likely not be available by the initial pre-staging reclamation date. IERC will make sure that all sprayers and other hazardous material will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged for removal at a later date. Nevertheless, all participants should always use caution when handling trash and infrastructure.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

Shasta-trinity National Forest Reclamation Complexes

Day One: October 30, 2018

Thompson Peak

Thompson Peak is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2016. Three thousand nine hundred thirty-one (3,931) plants were eradicated by law enforcement in 2016. The site is accessed via a moderately difficult ¼-mile hike.

Location of TMCC Features

Plot 1	
Plot 2	
Plot 3	
Camp	
Trash Pile	

Access:

Estimated Personnel Required:

10

Trash Estimate:

22 trash bags (660 - 880 lbs)

Irrigation Pipe Estimate:

730 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



Big Creek (Time permitting)

IERC has no information on this site besides the general location, and the number of plants eradicated (3,931). This is estimated to be a ¼-mile hike.

Location:

Site Location

Access:

Likely From

Estimated Personnel Required:

Unknown

Trash Estimate:

Unknown

Source:

Unknown

Irrigation Pipe Estimate:

Unknown

Hazardous Materials:

A hazmat assessment has not yet been completed.

No Photo Available

Day Two: October 31, 2018

Raccoon Face

Raccoon Face is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2018. One thousand nine hundred sixty (1,960) plants were eradicated by law enforcement in 2018 and Six thousand three hundred forty-seven (6,347) were eradicated in 2013. The site is accessed via a moderately difficult 1/3-mile hike.

Location of TMCC Features

Plot 1

Trash

Access:

[REDACTED]

Estimated Personnel Required:

15

Trash Estimate:

30 trash bags (900 - 1200 lbs)

Irrigation Pipe Estimate:

750 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



Day Three: November 1, 2018

Bar 717

Bar717 is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2018. Two hundred seventy (270) plants were eradicated by law enforcement in 2018. The site is accessed via an easy ¼-mile hike.

Location of TMCC Features

Plot 1	
Plot 2	
Plot 3	
Main Camp	
Old Camp	
Trash Pit	
Cistern	



Access:

Estimated Personnel Required:

8

Trash Estimate:

3 trash bags (90 - 120 lbs)

Source:

Unknown

Irrigation Pipe Estimate:

800 meters know

Hazardous Materials:

Empty over-the-counter pesticide bottles were visually confirmed, as well as an empty bottle of suspected carbofuran.

Double Bar 717

Double Bar717 is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2018. Two hundred seventy (270) plants were eradicated by law enforcement in 2018. The site is accessed via an easy ¼-mile hike.

Location of TMCC Features:

Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Plot 4	[REDACTED]
Camp	[REDACTED]
Trash Pile	[REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

8

Trash Estimate:

20 trash bags (600 - 800 lbs)

Source:

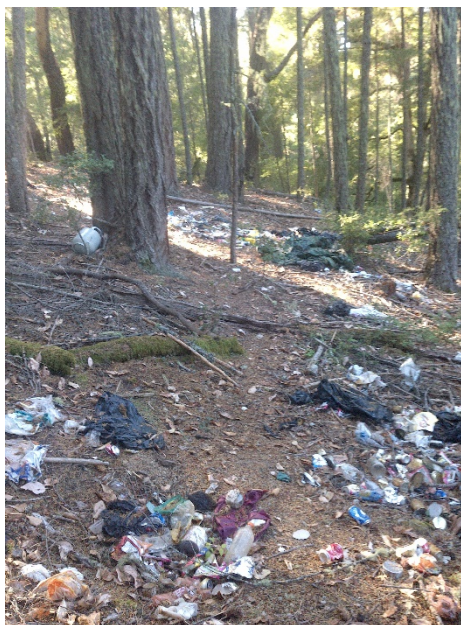
Source 1	[REDACTED]
Source 2	[REDACTED]
Source 3	[REDACTED]

Irrigation Pipe Estimate:

765 meters known

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



Day Four: November 2, 2018

Rock Finger

Rock Finger is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2014. Fifteen thousand two hundred forty (15,240) plants were eradicated by law enforcement in 2014. The site is accessed via a moderately difficult ¾-mile hike.

Location of TMCC Features:

Plot 1	
Trash	
Trash in Creek	
Cook Camp	
Camp	

Access:

Estimated Personnel Required:

8

Trash Estimate:

7 trash bags (200 - 250 lbs)

Source:

Irrigation Pipe Estimate:

750 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



**Six Rivers and Shasta-Trinity National Forest
Trespass Marijuana Cultivation Complex Reclamation**

Reclamation Plan for November 05 – November 09, 2018 Operation



Integral Ecology Research Center



www.IERCecology.org

November 3, 2018

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Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts from November 05 - 09, 2018 are located on the Six Rivers and Shasta-Trinity National Forest in Trinity County (Figure 1). This reclamation plan includes eight different TMCC that have been assessed by IERC prior to reclamation (Table 1). During assessments IERC personnel collected all information pertinent to planning reclamation efforts for each TMCC, including access information, calculations of refuse volume and irrigation pipe lengths, and an estimation of the quantity of labor required to reclaim the TMCC. Additionally, an inventory of confirmed and suspected hazardous materials was collected to reduce exposure risk to reclamation teams. Collected information is described in further detail below in the 'Description of Reclamation Summary Information' section and summarized for each TMCC to aid planning and coordination for reclamation team leaders.

This document summarizes TMCC reclamation planning information for two separate reclamation efforts: 1) reclamation activities to be implemented by members of the California Conservation Corps (CCC) and 2) reclamation activities to be implemented by employees of the Trinity County Resource Conservation District (TCRCD) and the Watershed Research and Training Center (WRTC). This document is structured to treat each operation independently; a standalone section is included for each operation summarizing the necessary reclamation information for each TMCC provided in daily chronological order.

Table 1: Summary of the nine trespass marijuana cultivation complexes (TMCC) prepared for reclamation, site coordinates, schedule and activities to be performed.

Day	Date	TMCC Name	Location	Activity
California Conservation Corps Operation				
1	11/05/2018	Kamorock		Staging
1	11/05/2018	KFrog		Staging
2	11/06/2018	Hawkins		Staging
3	11/07/2018	Steep N Deep		Staging
4	11/08/2018	Schoolhouse		Staging
WRTC and TCRCD Operation				
1	11/06/2018	Eye In The Sky		Staging and Manual Refuse Removal
2	11/07/2018	James Creek 2017		Staging
3	11/08/2018	Pink		Staging
4	11/09/2018	TBD	TBD	TBD

Operational Information

Operational dates for reclamation efforts: November 05 – November 09, 2018.

Initial Meeting Dates and Times:

California Conservation Corps:

Day 1 (November 05, 2018) **1000 hrs** at Burnt Ranch Campground, Burnt Ranch, CA

Resource Conservation District and the Watershed Research and Training Center:

Day 1 (November 06, 2018) **0830 hrs** on Route 1 (along South Fork Mountain) at an intersection with a private forestry road (which eventually becomes 2N27) ***Coordinates: 40 32.086 123 30.528

**Meeting times and locations for all other days will be determined and announced at least one day prior to the reclamation date.

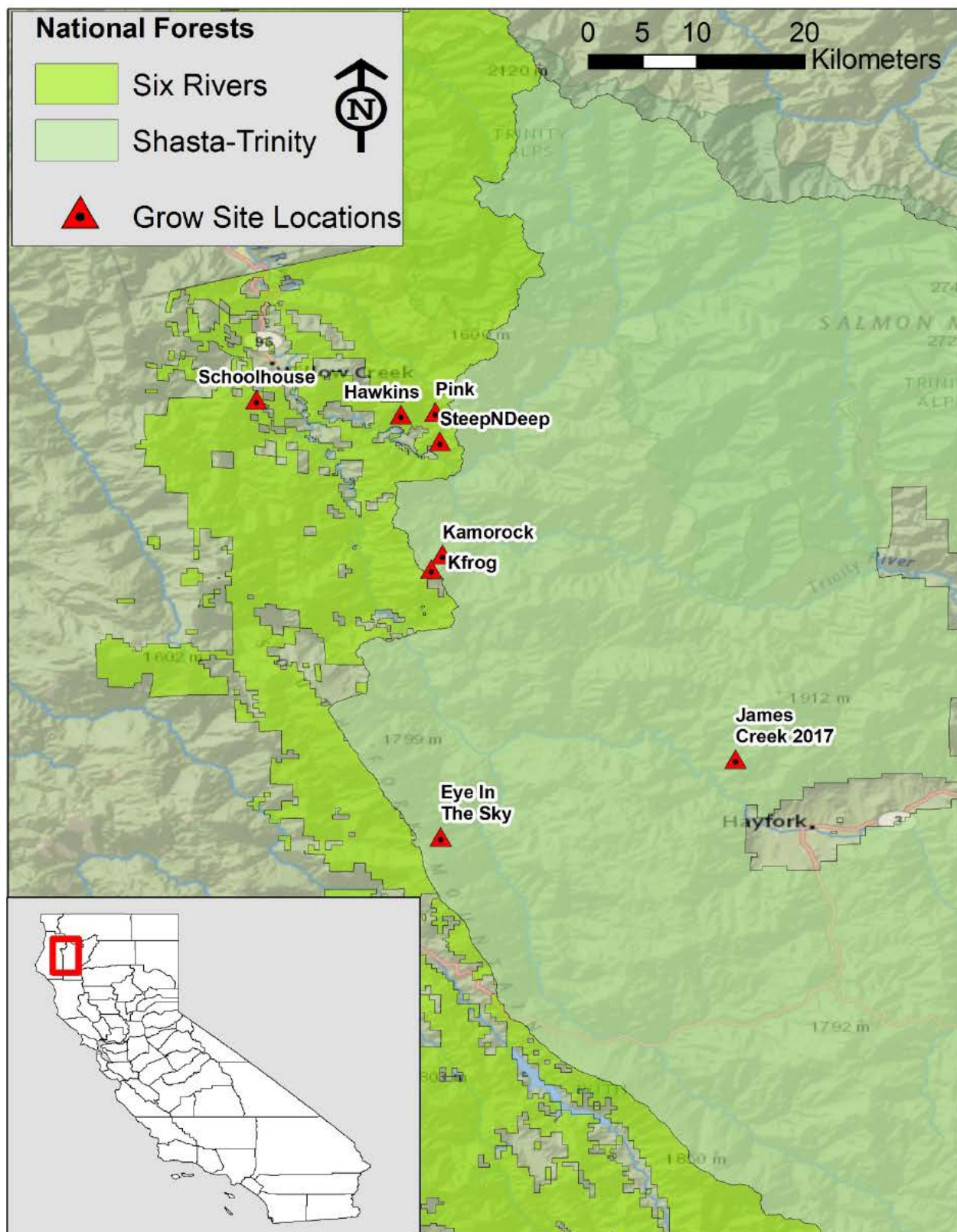


Figure 1. Map of trespass marijuana cultivation complex general locations scheduled for reclamation November 05 - 09, 2018 on the Six Rivers and Shasta-Trinity National Forests.

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass marijuana cultivation complexes scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates do not take into account of any 1/4" "spaghetti" line that may be present in the site.

Net (trash) and cobiner (pipe) loads

A helicopter can haul an average of 500lb net load or cobiner capacity. Estimated number of net and cobiner loads can be calculated using the estimated amount of trash and pipe within a site. The trash weight is calculated with an estimate of 40lbs of weight per one full 55-gallon garbage bag of trash. The pipe weight is calculated with an estimate of 400lbs of weight per one mile of pipe.

Hazardous Materials

IERC collected several samples during the assessment of the cultivation sites to test for a suite of pesticides; however, results will likely not be available by the initial pre-staging reclamation date. IERC will make sure that all sprayers and other hazardous material will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged for removal at a later date. Nevertheless, all participants should always use caution when handling trash and infrastructure.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

California Conservation Corps Reclamation Complexes

Day One: November 5, 2018

Kamorock

Kamorock is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2014. Five thousand five hundred seventy-four (5,574) plants were eradicated by law enforcement in 2014. The site is accessed via an easy-to-moderately difficulty ¼-mile hike.

Location of TMCC Features:

Camp

Plot 1

Plot 2

Source 1

Source 2

Access:

[REDACTED]

Estimated Personnel Required:

4

Trash Estimate:

1 - 2 trash bags (50 - 80 lbs)

Irrigation Pipe Estimate:

750 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



KFrog

KFrog is a small cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2014. Two hundred thirty-one (231) plants were eradicated by law enforcement in 2014. The site is accessed via an easy hike.

Location of TMCC Features:

Plot

small pipe pile



Access:

[REDACTED]

Estimated Personnel Required:

2 - 4

Trash Estimate:

1 bag (25 – 40 lbs)

Irrigation Pipe Estimate:

60 meters

Hazardous Materials:

No pesticides were visually confirmed by IERC personnel.

Day Two: November 6, 2018

Hawkins

Hawkins is a moderate-sized cultivation site on the Six Rivers National Forest, Trinity County last active in 2011. The site is accessed via an easy-to-moderate 1000-ft hike.

Location:

Plot 1

Plot 2

Plot 3

Source

Camp



Access:

[REDACTED]

Estimated Personnel Required:

12 (half-day)

Trash Estimate:

10 trash bags (350 – 450 lbs.)

Irrigation Pipe Estimate:

400 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.

Day Three: November 7, 2018

Steep N Deep

Steep N Deep is a moderate sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2012. Four thousand seven hundred and seventy-four (4,774) plants were eradicated by law enforcement in 2012. The site is accessed via a strenuous 1-mile hike.

Location:

Source

Plot 1

Camp

Trash

Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

15 trash bags (600-650 lbs.)

Irrigation Pipe Estimate:

1200 meters

Hazardous Materials:

Sprayer:

[REDACTED]



Day Four: November 8, 2018

Schoolhouse

Schoolhouse is a moderate-sized cultivation site on the Six Rivers National Forest, Humboldt County. Five thousand one hundred five (5,105) plants were eradicated by law enforcement in 2010. The site is accessed via an easy 200-meter hike over fairly flat terrain.

Location of TMCC Features:

Plot 1	
Plot 2	
Trash	
Camp	

Access:

Estimated Personnel Required:

12

Trash Estimate:

15 trash bags (400 - 800 lbs)

Irrigation Pipe Estimate:

500 m

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed.



TCRCD and WRTC Reclamation Complexes

Day One: November 6, 2018

Eye in the Sky

Eye in the Sky is a large cultivation complex on the Trinity Timberlands Property, Trinity County last active likely in 2017. Site access is considered moderate difficulty involving ½ mile hike. The site was discovered by the DIMEC computer model. The Eye In The Sky cultivation complex was not active in 2018 and showed no signs of recent activity. The majority of the cultivation complex has already been staged and removed via helicopter with the exception of this final cultivation plot. All refuse will be dragged upslope to a decommissioned road before being manually removed, the total distance refuse will be transported is approximately ½ mile. Refuse will be manually removed and transported to the Hayfork Disposal Station.

Location:

Plot



Access:



Estimated Personnel Required:

10

Trash Estimate:

5 trash bags (150 – 250 lbs.)

Irrigation Pipe Estimate:

Unknown

Hazardous Materials:

No hazardous materials were visually confirmed by IERC personnel within this area.

****** A TRAILER WILL BE REQUIRED THIS DAY FOR HAULING REFUSE TO THE TRANSFER STATION.**

Day Two: November 7, 2018

James Creek 2017

James Creek 2017 is a moderate-to-large sized cultivation complex on the Shasa-Trinity National Forest, Trinity County last active in 2017. ***Site access is considered extremely strenuous*** involving a two-mile hike with approximately 1500 – 2000 ft. elevation gain; **only the most fit and seasoned reclamation specialists should participate.**

Location:

Source	
Plot 1	
Plot 2	
Trim Camp	
Trash Pit	
Camp 1	
Camp 2	
Camp 4	
Camp 5	
Staging Area	



Access:

Estimated Personnel Required:

15

Trash Estimate:

40 trash bags (1500 - 1700 lbs.)

Irrigation Pipe Estimate:

1100 meters

Hazardous Materials:

Sprayer: (positive: Carbofuran)

Day Three: November 8, 2018

Pink

Pink is a collection of two moderate-sized cultivation sites (i.e. PinkUpper and PinkLower) separated by approximately 775m on the Shasta-Trinity National Forest, Trinity County.

Location of TMCC Features:

Upper Plot

[REDACTED]

Lower Plot

[REDACTED]

Upper Source

[REDACTED]

Lower Source

[REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

25 trash bags (800 - 1200 lbs)

Irrigation Pipe Estimate:

900 meters

Hazardous Materials:

Sprayer:

[REDACTED]

Additionally, multiple bottles of over-the-counter pesticides were visually confirmed.

Day Four: November 9, 2018

Shotgun

Shotgun is a small-sized cultivation site on the Shasta-Trinity National Forest, Trinity County. Eight thousand three hundred eighty-two (8,382) plants were eradicated by law enforcement in 2010. The site is accessed via an easy-moderate 1/3-mile hike, most of which is on a road.

Location:

Plot 1



Plot 2



Camp 1



Camp 2



Source 1



Source 2



Access:



Estimated Personnel Required:

6

Trash Estimate:

3 trash bags (90 - 120 lbs.)

Irrigation Pipe Estimate:

655 meters

Hazardous Materials:

Over-the-counter pesticides were visually confirmed by IERC personnel within this area.

Bubba Gump

Bubba Gump is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2014. The number of plants eradicated by law enforcement is unknown. The site is accessed via an easy-moderate hike.

Location of TMCC Features:

Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Camp	[REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

15

Trash Estimate:

20 bags (600 – 800 lbs)

Irrigation Pipe Estimate:

1600 meters

Hazardous Materials:

Multiple over-the-counter pesticides were visually confirmed by IERC personnel.



Casava (Time permitting)

Casava is a moderate-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2012. Ten thousand four hundred thirty-six (10,436) plants were eradicated by law enforcement in 2012. The site is accessed via a moderately difficult 1/8-mile hike.

Location of TMCC Features:

Plot 1	
Trash	
Drying Site	

Access:

Estimated Personnel Required:

2

Trash Estimate:

1 trash bags (30 - 40 lbs)

Source:

Unknown

Irrigation Pipe Estimate:

20 meters

Hazardous Materials:

No pesticides were visually confirmed



Shasta-Trinity and Six Rivers National Forest
Trespass Marijuana Cultivation Complex Reclamation

Reclamation Plan for November 30 and December 3, 2018 Operation



Integral Ecology Research Center



www.IERCecology.org

November 28, 2018

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on November 30 and December 3, 2018 are located on the Six Rivers and Shasta-Trinity National Forests in Trinity County. This reclamation plan includes nine different TMCC that have been assessed and pre-staged by IERC and partners prior to this planned air operation (Table 1). An inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation.

Operational Information

Operational dates for reclamation efforts: November 30 and December 3, 2018

Meeting Times and Locations:

November 30, 2018: 0730 at Hayfork Sheriff Substation

December 3, 2018: 0830 at Hawkins Bar, large empty lot with chain link fence (across from intersection of Denny Road and Route 299); Coordinates, 40° 52.213N 123° 31.420W

*****From meeting locations, teams will be assigned and proceed to field locations, LZ, or DZ**

Landing Zone Coordinates

Friday, November 30, 2018 (Hayfork Operation): [REDACTED]

Monday, December 3, 2018 (Burnt Ranch Operation): [REDACTED]

*****Drop Zone for Raccoon Face (if required, Monday Operation):** [REDACTED]

Table 1: Summary of the nine trespass marijuana cultivation complexes (TMCC) prepared for reclamation, site coordinates, schedule and activities to be performed.

Date	TMCC Name	Location	Pick-up Points Per Site	Estimated # of Long-line Loads Per Site
Hayfork Operation (Figure 1)				
11/30/2018	James Creek 2017	XXXXXXXXXX	8 (will require 2 teams)	9
11/30/2018	James Creek 2016.1	XXXXXXXXXX	2	2
11/30/2018	James Creek 2016.2	XXXXXXXXXX	2	2
11/30/2018	Nameless	XXXXXXXXXX	3	7
11/30/2018	No Name	XXXXXXXXXX	5	7
Burnt Ranch Operation (Figure 2)				
12/03/2018	Pink Lower	XXXXXXXXXX	2	2
12/03/2018	Pink Upper	XXXXXXXXXX	1	1
12/03/2018	SteepNDeep	XXXXXXXXXX	1	2
12/03/2018	Raccoon Face	XXXXXXXXXX	3	9

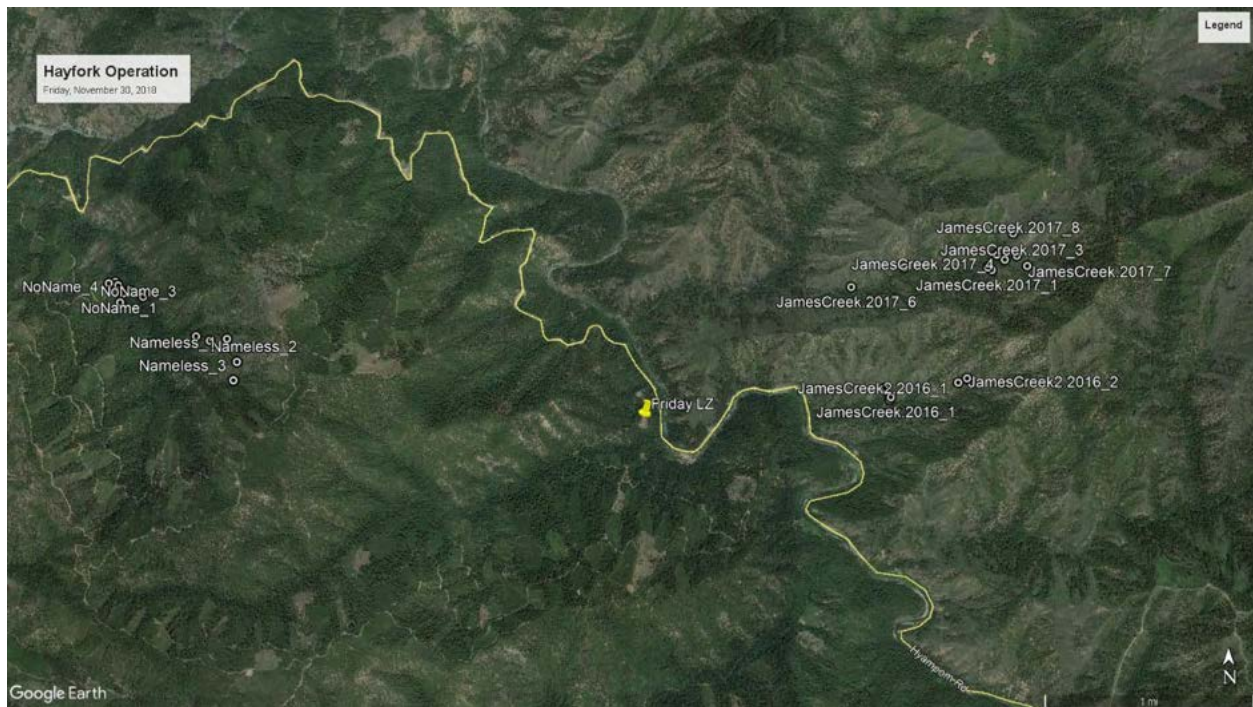


Figure 1. Locations of marijuana cultivation complexes scheduled for reclamation, landing zone and drop zone for operation scheduled for Friday, November 30, 2018.



Figure 2. Locations of marijuana cultivation complexes scheduled for reclamation, landing zone and drop zone for operation scheduled for Monday, December 3, 2018.



Reclamation Statistics

November 30 and December 3, 2018

Hayfork and Burnt Ranch California Grow Site Complexes

Reclamation Helicopter Operation Synopsis

Organizations Involved

Governmental: California Department of Fish and Wildlife Law Enforcement Division (CDFW-LED), Trinity County Resource Conservation District (TCRCD), California Conservation Corps (CCC), Trinity County Sheriff's Office (TCSO), and California Army National Guard (CANG)

Non-Governmental: Integral Ecology Research Center (IERC) and The Watershed Research and Training Center (WRTC)

Reclamation Organizers: Dr. Greta Wengert and Ivan Medel (IERC); Ian Erickson (TCRCD); Tom Evans (WRTC).

Funding Support: Specific funding for the reclamation of these trespass cannabis cultivation complexes was provided by a **California Department of Fish and Wildlife Cannabis Restoration Grant** to Integral Ecology Research Center.

Logistical and Match Support: The California Department of Fish and Wildlife Law Enforcement Division assisted with coordination and provided both law enforcement officers and vehicles as a force multiplier for this effort.

Statistics

Number of cannabis complexes reclaimed: Eight (8)

Number of independent sites reclaimed: Nine (9)

Locations: Shasta-Trinity and Six Rivers National Forests

Watersheds affected: Trinity River and Hayfork Creek

Species of conservation concern affected: foothill yellow-legged frog, Pacific fisher, western pond turtle, southern torrent salamander, northern spotted owl, steelhead trout, chinook and coho salmon

Personnel: IERC (5), CCC (15), WRTC (9), TCRCD (4), CDFW-LED (5), CANG (2), TCSO (4)

Trash and infrastructure removed during reclamation: 13,380 lbs (6.7 tons)

Irrigation pipe removed during reclamation: 5.9 miles (31,034 ft)

Long-line loads: 33 loads (Total long-line flight time ~ 6.8 hrs)



Top Photo Left: One of several irrigation pipe loads, which were diverting streams.
Top Photo Right: Amount of refuse removed from one complex.
Bottom Photo: A delighted team following a successful reclamation operation on National Forest Lands.



QUARTERLY PROGRESS REPORT

AGREEMENT # P1796020

Reclaiming our Public Lands and Watersheds from the Environmental Threats of Trespass Cannabis Cultivation

Dates Covered: January 1 – March 31, 2019

Prepared by:
Integral Ecology Research Center



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Dr. Mourad Gabriel

I. Activities and Tasks Performed During Reporting Period

Tasks performed include the following:

- Updating the database of all grow sites available for reclamation under this agreement. This step provides an accurate and up-to-date database for reclamation organizational needs and future report writing.
- Deconflicting with law enforcement agencies for information on current status of sites. This continues to be an essential step to ensure that any reclamation operations are not in direct conflict with ongoing investigations or cases. In addition, it provides an additional safety mechanism so that reclamation teams are not entering any sites with recent activity.
- Conducting additional operational background, safety and awareness training for staff and subcontractors for reclamation.
- Visiting sites in preparation for reclamation planning (data collection and hazardous materials assessment). Cumulative number of potential complexes visited and assessed during this quarter is 34, though only 25 of those were found to be actual cultivation complexes needing assessment and reclamation. Many of these sites were visited and assessed during this quarter under other IERC agreements, which will be scheduled for reclamation under the CDFW Cannabis grant this spring through fall.
- Developing site-specific reclamation plans and reports for submittal to partners and CDFW grant manager.

- Conducted staging and reclamation operations at 7 complexes (constituting 7 individual sites) on the Shasta-Trinity and Six Rivers National Forests and Hoopa Valley Indian Reservation for sites previously assessed by IERC. All operations were led by IERC, with Hoopa Tribal Forestry assisting in the manual removal and staging of grow site refuse at these complexes in preparation for either helicopter or manual removal (Reclamation Plans attached). Five of these sites were manually reclaimed during this quarter.

II. Upcoming Work Scheduled

During this quarter, we visited and assessed 10 sites that are scheduled for reclamation early in the second quarter of 2019 (Reclamation Plans Attached). We continue to visit, assess, and document sites in our main target areas for further Spring/ Summer 2019 reclamation operations. As we complete assessments, we will develop site-specific reclamation plans for distribution to all partners. These reclamation efforts will employ the Watershed Research and Training Center and Trinity County Resource Conservation District as subcontractors on sites within Trinity County and closely adjacent sites. Reclamation in Humboldt and Siskiyou County sites will employ CCC.

III. Progress Update Towards Project Objectives

To date, we have made significant progress towards our objective of documenting non-hazardous and hazardous materials to be removed from over 116 trespass cannabis cultivation sites (goal of 170 sites). We have fully removed all refuse from 90 independent sites which tracks to 52.9% of our objective of reclaiming 170 sites. Many additional sites have been assessed and will be incorporated into reclamation plans for this Winter/ Spring operations.

IV. Subcontractor Activities

None of our subcontractors have participated in reclamation operations under this grant in this quarter, due in part to winter furloughs for 2 of the 3 subcontractors. Additionally, heavy snow and rain have prohibited significant progress towards reclamation this quarter, thus we have focused on assessments by IERC staff.

V. Problems Encountered and Timeline for Resolution

Low elevation snow levels have impacted our ability to access and operate within higher elevation areas. We did not have significant amounts of reclamation planned for Quarter 1, so expected progress rates were met.

Additionally, the Federal government shutdown was a slight hindrance to progress as planning with our federal partners could not be completed for the 6-week period the shutdown encompassed.

QUARTERLY PROGRESS SUMMARY

AGREEMENT # P1796020

Reclaiming our Public Lands and Watersheds from the Environmental Threats of
Trespass Cannabis Cultivation

Dates Covered: January 01, 2019 – March 31, 2019



Prepared by: Integral Ecology Research Center



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April 08, 2019

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QUARTER 1 OF 2019, PROGRESS SUMMARY

In partial fulfillment of California Department of Fish and Wildlife's Cannabis Restoration Grant Program Agreement #P1796020, this document provides a quarterly summary of grant progress-to-date and includes documents developed by Integral Ecology Research Center (IERC) during the 5th Quarter of grant implementation (Quarter 1 of 2019, 01 January 2019 through 31 March 2019). Supplementary documents include reclamation plans for 7 trespass marijuana cultivation complexes (TMCC) implemented as one-off reclamations not associated with a larger-scale operation. Due to the law enforcement sensitivity of clandestine cannabis operation locations, and their ongoing potential to contain environmental and human health hazardous materials, the exact locations have been redacted from the aforementioned documents; however, broad scale maps have been left to allow the identification of the regional scope and distribution of reclamation activities.

Per the grant agreement, all TMCCs are located within select portions of the Klamath Basin and visited with the express objective of implementing up to three of the following activities:

1. **Assessment:** perform scientific assessments and evaluations ascertaining the magnitude of environmental impacts associated with the TMCCs, including the inventory and sequestration of hazardous materials to reduce the risk of exposure during reclamation efforts. Reclamation plans are developed based on the results and findings of these assessments.
2. **Staging:** the collection, bagging and preparation of non-hazardous grow site refuse and infrastructure into areas accessible to helicopter long-lines, or manual removal, using a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.
3. **Reclamation:** the manual or helicopter removal of grow site refuse and infrastructure utilizing a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.

Quarter 1 of 2019 was IERC's most productive-to-date in regards to total assessed TMCCs (34) as inclement weather and seasonal layoffs of reclamation teams reduced the ability to implement larger-scale reclamation activities. Through the entire duration of the grant, IERC has assessed 116 potential TMCC locations. Of these, 59 TMCCs have been fully reclaimed composing 90 independent cultivation sites which tracks to a 52.9% completion rate of the 170 independent sites outlined in the grant agreement at the midway point of a two-and-a-half-year contract. From these areas, IERC has cumulatively removed 84,310 lbs. of refuse and 296,505 ft. (56 miles) of irrigation piping.

Grant Quarter	Activities at Cultivation Complexes			Removed Refuse and Grow Site Infrastructure		
	Assessment	Staging	Reclamation	Independent Sites	Total Refuse (lbs)	Irrigation Line (ft)
1: Jan – March 2018	13	2	0	0	0	0
2: April – June 2018	21	16	6	12	23,295	68,003
3: July – Sep 2018	23	11	21	36	26,023	97,905
4: Oct – Dec 2018	25	20	27	37	34,372	129,733
5: Jan – March 2019	34	2	5	5	620	865
	116	51	59	90	84,310	296,505

RECLAMATION PLANS

* Indicates the site was reclaimed during Quarter 1 of 2019

Hoopa 2012*

Hoopa 2012 is a moderate-sized cultivation site on the Hoopa Valley Reservation in Humboldt County. The site showed no signs of recent activity. The site was recently burned and not much remains except for metal trash at the camp. Previously plastic trash from the camp was bagged and consolidated in the cistern. With 3 to 4 people the tarps from the cistern can be used to bag all the trash and it can be rolled downhill to Highway 96. Access is a steep 450 m uphill hike.

Location of TMCC Features:

Plot 1	
Plot 2	
Camp	
Cistern	

Access:

Estimated Personnel Required:

3 - 4

Trash Estimate:

3 trash bags (120 - 150 lbs)

Source:

The source was likely Skunk Creek, but no pipe exists to follow.

Irrigation Pipe Estimate:

20 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Casava*

Casava is a small-sized cultivation site on the Shasta-Trinity National Forest, Trinity County last active in 2012. Ten thousand four hundred thirty-six (10,436) plants were eradicated by law enforcement in 2012. The site is accessed via a moderately difficult 400-meter hike.

Location of TMCC Features:

Plot 1

Trash

Drying Site



Access:

[REDACTED]

Estimated Personnel Required:

2

Trash Estimate:

2 trash bags (60 - 80 lbs)

Source:

Unknown

Irrigation Pipe Estimate:

20 meters

Hazardous Materials:

No pesticides were visually confirmed

Ruby Creek*

Ruby Creek is a small-sized cultivation site on the Six Rivers National Forest in Humboldt County. The site showed no signs of recent activity. The site is accessed via an easy 250-meter hike.

Location of TMCC Features:

Camp [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

2

Trash Estimate:

6 trash bags (240 - 300 lbs)

Source:

Unknown

Irrigation Pipe Estimate:

0 meters

Hazardous Materials:

No pesticides were visually confirmed



Shady Neighbor*

Shady Neighbor is on the Six Rivers National Forest in Humboldt County. It was discovered while hiking to a grow site model hit. Source line was found cemented within creek and likely leads to a private grow on land adjacent to USFS land. The site is accessed via an easy 250-meter hike.

Location of TMCC Features:

Plot 1

Source

Access:

[REDACTED]

Estimated Personnel Required:

2

Trash Estimate:

1 trash bag (30 - 40 lbs)

Source:

[REDACTED]

Irrigation Pipe Estimate:

60 meters

Hazardous Materials:

No pesticides were visually confirmed



Asian Grow 2015*

Asian Grow 2015 is a small-sized cultivation site on the Shasta-Trinity National Forest in Trinity County. The site was last active in 2015 and showed no signs of recent activity. No camp was located. The site is accessed via a brushy but easy 150-meter uphill hike.

Location of TMCC Features:

Plot 1

Source

Access:

[REDACTED]

Estimated Personnel Required:

3

Trash Estimate:

1 trash bag (30 - 40 lbs)

Source:

[REDACTED]

Irrigation Pipe Estimate:

470 meters

Hazardous Materials:

No pesticides were visually confirmed



Backbone1 2011

Backbone1 2011 is a large-sized cultivation complex on the Shasta-Trinity National Forest, Trinity County, last active in 2011. Forty-two thousand six hundred eighty-six (42,686) plants were eradicated by law enforcement in 2011. There is a lot of trash scattered between the trash pit and camp. The site is accessed via a moderately difficult 500-meter uphill hike.

Location of TMCC Features:

Plot1	
Plot2	
Camp	
Trash 1	
Trash 2	
Cistern	



Access:

Estimated Personnel Required:

4-6

Trash Estimate:

12 trash bags (480 - 600 lbs)

Source:

Source 1

Source 2

Irrigation Pipe Estimate:

2,150 meters

Hazardous Materials:

Two empty over-the-counter pesticide containers were detected formerly containing bromethalin and carbaryl.

Ranger Mountain

Ranger Mountain is a large-sized cultivation site on the Hoopa Valley Reservation in Humboldt County. It was last active in 2011 and showed no signs of recent activity. The site is accessed through a moderate 500-meter hike through brush and over large fallen trees.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Plot 5	
Camp	
Drying	
Trash 1	
Trash 2	
Trash 3	



Access:

Estimated Personnel Required:

Not estimated prior to reclamation

Trash Estimate:

Not estimated prior to reclamation

Source:

Source 1	
Source 2	
Source 3	

Irrigation Pipe Estimate:

380 meters

Hazardous Materials:

Sprayers and containers of brodifacoum, metaldehyde and malathion were found during the initial and subsequent assessments. Sprayers were not sampled, but were placed in orange bags and marked with danger flagging.

QUARTERLY PROGRESS SUMMARY

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Trespass Cannabis Cultivation

April 01, 2019 – June 30, 2019



Prepared by: Integral Ecology Research Center



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July 12, 2019

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QUARTER 2 OF 2019, PROGRESS SUMMARY

In partial fulfillment of California Department of Fish and Wildlife's Cannabis Restoration Grant Program Agreement #P1796020, this document provides a quarterly summary of grant progress-to-date and includes documents developed by Integral Ecology Research Center (IERC) during the 6th Quarter of grant implementation (Quarter 2 of 2019, 01 April 2019 through 30 June 2019). Supplementary documents include reclamation and aerial operation plans (when necessary) for 28 trespass marijuana cultivation complexes (TMCC) implemented as one-off reclamations not associated with a larger-scale operation.

Due to the law enforcement sensitivity of clandestine cannabis operation locations, and their ongoing potential to contain environmental and human health hazardous materials, the exact locations have been redacted from the aforementioned documents; however, broad scale maps have been left to allow the identification of the regional scope and distribution of reclamation activities.

Per the grant agreement, all TMCCs are located within select portions of the Klamath Basin and visited with the express objective of implementing up to three of the following activities:

1. **Assessment:** perform scientific assessments and evaluations ascertaining the magnitude of environmental impacts associated with the TMCS, including the inventory and sequestration of hazardous materials to reduce the risk of exposure during reclamation efforts. Reclamation plans are developed based on the results and findings of these assessments.
2. **Staging:** the collection, bagging and preparation of non-hazardous grow site refuse and infrastructure into areas accessible to helicopter long-lines, or manual removal, using a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.
3. **Reclamation:** the manual or helicopter removal of grow site refuse and infrastructure utilizing a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.

Quarter 2 of 2019 was highly productive for both assessments (18 TMCCs) and reclamation efforts (30 independent sites). Through the entire duration of the grant, IERC has assessed 134 potential TMCC locations. Of these, 81 TMCCs have been fully reclaimed composing 120 independent cultivation sites which tracks to a 70.6% completion rate of the 170 independent sites outlined in the grant agreement. From these areas, IERC has cumulatively removed 100,444 lbs. of refuse and 487,227 ft. (92.28 miles) of irrigation piping. NOTE: More current information resulted in an updated conversion ratio for calculating irrigation pipe length from weight resulting in a discrepancy from previous progress reports.

Grant Quarter	Activities at Cultivation Complexes			Removed Refuse and Grow Site Infrastructure		
	Assessment	Staging	Reclamation	Independent Sites	Total Refuse (lbs)	Irrigation Line (ft)
1: Jan – March 2018	13	2	0	0	0	0
2: April – June 2018	21	18	6	12	23,295	82,428
3: July – Sep 2018	23	11	21	36	26,023	118,673
4: Oct – Dec 2018	25	20	27	37	34,372	157,252
5: Jan – March 2019	34	2	5	5	620	1,048
6: April - June 2019	18	16	22	30	16,134	127,827
	134	69	81	120	100,444	487,227

OPERATIONAL PLANS
Klamath National Forest
Trespass Marijuana Cultivation Complexes

Reclamation Operational Plan for April 02 - April 05, 2019



Integral Ecology Research Center



www.IERCecology.org

April 01, 2019

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on April 02 - 05 are located on the Klamath National Forest in Humboldt and Siskiyou Counties. This reclamation plan includes ten different TMCC that have been assessed by IERC (Table 1). An inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation. California Conservation Corps members (CCC) under the supervision of Integral Ecology Research Center (IERC) staff will be participating in reclamation activities at Pump Iron, Mossy Mountain, Flume, Coon Dog, Yellow Jacket, El Squato, and potentially Coon Dog (Table 1, Figures 1 – 3). In addition to supervising CCC reclamation sites, IERC and additional personnel from varied organizations and government agencies will also participate in reclamation activities at DeadWood, DeadWeight, Tinkham Creek, Bear Peak 1, and potentially Coon Dog (Table 1, Figures 1 – 3).

Operational Information

Operational dates for reclamation efforts: April 02 - 05, 2019

Meeting Times and Locations:

April 2, 2019: 0830 hours, IERC Office, 239 Railroad Avenue, Blue Lake, CA

April 3, 2019: 0730 hours, Happy Camp Forest Service Ranger District Office, Happy Camp, CA

April 4, 2019: 0830 hours, Riverbar Landing Zone (LZ) south of Happy Camp ~ 10 miles (consult IERC Lead)

April 5, 2019: 0800 hours, Highway 96 turnout north of Somes Bar General Store, Somes Bar, CA

*****From meeting locations, teams will be assigned and proceed to field locations**

Table 1: Summary of the ten trespass marijuana cultivation complexes prepared for reclamation and air operations on April 02 - 05, 2019, site coordinates, schedule and activities to be performed.

Day	Date	TMCC Name	Location	Team
California Conservation Corps				
1	4/2/2019	Pump Iron		Staging
2	4/3/2019	Mossy Mountain		Staging
2	4/3/2019	Flume		Staging
3	4/4/2019	Yellow Jacket		Staging
4	4/5/2019	El Squato		Staging
IERC and other personnel				
3	4/4/2019	Dead Weight		Staging
3	4/4/2019	Dead Wood		Staging
3	4/4/2019	Tinkham		Staging/ re-bagging
3	4/4/2019	Bear Peak 1		Staging/ re-bagging
3/4*	4/4/2019	Coon Dog		Staging/manual haul-out

* Time and personnel dependent

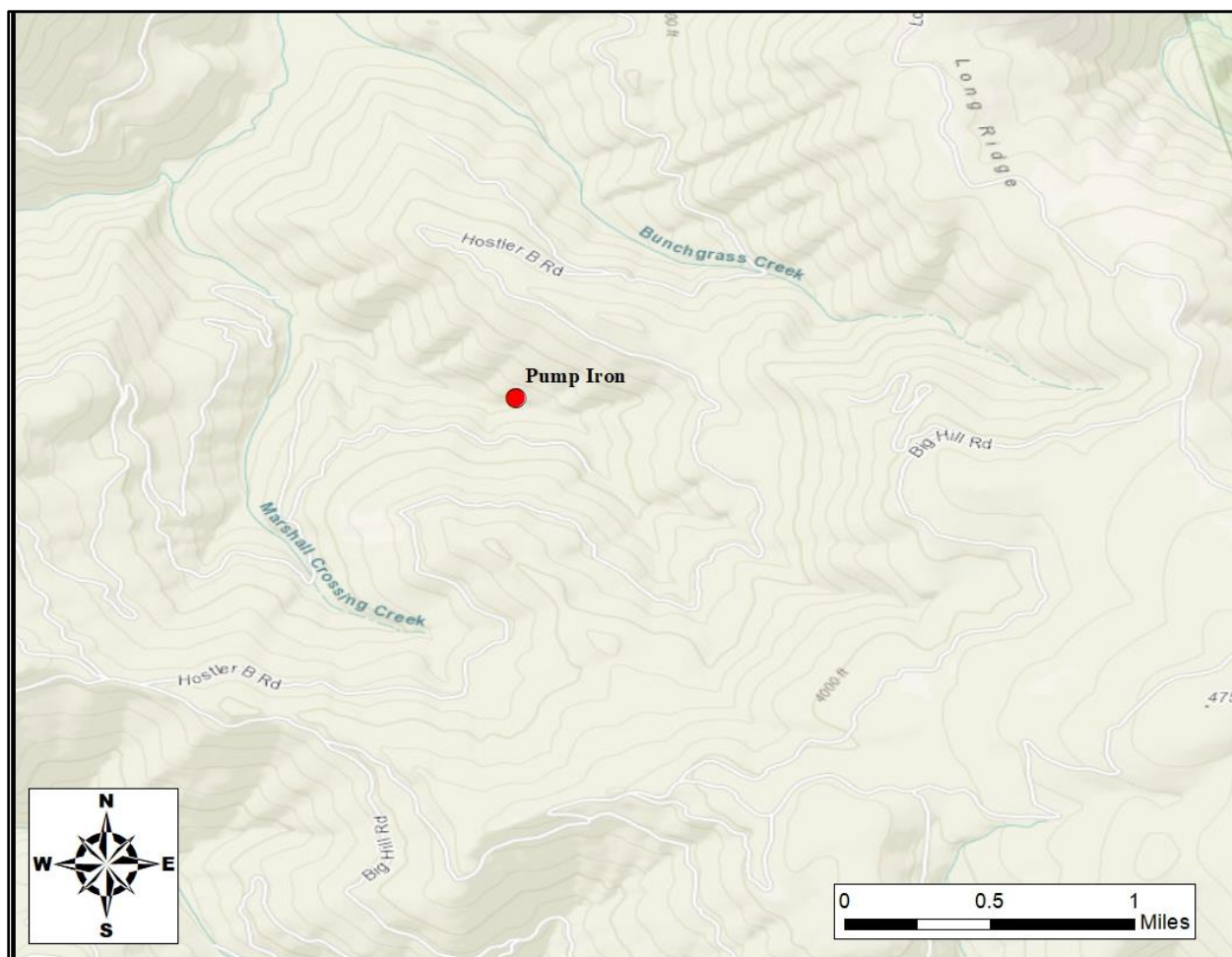


Figure 1: Map of the Pump Iron cannabis cultivation complex designated for reclamation operations scheduled for April 02, 2019 on the Hoopa Valley Indian Reservation.

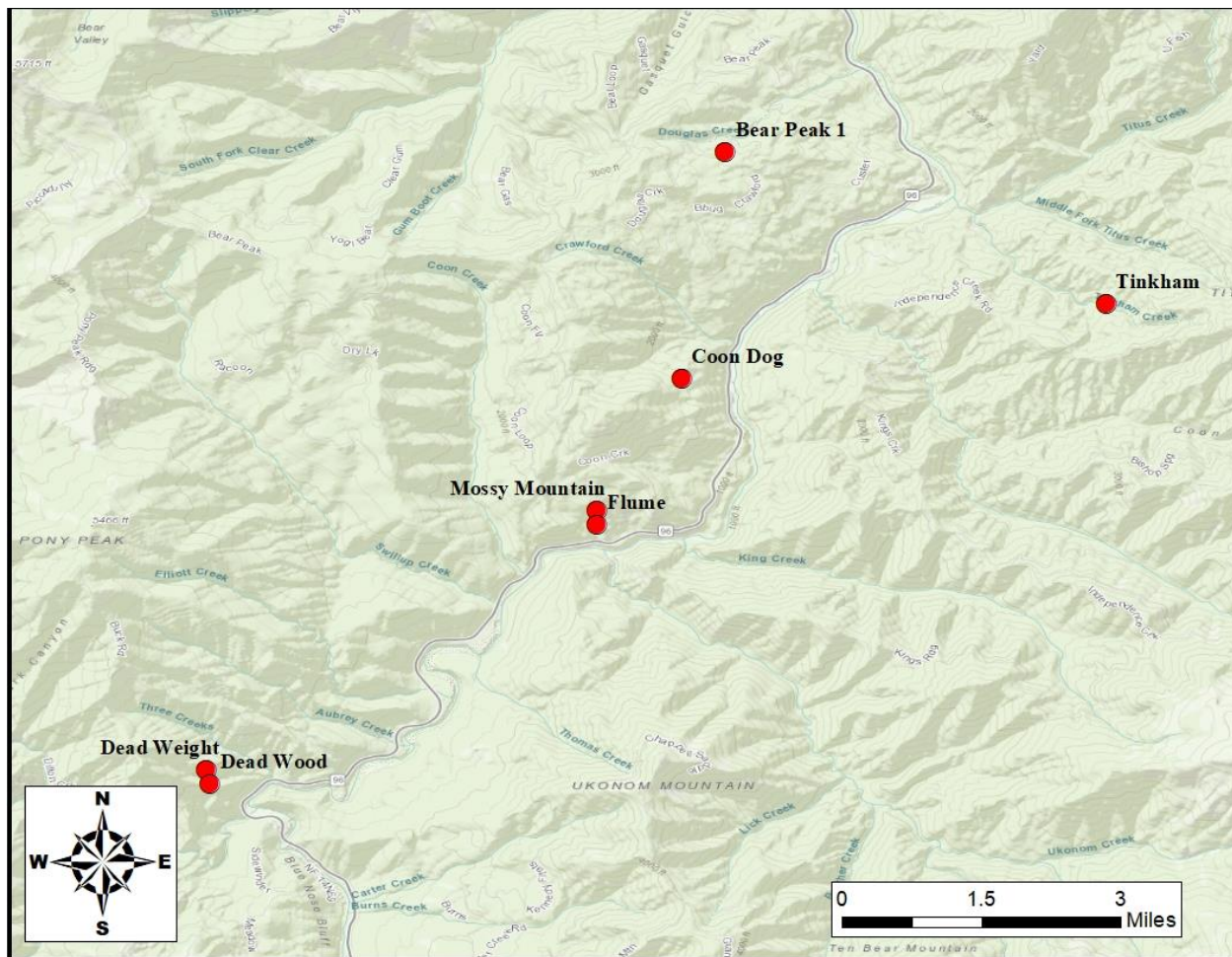


Figure 2: Map of cannabis cultivation complexes designated for reclamation operations scheduled for April 03 - 04, 2019 on the Klamath National Forest lands in Siskiyou County.

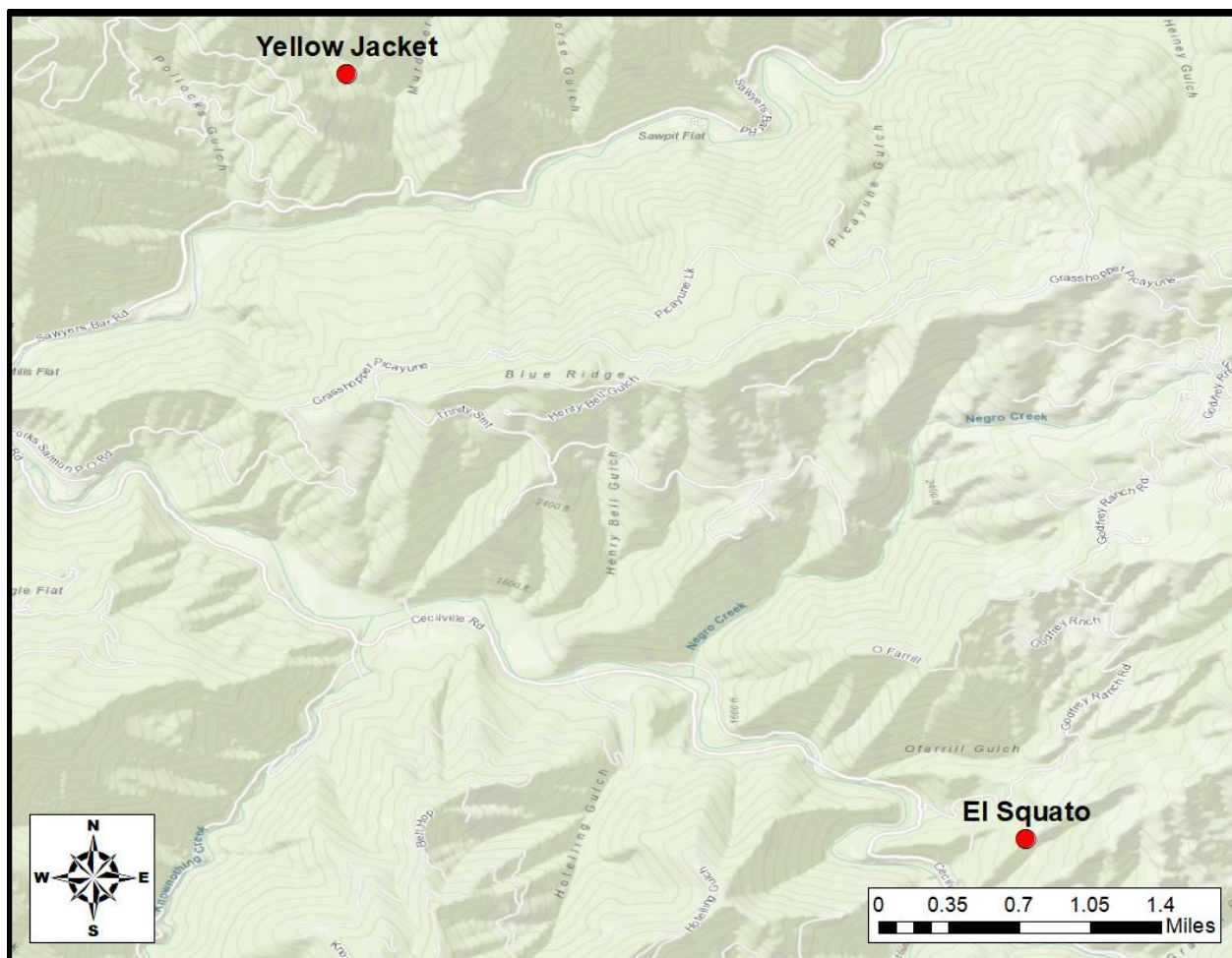


Figure 3. Map of two cannabis cultivation complexes and designated reclamation and air operations scheduled for April 04 - 05 2019 on the Klamath National Forest lands in Siskiyou County.

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass marijuana cultivation complexes scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates do not take into account of any 1/4" "spaghetti" line that may be present in the site.

Net (trash) and cobiner (pipe) loads

A helicopter can haul an average of 500lb net load or cobiner capacity. Estimated number of net and cobiner loads can be calculated using the estimated amount of trash and pipe within a site. The trash weight is calculated with an estimate of 40lbs of weight per one full 55-gallon garbage bag of trash. The pipe weight is calculated with an estimate of 400lbs of weight per one mile of pipe.

Hazardous Materials

IERC collected several samples during the assessment of the cultivation sites to test for a suite of pesticides; however, results will likely not be available by the initial pre-staging reclamation date. IERC will make sure that all sprayers and other hazardous material will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged for removal at a later date. Nevertheless, all participants should always use caution when handling trash and infrastructure.

California Conservation Corps Reclamation Complexes

Pump Iron

Pump Iron is a moderate-sized cultivation site on the Hoopa Valley Reservation in Humboldt County. The site was likely active prior to 2010 and shows no signs of recent activity. Access is a 600m moderately steep hike approximately 900 ft. elevation drop downhill off Hostler B Road.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Source	
Camp	
Trash 1	
Trash 2	

Access:

Estimated Personnel Required:

6

Trash Estimate:

12 trash bags (480 - 600 lbs)

Source:

Source was identified at . There is approximately 1,500m of pipe. A tent is buried in the source stream.

Irrigation Pipe Estimate:

1,500 meters

Hazardous Materials:

A 1-gallon sprayer was discovered at .



Mossy Mountain

Mossy Mountain is a moderate-sized cultivation site in Siskiyou County on Klamath National Forest lands that was eradicated in 2014. The Mossy Mountain cultivation complex was not active in 2018 and showed no signs of recent activity. The access is a moderate hike approximately 700 ft. uphill from Highway 96.

Location of TMCC Features:

Plot 1 [REDACTED]
Plot 2 [REDACTED]
Plot 3 [REDACTED]
Camp [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

10 trash bags (400 - 500lbs.)

Source:

Source not located

Irrigation Pipe Estimate:

210 meters

Hazardous Materials:

Sprayer: [REDACTED]



Flume

Flume a moderate-sized cultivation site in Siskiyou County on Klamath National Forest lands. The Flume cultivation complex was not active in 2018 and showed no signs of recent activity. The access is an easy to moderate hike uphill from Highway 96 and approximately 250 meters downhill from Mossy Mountain.

Location of TMCC Features:

Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Camp	[REDACTED]
Trash 1	[REDACTED]
Trash 2	[REDACTED]
Trash 3	[REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

10

Trash Estimate:

15 trash bags (600 - 750 lbs.)

Source:

Source not located

Irrigation Pipe Estimate:

210 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Yellow Jacket

Yellow Jacket is a moderate-sized cultivation site in Siskiyou County on Klamath National Forest lands. The site was not active in 2018 and showed no signs of recent activity. To access the site, park on right shoulder of the Forest Road 15N10, traverse to the site's elevation (approximately 2260 ft.) and side hill to the site. Most of the walk is fairly open; however, there is a substantial amount of poison oak shoots along the way. The hike is approximately 600 meters.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Source	
Camp	
Trash	

Access:

Estimated Personnel Required:

10 – 12

Trash Estimate:

20 trash bags (800 – 1,000 lbs)

Source:

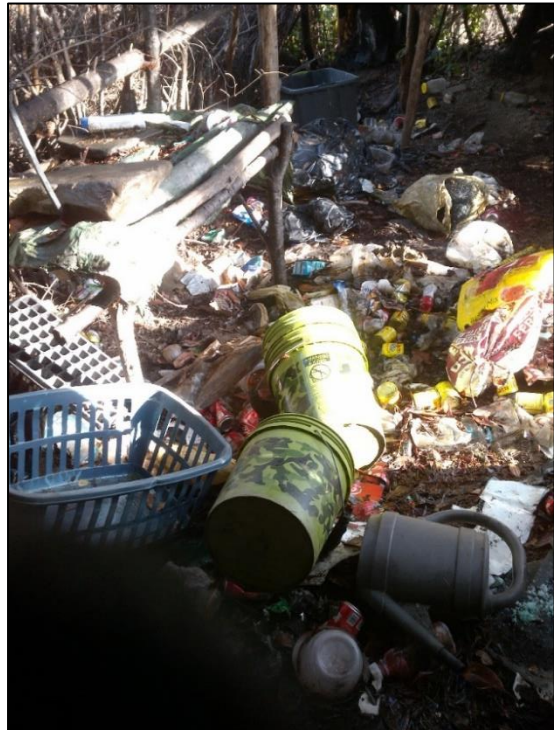
The main inbound source line was not traced to source, nor was the outbound source line (emerging from Plot 4) pursued. Someone will have to investigate both during reclamation. The location given above for the source is the furthest extent the source line was followed.

Irrigation Pipe Estimate:

600 meters

Hazardous Materials:

A sprayer was discovered at . Toxicological samples were collected but results have not yet been received, thus the sprayer should be treated as containing a hazardous substance and handled only by qualified personnel.



El Squato

El Squato is a moderate-sized cultivation site in Siskiyou County on Klamath National Forest lands. The site was not active in 2018 and showed no signs of recent activity. To access the site, park on right shoulder of Forest Road 93 and hike roughly 800 meters uphill to the site. The hike is considered moderate in terrain and includes approximately 700 ft. of elevation gain.

Location of TMCC Features:

Plot 1	
Trash 1	
Trash 2	
Reservoir	

Access:

Estimated Personnel Required:

10

Trash Estimate:

20 trash bags (800 – 1,000 lbs)

Source:

The main inbound source line was not traced to source, nor was the outbound source line (emerging from Plot 1) pursued. Someone will have to investigate both during reclamation. The location given above for the source is the furthest extent the source line was followed.

Irrigation Pipe Estimate:

At least 350 meters

Hazardous Materials:

No Hazardous Materials were located during the initial site assessment



IERC and other partners, Reclamation Complexes

Dead Weight

Dead Weight is a small cultivation site in Siskiyou County on Klamath National Forest lands eradicated in 2013. The Dead Weight cultivation complex was not active in 2018 and showed no signs of recent activity. For site access, park along Highway 96. First travel up to the Dead Wood site at the top of the ridge, then drop down into the creek and back up onto the other nose. The hike is 1100 meters, considered difficult and includes 1400 ft. of elevation gain. Some refuse is located in the creek and will need to be carried up to a staging area above the site. Machete or pocket loppers may be helpful due to the presence of dense brush.

Location of TMCC Features:

Plot 1 [REDACTED]

Camp [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

4

Trash Estimate:

2 trash bags (80 - 100 lbs)

Source:

Source: [REDACTED] (furthest location of source followed)

Irrigation Pipe Estimate:

280 meters

Hazardous Materials:

Sprayer: [REDACTED]



Dead Wood

Dead Wood is a small cultivation site in Siskiyou County on Klamath National Forest lands that was located during the Dead Weight site assessment. The Dead Wood cultivation complex is not known to law enforcement, showed no signs of recent activity, and was likely last active around 2010 - 2011. To access the site, park along Highway 96, walk along on decommissioned road, then proceed straight up the nose of the ridge approximately 750 meters. The last 150 meters of the trail is covered by downed trees. The hike is considered moderate-to-difficult and includes 1200 ft. of elevation gain.

Location of TMCC Features:

Plot 1
Camp
Trash
Drying



Access:



Estimated Personnel Required:

4

Trash Estimate:

7 trash bags (280 - 350 lbs.)

Source:



(location of furthest point followed)

Irrigation Pipe Estimate:

250 meters

Hazardous Materials:

No hazardous materials were visually confirmed.

Tinkham Creek

Tinkham Creek is a moderate-sized cultivation site in Siskiyou County on Klamath National Forest lands. It was last active in 2016 and showed no signs of recent activity. Site access is an easy-to-moderate hike 730 meter hike downhill along a ridge off Forest Road 15N10. In October 2018, materials were staged and a trail was cut and flagged into the site by IERC and CCC personnel. On-the-ground reclamation activities will consist of re-bagging refuse that has been disturbed by wildlife.

Location of TMCC Features:

Plot 1 [REDACTED]
Camp [REDACTED]
Cistern 1 [REDACTED]
Cistern 2 [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

10 trash bags (400 - 500 lbs)

Source:

Source 1 [REDACTED]
Source 2 [REDACTED]

Irrigation Pipe Estimate:

500 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Bear Peak 1

Bear Peak is a moderate-sized cultivation site in Siskiyou County on Klamath National Forest lands. Bear Peak was staged into four separate staging locations in 2018. Bear Peak is a moderate 800 meter hike accessed off Forest Road 15N24. Bear Peak refuse has already been staged in Fall 2018, on-the-ground reclamation activities will consist of re-bagging refuse that has been disturbed by wildlife.

Location of TMCC Features:

Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Plot 4	[REDACTED]
Camp	[REDACTED]

Access:

[REDACTED] Estimated

Personnel Required:

10

Trash Estimate:

15 trash bags (600 – 750 lbs.)

Source:

The main inbound source line was not traced to source.

Irrigation Pipe Estimate:

5,400 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Coon Dog

Coon Dog is a small cultivation site in Siskiyou County on Klamath National Forest lands that was eradicated in 2012. The Coon Dog cultivation complex was not active in 2018 and showed no signs of recent activity. The access is a short, yet steep, hike 1000 ft. uphill from Highway 96. This site may not require air support to haul out refuse. Time and personnel dependent, all trash and infrastructure may be hauled out by hand or incorporated into the helicopter aerial removal operation.

Location of TMCC Features:

Plot 1

Camp

Access:

Estimated Personnel Required:

3

Trash Estimate:

3 trash bags (120 - 150 lbs)

Source:

Source 1:

Source 2:

Irrigation Pipe Estimate:

70 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



Klamath National Forest
Trespass Marijuana Cultivation Complex Reclamation

Aerial Operation Plan for April 12, 2019



Integral Ecology Research Center



April 08, 2019

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on April 12, 2019 are located on the Klamath National Forest in Siskiyou County. This reclamation operational plan includes nine TMCC previously assessed and staged by IERC by IERC and partners prior to this planned air operation (Table 1, Figures 1 - 2). An inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation.

Operational Information

Operational date for reclamation efforts: **April 12, 2019**

Meeting Times and Locations:

April 12, 2019: 0800 at LZ ([REDACTED]) East side of highway 96, on the riverbar, Ferry Point

*****From meeting location, teams will be assigned and proceed to field locations, LZ, or DZ**

Landing and Drop Zone Coordinates

Ferry Point area LZ/ DZ

Landing Zone (LZ 01): [REDACTED]

South Drop Zone (DZ 02): [REDACTED]

Forks of Salmon area LZ

Landing Zone (LZ 02): [REDACTED]

Table 1: Summary of nine trespass marijuana cultivation complexes, site locations, individual staging locations, drop locations, hazmat status and refuse quantities planned for aerial removal on April 12, 2019 on Klamath National Forest.

Site Name	Coordinates	Long-line Loads	Nets	Cobiners	HazMat	Drop Point
FERRY POINT AREA/ LZ 01						
Bear Peak	[REDACTED]	1	2	0	No	LZ 01
Bear Peak	[REDACTED]	1	0	1	No	LZ 01
Bear Peak	[REDACTED]	1	0	1	No	LZ 01
Bear Peak	[REDACTED]	1	0	1	No	LZ 01
Tinkham	[REDACTED]	1	1	0	No	LZ 01
Tinkham	[REDACTED]	1	1	1	No	LZ 01
DeadWeight	[REDACTED]	1	1	0	Propane	DZ
DeadWeight	[REDACTED]	1	1	1	Sprayer (bagged)	DZ
DeadWood	[REDACTED]	1	1	1	No	DZ
Flume	[REDACTED]	1 - 2	2	0	No	DZ
MossyMtn	[REDACTED]	1	1	1	Sprayer (bagged)	DZ
MossyMtn	[REDACTED]	1	0	1	No	DZ
FORKS OF SALMON AREA/ LZ 02						
YellowJacket	[REDACTED]	1	0	1	No	LZ 02
YellowJacket	[REDACTED]	1	1	1	Bucket and Sprayer (bagged)	LZ 02
ElSquato	[REDACTED]	1	1	1	No	LZ 02
ElSquato	[REDACTED]	1	0	0.25	No	LZ 02
ElSquato	[REDACTED]	1	0	0.25	No	LZ 02
BuckWoods	[REDACTED]	Not staged			Unknown	LZ 02

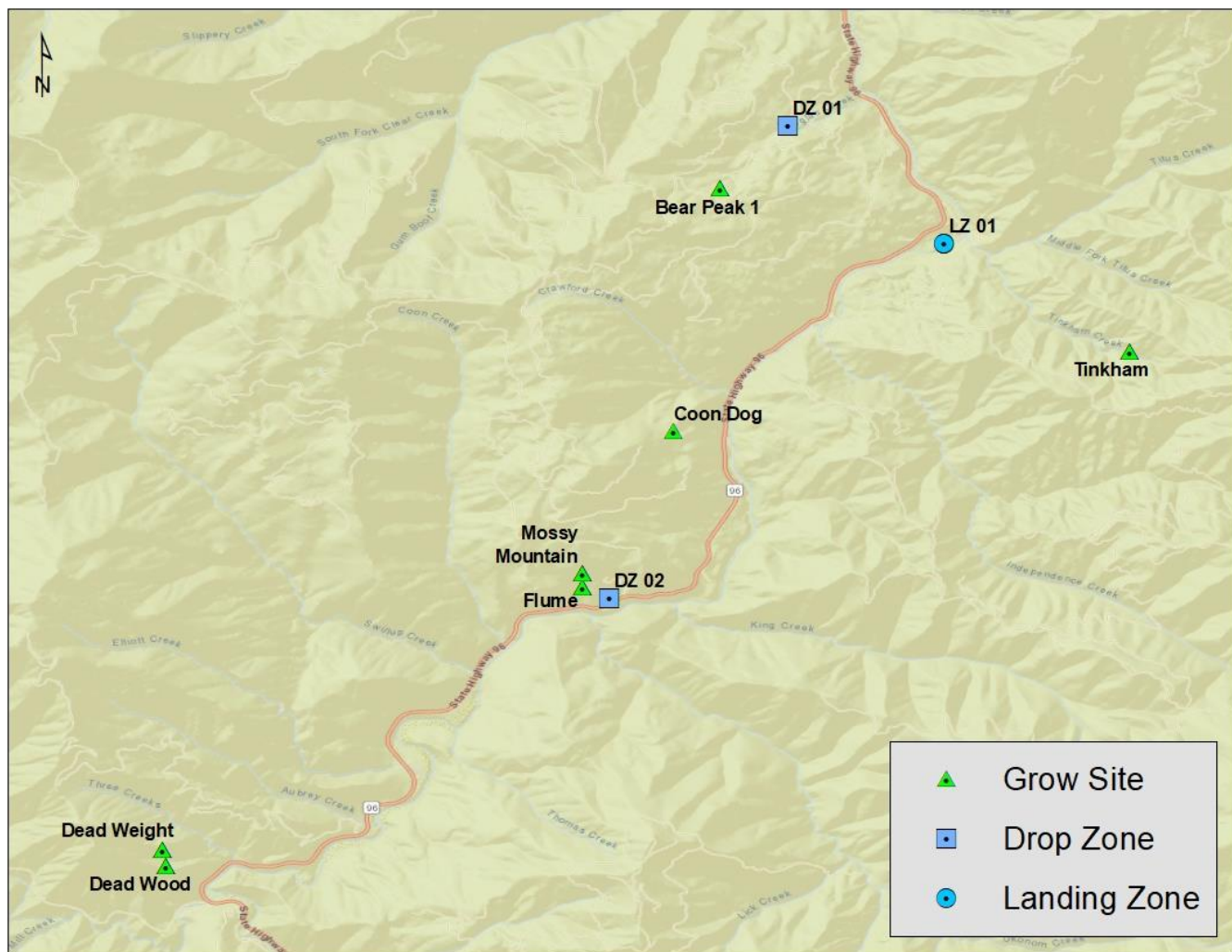


Figure 1. Map of cannabis cultivation complexes, landing zone and drop zones designated for reclamation air operations on April 12, 2019 in the morning, along Highway 96 on the Klamath National Forest in Siskiyou County.

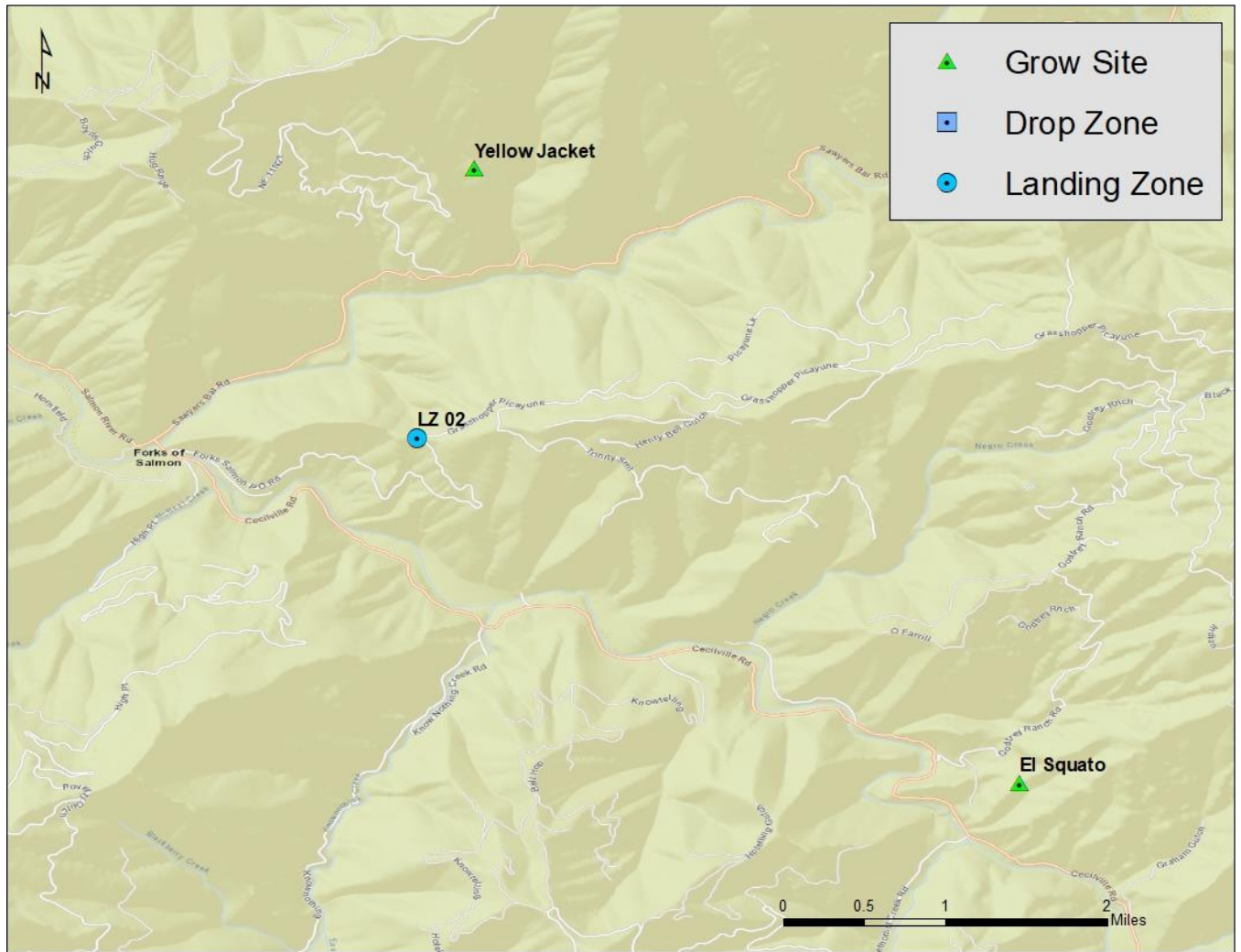


Figure 2. Map of cannabis cultivation complexes and landing zone designated for reclamation air operations on April 12, 2019 in the afternoon on the Klamath National Forest in Siskiyou County.

Klamath National Forest
Trespass Marijuana Cultivation Complex Reclamation
Forks of Salmon, CA

Aerial Operation Plan for April 30, 2019



Integral Ecology Research Center



April 27, 2019

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on April 30, 2019 are located on the Klamath National Forest in Siskiyou County. This reclamation operational plan includes four TMCC previously assessed and staged by IERC and partners prior to this planned air operation (Table 1, Figure 1). An inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation.

Operational Information

Operational date for reclamation efforts: **April 30, 2019**

Meeting Time and Location

April 30, 2019: 0830 at Forks of Salmon, USFS Rest/ Picnic Area ([REDACTED])

*****From meeting location, teams will be assigned and proceed to field locations, LZ, or DZ**

Landing and Drop Zone Coordinates

Landing Zone: [REDACTED]

Drop Zone (if needed, for Buckwoods and Cody Creek): [REDACTED]

Helicopter Information

Time of Arrival at LZ: 0930 hours

Company: Air Shasta, Redding, CA

Pilot: Gavin Woelfel, CDFW Warden

Tail number: N913RL

Make: Bell

Model: 206B3

Table 1: Summary of four trespass marijuana cultivation complexes, site locations, individual staging locations, drop locations, hazmat status and refuse quantities planned for aerial removal on April 30, 2019 on Klamath National Forest.

Site Name	Coordinates	Long-line Loads	Nets	Cobiners	HazMat	Drop Point
FORKS OF SALMON AREA						
Yellow Jacket	[REDACTED]	1	0	1	No	LZ
Yellow Jacket	[REDACTED]	1	1	1	Bucket and Sprayer (bagged)	LZ
El Squato	[REDACTED]	1	1	1	No	LZ
El Squato	[REDACTED]	1	0	0.25	No	LZ
El Squato	[REDACTED]	1	0	0.25	No	LZ
Buck Woods	[REDACTED]	Not staged (estimated 2 cobiners)			?	DZ
Cody Creek	[REDACTED]	Partially staged (unknown)	?	?	?	DZ

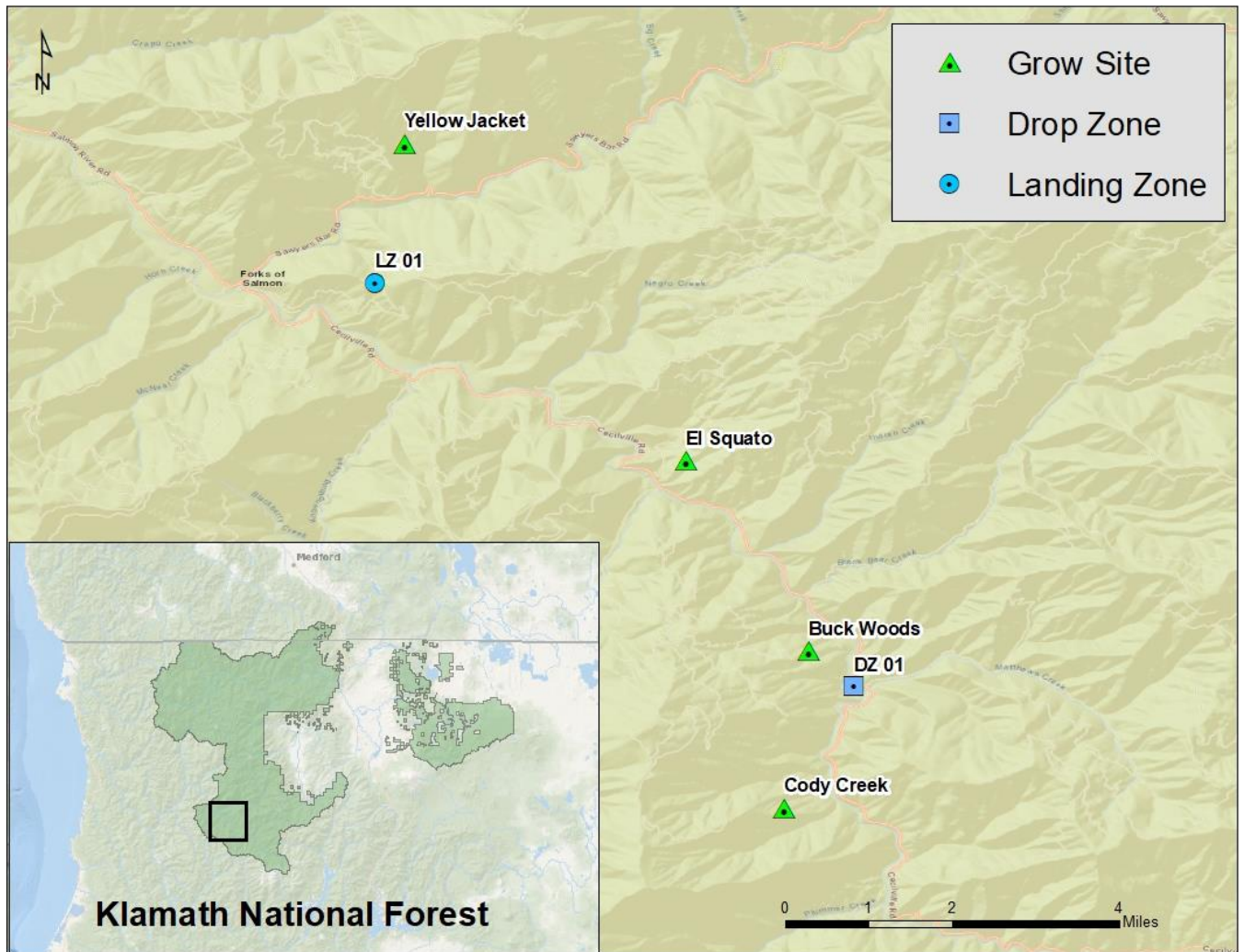


Figure 1. Map of marijuana cultivation complexes, landing zone and potential drop zone designated for reclamation air operations on April 30, 2019 on the Klamath National Forest in Siskiyou County.

Shasta - Trinity National Forest
Trespass Cannabis Cultivation Complexes

Reclamation and Air Operational Plan for May 07 - May 14, 2019



Integral Ecology Research Center



www.IERCecology.org

May 05, 2019

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BACKGROUND

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on May 07 - 14 are located on the Shasta - Trinity National Forest around the Hayfork and Hyampom areas in Trinity County. This operational plan includes site-specific reclamation plans for nine unstaged TCCC and aerial removal information for an additional four TCCC previously assessed and partially staged by IERC and partners before the planned air operation (Table 1). An inventory of confirmed and suspected hazardous materials was collected, and all were mitigated and warning flagged to reduce exposure risk to reclamation teams. ***Hazardous materials will not be removed during this operation.***

A diverse collaboration of reclamation teams from Integral Ecology Research Center (IERC), Watershed Research and Training Center, Trinity County Resource Conservation District, California Conservation Corps' Watershed Stewards Program, California Department of Fish and Wildlife, Trinity County Sheriff's Office, California National Guard and United States Forest Service will participate in a multi-day reclamation effort under the supervision and coordination of IERC staff at Los Pavos, El Otro Lado, Tule Creek, Little Britches, Duffman, Plummer Peak 2, Plummer Peak 2018, Lil' Plum, Ray's Peak, Creeky Tiki, James Creek 2016, Nameless, and No Name (Table 1, Figures 1 – 3). Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

Operational Information

Operational dates for reclamation efforts: May 07 – 10 and May 13 – 14, 2019

Meeting Time and Locations: 0800 (every day), Trinity County Sheriff's Substation, Hayfork, CA (corner of Hwy 3/ Hyampom Rd.)

*****From meeting location, teams will be assigned and proceed to field locations, LZ, or DZ**

Landing and Drop Zone Coordinates

May 10, 2019:

Landing Zone (LZ 01): [REDACTED]

May 13, 2019:

Landing Zone (LZ 01): [REDACTED]

Drop Zone (DZ 02): [REDACTED]

May 14, 2019:

Landing Zone (LZ 03): [REDACTED]

Drop Zone (DZ 03) - option 1: [REDACTED]

Drop Zone (DZ 03) - option 2: [REDACTED]

Helicopter Information

Company: Air Shasta, Redding, CA

Pilot: Gavin Woelful, CDFW Warden

Tail number: N913RL

Make/ Model: Bell 206B3

Table 1. Summary of thirteen trespass cannabis cultivation complexes, site locations or pre-staged locations, reclamation activities, estimated refuse quantities*, and drop locations planned for aerial removal on May 07 – May 14, 2019 on Shasta - Trinity National Forest.

				Aerial Removal Information			
TCCC Name	Coordinates	Staging	Aerial Removal	Nets	Cobiners	Long-line Loads	Drop Point
Tuesday May 07, 2019							
Los Pavos		X		na	na	na	na
El Otro Lado		X		na	na	na	na
Duffman		X		na	na	na	na
Wednesday May 08, 2019							
Plummer Peak 2		X		na	na	na	na
Thursday May 09, 2019							
Plummer Peak 2018		X		na	na	na	na
Friday May 10, 2019							
Plummer Peak 2018			X	11*	10*	15*	LZ01
Plummer Peak 2			X	5*	6*	8*	LZ01
Lil’ Plum		X	X	0*	1*	1*	LZ01
Monday May 13, 2019							
Los Pavos			X	4*	5*	7*	LZ01
El Otro Lado			X	3*	4*	4*	DZ02
Tule Creek		X	X	1*	1*	1*	DZ02
Little Britches		X	X	1*	0*	1*	DZ02
Duffman			X	1*	1*	1*	LZ01
Ray's Peak		X		na	na	na	na
Tuesday: May 14, 2019							
Rays Peak			X	4*	2*	4*	DZ03
NoName			X	2	2	2	LZ03
CreekyTiki			X	0	1	1	LZ03
JamesCreek3.2016			X	0	1	1	LZ03
JamesCreek3.2016			X	1	1	1	LZ03
Nameless			X	0	1	1	LZ03
Nameless			X	1	1	1	LZ03
Nameless			X	0	1	1	LZ03
Nameless			X	1	0	1	LZ03

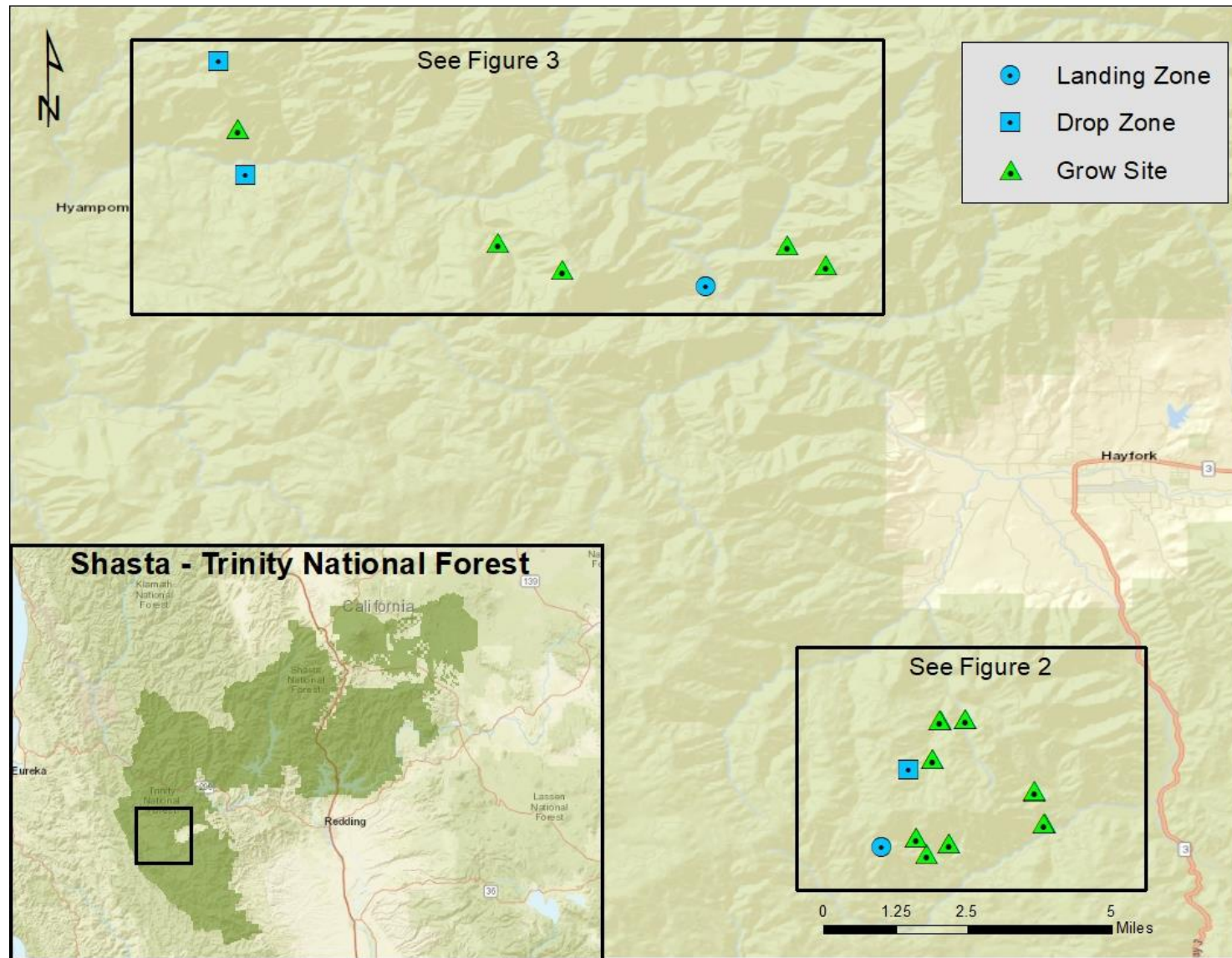


Figure 1. Overview map of cannabis cultivation complexes, landing zones and drop zones designated for reclamation air operations on May 07 through 14, 2019 within the Hyampom and Hayfork Areas on the Shasta - Trinity National Forest in Trinity County.

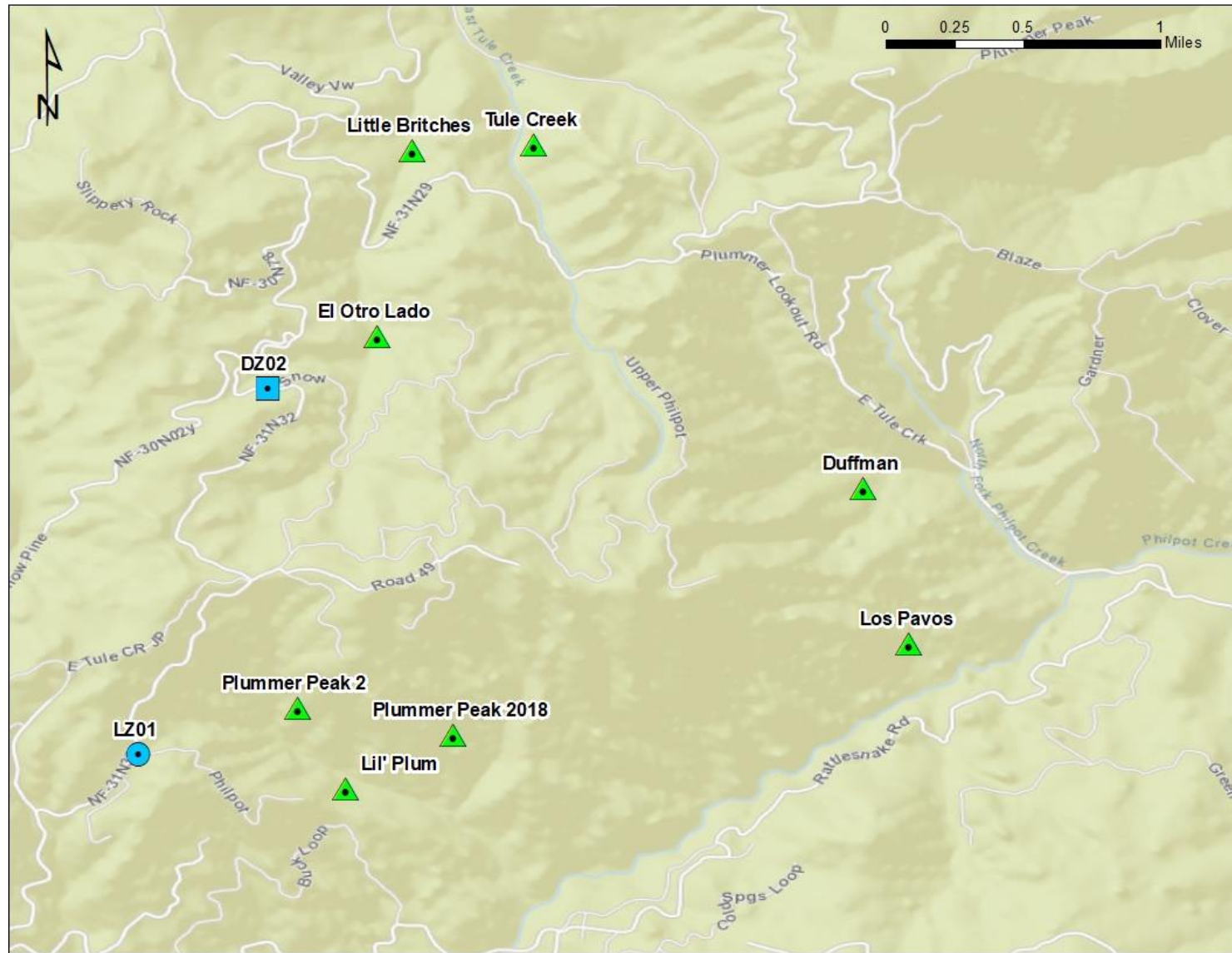


Figure 2. Map of eight trespass cannabis cultivation complexes, landing zone, and drop zone designated for reclamation activities south of Hayfork Areas on the Shasta - Trinity National Forest in Trinity County.

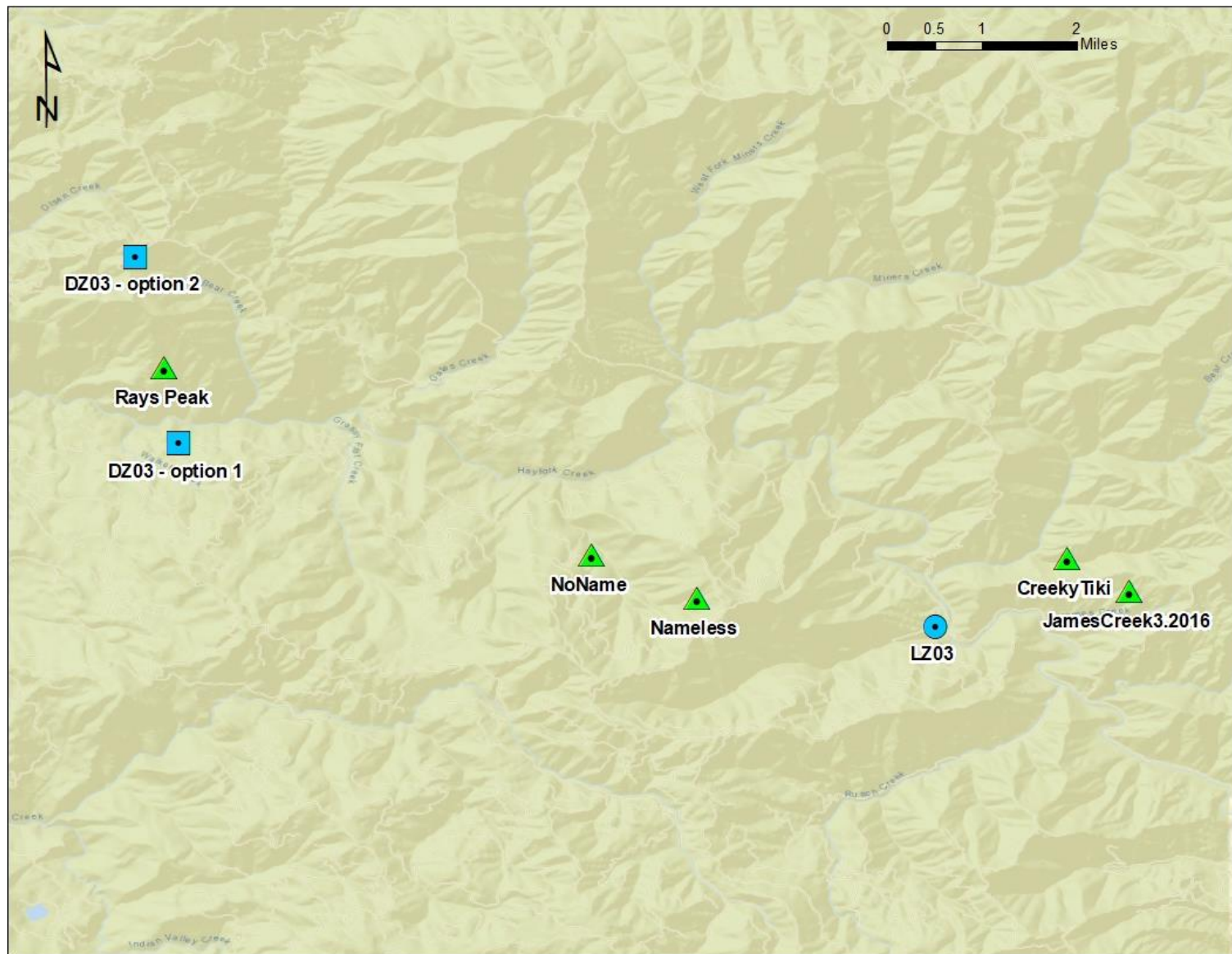


Figure 3. Map of five trespass cannabis cultivation complexes, landing zone, and drop zone designated for reclamation activities off Hyampom Rd. on the Shasta - Trinity National Forest in Trinity County.

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass marijuana cultivation complexes scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates do not take into account of any 1/4" "spaghetti" line that may be present in the site.

Net (trash) and cobiner (pipe) loads

A helicopter can haul an average of 500lb net load or cobiner capacity. Estimated number of net and cobiner loads can be calculated using the estimated amount of trash and pipe within a site. The trash weight is calculated with an estimate of 40lbs of weight per one full 55-gallon garbage bag of trash. The pipe weight is calculated with an estimate of 400lbs of weight per one mile of pipe.

Hazardous Materials

IERC collected several samples during the assessment of the cultivation sites to test for a suite of pesticides; however, results will likely not be available by the initial pre-staging reclamation date. IERC will make sure that all sprayers and other hazardous materials will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged for removal at a later date. Nevertheless, all participants should always use caution when handling trash and infrastructure.

Site-Specific Reclamation Plans

Tuesday May 7th, 2019

Los Pavos

Los Pavos is a spread out, moderately-sized cultivation site in Trinity County on Shasta-Trinity National Forest. The site was eradicated in 2010 of 1,486 plants, however evidence indicates the TCCC may have been active as recently as 2017 - 2018. No sign of 2019 activity was present. Access to the site is a moderate 450-meter hike that crosses a creek. A creek crossing utilizing waders is necessary

[REDACTED]. A large homeless encampment structure is located near the creek crossing and may be additionally staged at the end of the day depending on time.

Location of TMCC Features:

Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Plot 4	[REDACTED]
Plot 5	[REDACTED]
Plot 6	[REDACTED]
Camp 1	[REDACTED]
Camp 2	[REDACTED]
Trash	[REDACTED]
Trim	[REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

20-25 trash bags (600 – 1,000 lbs)

Source:

Three source lines were discovered.

Source 1	[REDACTED]
Source 2	[REDACTED]
Source 3	[REDACTED]

Irrigation Pipe Estimate:

1,600+ meters

Hazardous Materials:

Three sprayers were discovered and were not bagged. ***Non-qualified reclamation personnel are not to handle the sprayers at any time.***

El Otro Lado

El Otro Lado is a moderate-sized cultivation site in Trinity County on Shasta-Trinity National Forest. The site was last active in 2010 and showed no signs of recent activity. The site is linear and runs along the west side of the creek. The pipe in plot 3 is covered in duff and cut into 4-foot lengths. Reclamation teams should be cautious at Trash 2, a trash pit covered by sticks, because there may be a yellow jacket nest in the trash pit. Access is an easy 250-meter hike from the access coordinates.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Camp	
Trash 1	
Trash 2	
Trash 3	
Trash 4	



Access:

Estimated Personnel Required:

12

Trash Estimate:

25 trash bags (750 – 1,000 lbs)

Source:

The source was not identified.

Irrigation Pipe Estimate:

500+ meters

Hazardous Materials:

No hazardous materials were visually confirmed. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Duffman

Duffman is a small-sized cultivation site in Trinity County on Shasta-Trinity National Forest. The oldest known activity was from 2009 and showed no signs of recent activity. All trash and pipe is covered in thick duff and a large rake may be beneficial to uncover buried items during reclamation. The access to the site is a moderate 350-meter uphill hike with 500-feet of elevation change.

Location of TMCC Features:

Plot 1 [REDACTED]
Camp 1 [REDACTED]
Camp 2 [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

6

Trash Estimate:

10 trash bags (300 - 400 lbs)

Source:

The source was not identified.

Irrigation Pipe Estimate:

400 meters

Hazardous Materials:

No hazardous materials were visually confirmed. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Wednesday, May 8th, 2019

Plummer Peak 2

Plummer Peak2 is a large cultivation site in Trinity County on Shasta-Trinity National Forest. The site was eradicated in 2010, however law enforcement detected cultivators in the area in again in 2016 and eradicated approximately 5,600 plants. The site showed no signs of recent activity. The terrain is moderate and to access the site it is recommended that teams hike down from road 3N32 through the source drainage.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Plot 5	
Plot 6	
Plot 7	
Camp 1	
Camp 2	
Camp 3	
Pipe	
Trash 1	
Trash 2	



Access:

Estimated Personnel Required:

20

Trash Estimate:

25 trash bags (750 – 1,000 lbs)

Source:

Three source lines were discovered. Source 1 leads to Plummer Peak 2018 cistern. The source line leading from plot 1 to camp 1 is surrounded by dense brush.

Source 1	
Source 2	
Source 3	

Irrigation Pipe Estimate:

3,800+ meters

Hazardous Materials:

Three sprayers were discovered during the assessment and were contained in bright orange bags. Two sprayers were sampled but results are still pending. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Thursday May 9th, 2019

Plummer Peak 2018

Plummer Peak 2018 is a large cultivation site in Trinity County on Shasta-Trinity National Forest. The site was eradicated in 2018 and shows no sign of 2019 use; however, the TCCC shows evidence of multiple years of extended use prior to eradication. The access to the site is a moderate 1-km hike with an approximately 600-foot elevation gain. During eradication, extensive use of banned pesticides was discovered and reclamation teams should display increased caution and situational awareness when interacting with TCCC infrastructure and refuse.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Plot 5	
Plot 6	
Plot 8	
Plot 9	
Plot 10	
Camp 1	
Camp 2	
Camp 3	
Camp 4	
Drying 1	
Drying 2	
Prep 1	
Trash 1	
Trash 2	
Trash 3	
Trash 4	
Cistern 1	
Cistern 2	
Cistern 3	
Cistern 4	



Access:

Estimated Personnel Required:

20 - 25

Trash Estimate:

53 trash bags (1,590 – 2,120 lbs)

Source:

Four source lines were discovered.

Source 1	[REDACTED]	[REDACTED]
Source 2	[REDACTED]	[REDACTED]
Source 3	[REDACTED]	[REDACTED]
Source 4	[REDACTED]	[REDACTED]

Irrigation Pipe Estimate:

10,000+ meters

Hazardous Materials:

This site has multiple bottles confirmed carbofuran and sprayers staged in orange buckets and orange plastic bags at [REDACTED]. ***Non-qualified reclamation personnel should not approach this area for any reason. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Friday, May 10th, 2019

Lil' Plum

Lil' Plum is a small cultivation site in Trinity County on Shasta-Trinity National Forest. The site was eradicated prior to 2010 of an unknown plant count. The site showed no signs of recent activity. Little to no trash was detected at the site and only irrigation pipe remains. The site is accessed by an easy 1200-meter hike down a decommissioned road leading to the landing zone. Lil' Plum will be staged during the aerial removal operation.

Location of TMCC Features:

Plot 1 [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

4

Trash Estimate:

0 trash bags

Source:

No source lines were detected

Irrigation Pipe Estimate:

1,500 meters

Hazardous Materials:

No hazardous materials were visually confirmed. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Monday, May 13th, 2019

Rays Peak

Rays Peak is a moderate-sized cultivation site in Trinity County on Shasta-Trinity National Forest eradicated in 2017 of 7,087 plants. To access the site, park at the large parking area at the end of the road, hike up Rays Peak and follow ridgeline until [REDACTED], then hike downhill to the site. There is some flagging marking a way down slope. The hike is approximately 2km with 1,500-foot elevation change and should only be attempted by highly fit reclamation specialists.

Location of TMCC Features:

Plot 1	[REDACTED]
Source 1	[REDACTED]
Source 2	[REDACTED]
Trash 1	[REDACTED]
Trash 2	[REDACTED]
Trim	[REDACTED]
Camp	[REDACTED]
Cistern 1	[REDACTED]
Cistern 2	[REDACTED]
Cistern 3	[REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

15

Trash Estimate:

18 trash bags (720 - 900 lbs)

At Trash 1 there are two 500ft rolls of new 3/4" pipe.

Source:

Two source points were found in nearby streams. Both locations are listed above.

Irrigation Pipe Estimate:

2,800+ meters

Hazardous Materials:

Four sprayers were found at the site and mitigated in orange bags. Two were sampled for toxicants with one testing positive for carbofuran and located at [REDACTED]. While not all sprayers were sampled or yielded positive results, sprayers shall not be handled by unqualified personnel. **Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.**

Tule Creek

Tule Creek is a small-sized cultivation site in Trinity County on Shasta-Trinity National Forest. The site was last active in 2010 and showed no signs of recent activity. To access the TCCC, park at the same turnout for Little Britches, walk down the road, turn left at [REDACTED] and continue down the nose of the ridge. The hike is an easy-to-moderate 400-meters with 300-feet elevation change. Most of the pipe and camp refuse was burned during a fire.

Location of TMCC Features:

Plot [REDACTED]

Trash [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

8 (manual extraction)

2 (helicopter extraction)

Trash Estimate:

5 trash bags (150 - 200 lbs)

Source:

The source was not identified.

Irrigation Pipe Estimate:

100 meters

Hazardous Materials:

No hazardous materials were visually confirmed. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Little Britches

Little Britches is a small cultivation site in Trinity County on Shasta-Trinity National Forest. The site was eradicated in 2011 of 5,641 plants and showed no signs of recent activity. The site was recently burned and no pipe exists within the plots. All the remaining, non-burned trash is partially staged next to the creek. The access to the site is a short, easy walk approximately 300 meters down an old decommissioned road.

Location of TMCC Features:

Plot 1

Camp

Trash

Access:

Estimated Personnel Required:

6 (manual extraction)

1 (helicopter extraction)

Trash Estimate:

5 trash bags (150 - 200 lbs)

Source:

The source was not identified.

Irrigation Pipe Estimate:

Unknown meters

Hazardous Materials:

No hazardous materials were visually confirmed. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Shasta-Trinity National Forest
Trespass Marijuana Cultivation Complexes

Reclamation Operational Plan for May 14, 2019

Backbone1.2011, Gilmore Girls, Tick Check



Integral Ecology Research Center



www.IERCecology.org

May 13, 2019

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on May 14, 2019 are located on the Shasta-Trinity National Forest in Trinity County. This reclamation plan includes three different TMCC that have been assessed by IERC. An inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation.

Operational Information

Operational dates for reclamation efforts: **May 14, 2019**

Meeting Time and Location:

0800 at the intersection of Highway 299 and E. Fork/ Helena Road

*****From meeting locations, teams will be assigned and proceed to field locations**

Backbone Ridge Cannabis Cultivation Complexes

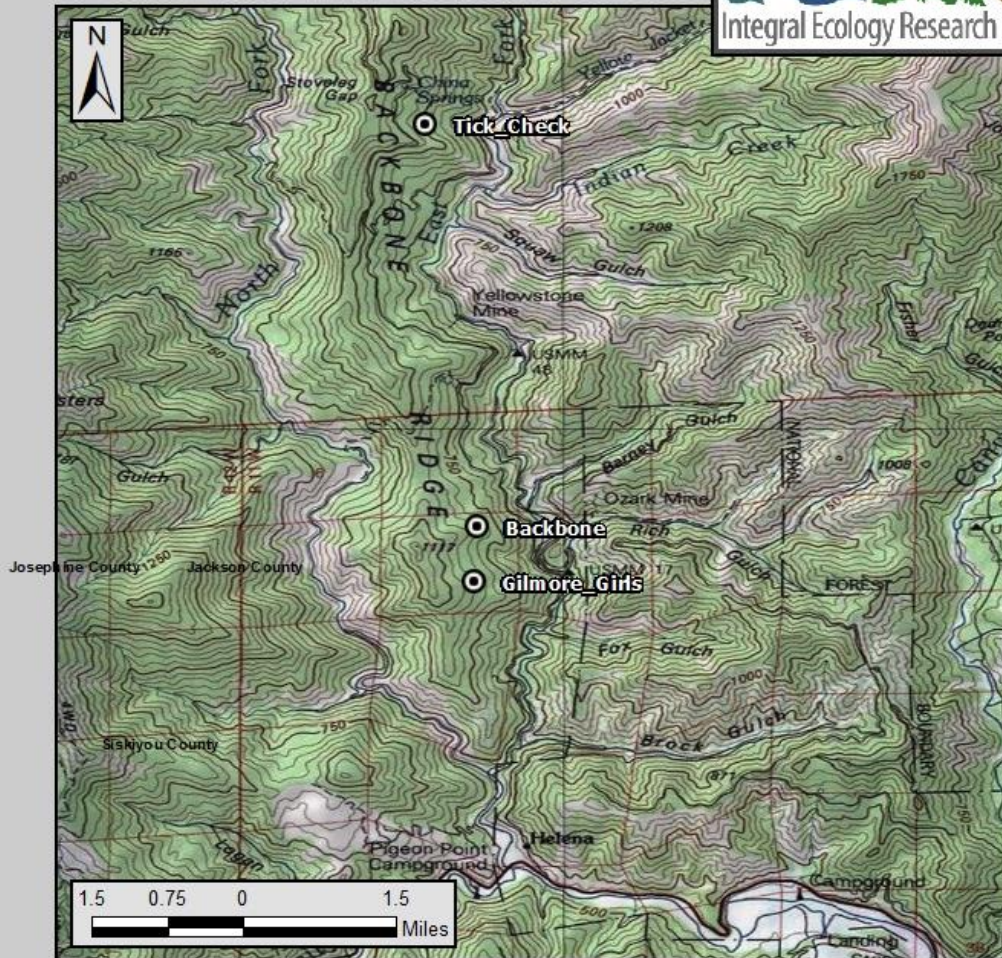


Figure 1. Locations of three cannabis cultivation complexes scheduled for reclamation on Tuesday, May 14, 2019 on the Shasta-Trinity National Forest.

BackBone1.2011

Back Bone1.2011 is a large-sized cultivation site in Trinity County in Shasta-Trinity National Forest. It was eradicated in 2011 and showed no signs of recent activity as of March 2019. The easiest means of accessing the site is through the drainage just to the north of the site (approximately 780 meters from Hobo Gulch Road). It is recommended for reclamation personnel to hike down the steep terrain back to Hobo Gulch Road out from the northeastern corner of the site, as it is faster than trekking back through the drainage to the north (approximately 450 meters). There is a lot of trash scattered between the Trash pit and Camp.

Location of TMCC Features:

Plot 1	[REDACTED]
Source	[REDACTED]
Camp	[REDACTED]
Trash	[REDACTED]
Cistern	[REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

6 – 8 (for full-day operation)

Trash Estimate:

12 trash bags (480 - 600 lbs.)

Source:

Source was found in a nearby creek.

Irrigation Pipe Estimate:

1,800 meters

Hazardous Materials:

Some over-the-counter pesticides (i.e. bromethalin, carbaryl) were visually confirmed.



Tick Check

Tick Check is a moderate-sized cultivation site in Trinity County in Shasta-Trinity National Forest. It was eradicated in 2013 and showed no signs of recent activity as of late March 2019. Trash is concentrated at Camp 1, with less than a 55 gallon bags-worth of trash across Camp 2 and the water source. Access the site by hiking downhill from Hobo Gulch Road along the nose of the ridge until reaching the same elevation as the site, then cut over to the site. The complex is approximately 800 meters below the road.

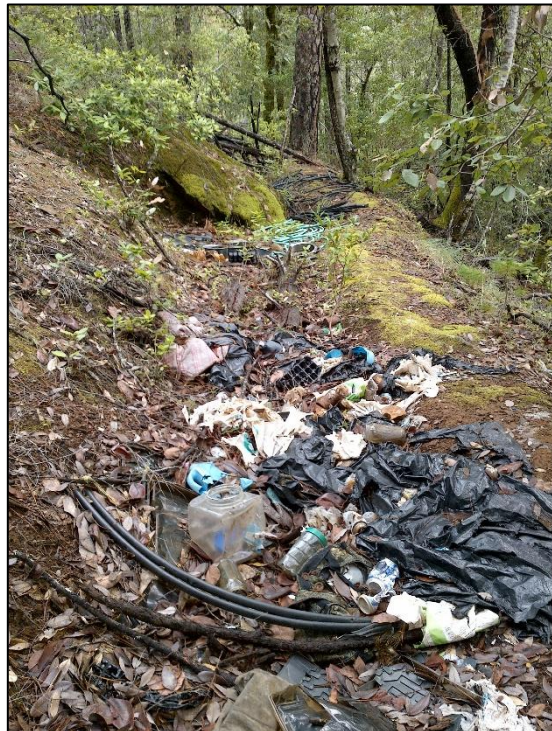
Plot 1

Plot 2

Source

Camp 1

Camp 2



Location of TMCC Features:

Access:

[REDACTED]

Estimated Personnel Required:

10 – 12

Trash Estimate:

30 trash bags (1200 - 1500 lbs.)

Source:

Source for Plot 1 was not located, but likely tracks to the creek just north of the plot. Plot 2 source leads to creek.

Irrigation Pipe Estimate:

A minimum of 400 meters.

Hazardous Materials:

Sprayer at [REDACTED]

Gilmore Girls (if time)

Gilmore Girls is a small-sized cultivation site in Trinity County in Shasta-Trinity National Forest. It was eradicated in 2011 and showed no signs of recent activity. Trash from the site's camp has been pre-staged; however, irrigation pipe within the site still needs to be staged for extraction. Access the site by hiking uphill from East Fork Road for approximately 1100 meters, over roughly 1200 feet of elevation change. The path up the nose of the mountain is fairly open, but the plots are extremely brushy with a lot of poison oak. Loppers are recommended for reclamation personnel.

Location of TMCC Features:

Plot 1	
Plot 2	
Source	
Trash 1	
Trash 2	
Camp	



Access:

Estimated Personnel Required:

4 (for full-day operation)

Trash Estimate:

4 trash bags (160 - 200 lbs.)

Source:

Source has not yet been located; sourceline must be followed from Plot 1 to the nearby creek to the north.

Irrigation Pipe Estimate:

A minimum of 600 meters across the two plots; estimate for the source line was not obtained.

Hazardous Materials:

Sprayer at .

Shasta - Trinity National Forest
Trespass Cannabis Cultivation Complexes

Reclamation Operational Plan for June 20, 2019



Integral Ecology Research Center



www.IERCecology.org

June 15, 2019

Background

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on June 20, 2019 are located on the Shasta - Trinity National Forest adjacent to Trinity Lake in Trinity County. This reclamation plan includes three different TCCC that have been assessed by IERC. Under the supervision of Integral Ecology Research Center (IERC) and the Trinity County Sheriff's Office (TCSO), teams from various government agencies, local conservation organizations, and volunteers from the Rocky Mountain Elk Foundation will participate in reclamation activities at Stonewall Pass 1, Stonewall Pass 2, and Haylock Ridge TCCC (Table 1, Figure 1). Reclamation activities at all locations will include the collection and manual extraction of all non-hazardous refuse, irrigation piping, and TCCC-related infrastructure.

All TCCC have been previously assessed and documented by IERC personnel and an inventory of confirmed and suspected hazardous materials was collected. All sprayers at these locations were flagged, but not mitigated. ***Non-qualified reclamation personnel are not to handle the sprayers at any time. Any hazardous materials discovered will not be removed during this operation.***

Operational Information

Operational date for reclamation efforts: June 20, 2019

Meeting Time and Locations: 0800, Weaverville Airport, Weaverville, CA

*****From meeting location, teams will be assigned and proceed to field locations**

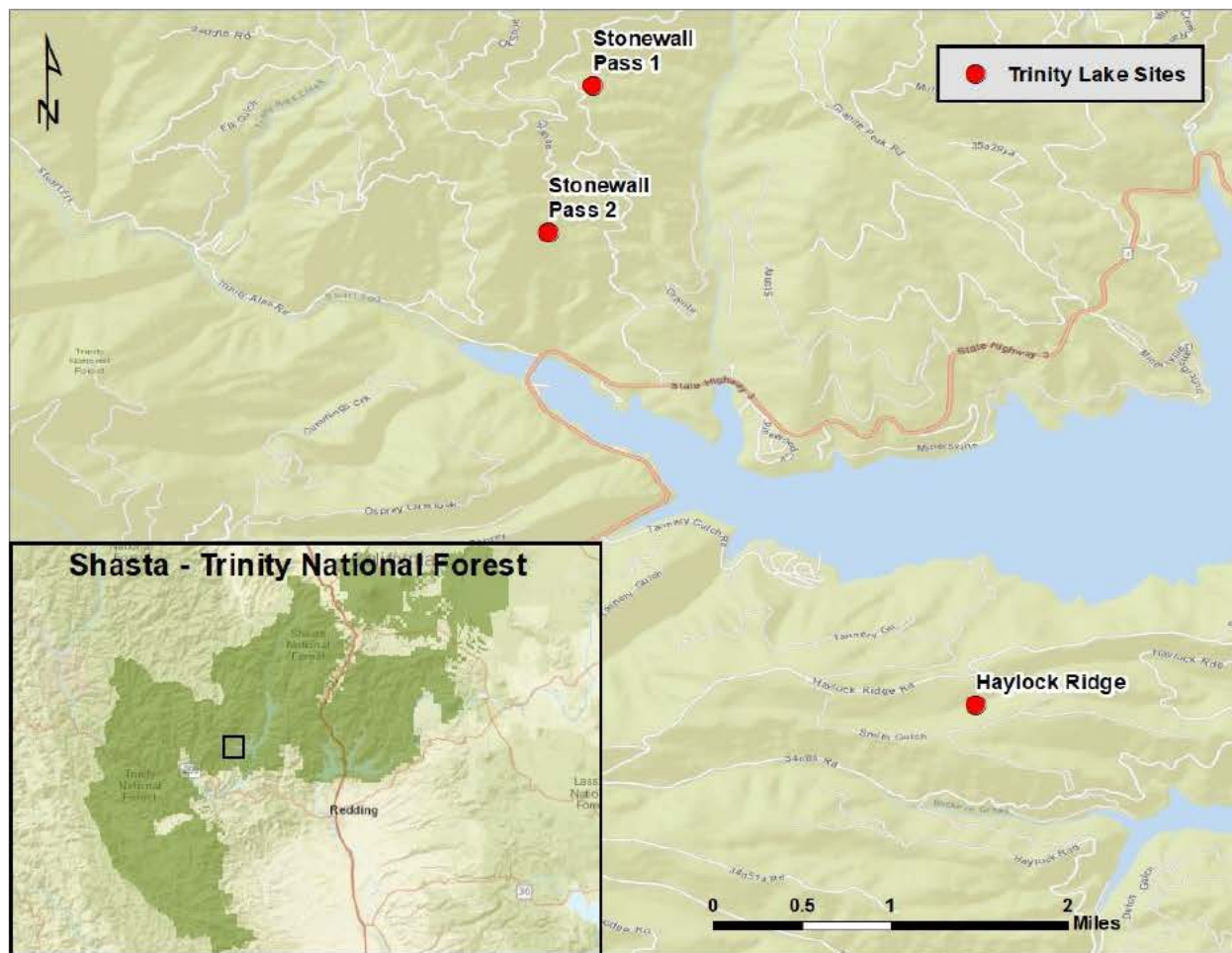


Figure 3. Overview map of trespass cannabis cultivation complexes designated for reclamation on June 20, 2019 within the Trinity Lake area on or adjacent to the Shasta - Trinity National Forest in Trinity County.

Table 1. Summary of the three trespass marijuana cultivation complexes (TCCC) locations scheduled for reclamation on June 20, 2019 within the Trinity Lake area on or adjacent to the Shasta - Trinity National Forest in Trinity County.

TCCC Name	Location	Activities
Stonewall Pass 1		Manual Removal
Stonewall Pass 2		Manual Removal
Haylock Ridge		Manual Removal

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass marijuana cultivation complexes scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates do not take into account any 1/4" "spaghetti" line that may be present in the site.

Hazardous Materials

IERC collected a single sprayer sample at the Haylock Ridge complex during the assessment of the cultivation sites to test for a suite of pesticides; however, results will likely not be available by the reclamation date. IERC will ensure that all sprayers and other hazardous materials will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged for removal at a later date. Nevertheless, all participants should always use caution when handling trash and infrastructure.

Site-Specific Reclamation Plans

Stonewall Pass 1

Stonewall pass is a small-sized cultivation site in Trinity County on Sierra Pacific Industries timberlands eradicated in 2016. During entry and eradication, law enforcement personnel noted elk droppings and a small herd of elk occupying the TCCC. Much of the pipe is buried and shovels or rakes may be useful for removal. The access point is behind an SPI gate and the road may be impassable for a trailer. A UTV will be utilized to shuttle extracted refuse to the trailer staging location. The source of water removal is likely in the creek north of the site. A source team should be deployed into the creek when accessing the site during reclamation efforts.

Location of TCCC Features:

Plot 1	
Plot 2	
Small Plot	
Camp 1	
Creek Trash	

Access:

Estimated Personnel Required:

5

Trash Estimate:

5 trash bags (150-200 lbs)

Source:

The source was not identified.

Irrigation Pipe Estimate:

1,500 meters

Hazardous Materials:

Two sprayers were identified [REDACTED] during assessment efforts and were flagged, but not mitigated. ***Non-qualified reclamation personnel are not to handle the sprayers at any time.***



Stonewall Pass 2

Stonewall pass is a small to moderate-sized cultivation site in Trinity County in Shasta-Trinity National Forest eradicated in 2016. During entry and eradication, law enforcement personnel noted elk droppings and a small herd of elk occupying the TCCC. Access coordinates are for the plots and the main camp is approximately 500m away from the main site, requires a different access point, and can be manually removed with approximately 4 people.

Location of TCCC Features:

Plot 1	
Plot 2	
Camp	
Plot Trash	
Cistern	

Access:

Estimated Personnel Required:

5

Trash Estimate:

4 trash bags (100-175 lbs)

Source:

The source was not identified.

Irrigation Pipe Estimate:

1,620 meters

Hazardous Materials:

Only empty over-the-counter pesticide bottles were visually confirmed. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Haylock Ridge

Haylock Ridge is a small-sized cultivation site in Trinity County in Shasta-Trinity National Forest. The oldest known activity was from 2016. The parking location is off of Haylock Ridge Road. The entry hike is an easy 150m walk under the power lines. Approximately 500 meters of pipe was already rolled and removed from plot 1.

Location of TCCC Features:

Plot 1	
Plot 2	
Camp 1	
Plot Trash	
Trim Camp	
Trash	

Access:

Estimated Personnel Required:

12

Trash Estimate:

7 trash bags (250-300 lbs)

Source:

Ended source searching at
. Continue to search for
source upstream to the west.

Irrigation Pipe Estimate:

1,400 meters

Hazardous Materials:

One sprayer was identified at
during assessment efforts
and was flagged, but not mitigated. **Non-qualified reclamation personnel are not to handle any suspected hazardous material, including sprayers, at any time.**



Reclamation Plans Not Included in Larger Operational Plans

*The Cody Creek TMCC was partially restored during the Salmon River Aerial Operation on April 30, 2019. The site was assessed following the initial planned date for the Salmon River Aviation Operation which is why it was not included in the original operational plan draft.

Cody Creek

Cody Creek is a moderate to small-sized cultivation site in Siskiyou County on Klamath National Forest. The site was eradicated in 2016 but evidence on the plot suggests the site was active in the last year or two. To access the site park at the access coordinates and hike on old road until it dead ends then hike on top of ridge, downhill for about 800m. The hike is steep and strenuous. A helicopter is required for reclamation.

Location of TMCC Features:

Plot

Trash 1

Access:

Estimated Personnel Required:

6

Trash Estimate:

1 trash bags (40 – 50 lbs)

Source:

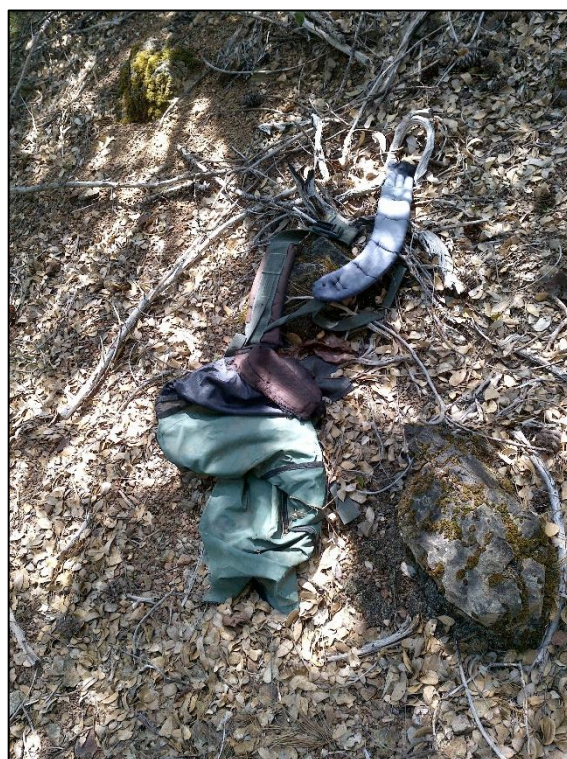
The source was followed until [REDACTED] and still needs to be located in the creek.

Irrigation Pipe Estimate:

1,400 m

Hazardous Materials:

No hazardous material was discovered at this site.



QUARTERLY PROGRESS SUMMARY

AGREEMENT # P1796020

Reclaiming our Public Lands and Watersheds from the Environmental Threats of
Trespass Cannabis Cultivation



July 01, 2019 – September 30, 2019

Prepared by: Integral Ecology Research Center



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October 8, 2019

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QUARTER 3 OF 2019, PROGRESS SUMMARY

In partial fulfillment of California Department of Fish and Wildlife's Cannabis Restoration Grant Program Agreement #P1796020, this document provides a quarterly summary of grant progress-to-date and includes documents developed by Integral Ecology Research Center (IERC) during the 7th Quarter of grant implementation (Quarter 3 of 2019, 01 July 2019 through 30 September 2019). Supplementary documents include reclamation and aerial operation plans (when necessary) and summary statistics and press releases for six operations and a single one-off reclamation not associated with a larger-scale operation.

Due to the law enforcement sensitivity of clandestine cannabis operation locations, and their ongoing potential to contain environmental and human health hazardous materials, the exact locations have been redacted from the aforementioned documents; however, broad scale maps have been left to allow the identification of the regional scope and distribution of reclamation activities.

Per the grant agreement, all trespass cannabis cultivation complexes (TCCC) are located within the Klamath Basin and visited with the objective of implementing up to three of the following activities:

1. **Assessment:** perform scientific assessments and evaluations ascertaining the magnitude of environmental impacts associated with the TMCC, including the inventory and sequestration of hazardous materials to reduce the risk of exposure during reclamation efforts. Reclamation plans are developed based on the results and findings of these assessments.
2. **Staging:** the collection, bagging and preparation of non-hazardous grow site refuse and infrastructure into areas accessible to helicopter long-lines, or manual removal, using a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.
3. **Reclamation:** the manual or helicopter removal of grow site refuse and infrastructure utilizing a varied workforce of IERC staff, federal, state and local agency personnel, and teams of subcontracted non-governmental organization employees.

Quarter 3 of 2019 was highly productive for both assessments (15 TCCC) and reclamation efforts (20 independent sites). Through the entire duration of the grant, IERC has assessed 149 potential TMCC locations. Of these, 100 TMCCs have been fully reclaimed composing 140 independent cultivation sites which tracks to an 82% completion rate of the 170 independent sites outlined in the grant agreement. From these areas, IERC has cumulatively removed 112,483 lbs. of refuse and 566,843 ft. (107 miles) of irrigation piping. NOTE: More current information resulted in an updated conversion ratio for calculating irrigation pipe length from weight resulting in a discrepancy from previous progress reports.

Grant Quarter	Activities at Cultivation Complexes			Removed Refuse and Grow Site Infrastructure		
	Assessment	Staging	Reclamation	Independent Sites	Total Refuse (lbs)	Irrigation Line (ft)
1: Jan – March 2018	13	2	0	0	0	0
2: April – June 2018	21	18	6	12	23,295	82,428
3: July – Sep 2018	23	11	21	36	26,023	118,673
4: Oct – Dec 2018	25	20	27	37	34,372	157,252
5: Jan – March 2019	34	2	5	5	620	1,048
6: April - June 2019	18	16	23	30	16,134	127,827
7: July - Sep 2019	15	16	18	20	12,039	79,616
	149	85	100	140	112,483	566,843

OPERATIONAL PLANS

Shasta - Trinity National Forest

Reclamation Operational Plan: July 16 - 19, 2019



Integral Ecology Research Center



www.IERCecology.org

July 10, 2019

Background

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on July 16 – 19, 2019 are located on the Shasta - Trinity National Forest around the Hayfork area in Trinity County. This operational plan includes site-specific reclamation plans for nine unstaged TCCC. An inventory of confirmed and suspected hazardous materials was collected, and all were mitigated and warning flagged to reduce exposure risk to reclamation teams. ***Hazardous materials will not be removed during this operation.***

A diverse collaboration of reclamation teams from Integral Ecology Research Center (IERC), Watershed Research and Training Center, California Conservation Corps, and United States Forest Service will participate in a multi-day reclamation effort under the supervision and coordination of IERC staff at these nine sites. Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

Operational Information

No air operations are scheduled for this reclamation effort.

Operational dates for reclamation efforts: July 16-19, 2019

Meeting Time and Location TBD for July 16 (only California Conservation Corps); will likely be just a half day of reclamation

Meeting Time and Location July 17 – 19: 0830 (every day, unless otherwise planned the prior day), Trinity County Sheriff's Substation, Hayfork, CA (corner of Hwy 3/ Hyampom Rd.)

***** From meeting location, teams will be assigned and proceed to field locations**

***** Order of sites has not yet been determined and will depend on LEO availability each day, and when sites are cleared for reclamation.**

Contact Information for Reclamation Organizers

Greta Wengert: (707) 845-7848; gwengert@ierceecology.org

Mourad Gabriel: (707) 845-7847; mgabriel@ierceecology.org

Ivan Medel: (707) 668-4030; imedel@ierceecology.org

Blue Ditch

Blue Ditch is a moderate-sized cultivation site in Trinity County in the Shasta-Trinity National Forest eradicated in 2010 of 7,434 plants. To access the site, park at the head of the overgrown dirt road leading to the site, then hike along the road for approximately 800 meters. The hike is relatively short with less than a 50-meter elevation change. The grow site is on the opposite side of where the road washed out and the plot rests on the dirt road with the camp and trash pile off the right side just past the plot. Reclamation may require a helicopter, though it may also be possible to drag pipe and trash to a nearby road for vehicular removal.

Location of TMCC Features:

Plot 1	[REDACTED]
Source 1	[REDACTED]
Trash 1	[REDACTED]
Camp 1	[REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

10

Trash Estimate:

12 trash bags (450-600 lbs.)

Source:

unknown

Irrigation Pipe Estimate:

300 meters

Hazardous Materials:

Three sprayers found at the site were bagged in a hazmat bag and are sitting within the plot at [REDACTED]. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Chicken Wire

ChickenWire is a small-sized cultivation site in Trinity County in the Shasta-Trinity National Forest. The site was discovered during IERC ground-truthing efforts therefore, the active years are unknown but is believed to be at least 10 – 15 years in age. The site is accessed by a moderate hike that is short but steep with about 100 meters of elevation change after parking at the end of a decommissioned road. The site consists mostly of chicken wire and t-posts outlining plot perimeters.

Location of TMCC Features:

Plot 1 [REDACTED]
Plot 2 [REDACTED]
Plot 3 [REDACTED]
Source [REDACTED]
Camp 1 [REDACTED]
Trash 1 [REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

3

Trash Estimate:

1 trash bag (40-50 lbs.)

Source:

Unknown

Irrigation Pipe Estimate:

80 meters

Hazardous Materials:

No hazardous materials were visually identified during the assessment.

Dub Rap

Dub Rap is a moderate sized cultivation site within Trinity County in Shasta-Trinity National Forest eradicated in 2011 of 12,898 plants. To access the site, park next to and follow a decommissioned skid road and turn upslope. The hike to the site is less than 500 meters with minimal elevation change. A camp was not identified during the assessment. Reclamation may require a helicopter, though there is the potential for refuse to be dragged to a nearby road.

Location of TMCC Features:

Plot 1	
Source	
Trash 1	

Access:

Estimated Personnel Required:

10

Trash Estimate:

5 Trash Bags (200-300 lbs.)

Source:

Source line was located and leads to a stream west of the site.

Irrigation Pipe Estimate:

600 meters

Hazardous Materials:

No hazardous materials were visually detected during the assessment.



Shiell Gulch2

Shiell Gulch 2 is a moderate-sized cultivation site in Trinity County on Shasta-Trinity National Forest eradicated in 2018 of 3,000 plants. Accessing the site requires an easy-to-moderate 350-meter hike along the side of a hill. Reclamation will require a helicopter.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 2B	
Source	
Trash	
Camp 1	
Camp 2	
Platform	
Trim	

Access:

Estimated Personnel Required:

8

Trash Estimate:

35 trash bags (1,400 – 1,750 lbs)

Source:

Source was identified as a nearby creek.

Irrigation Pipe Estimate:

1,740 meters

Hazardous Materials:

Two sprayers were identified at the site. One had just the nozzle and spare parts. The other sprayer was sampled for toxicants but came back negative for all chemical analytes. ***However, all sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Shiell Gulch 2018

Shiell Gulch 2018 is a large-sized cultivation site in Trinity County on Shasta-Trinity National Forest eradicated of 6,544 plants in 2018. To access the site, cross Hayfork Creek south of Wildwood Road, possibly using a fallen log and follow a trail to the plot. The hike is approximately 1.4 kilometers and is considered moderate in difficulty. Reclamation will require a helicopter.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Old Plot	
Camp 1	
Day Camp	
Trim	
Kitchen	
Trash 1	
Trash 2	



Access:

Estimated Personnel Required:

12

Trash Estimate:

50 trash bags (2,000 – 2,500 lbs)

Source:

Source was not identified.

Irrigation Pipe Estimate:

2,000 meters

Hazardous Materials:

Five sprayers were found at this site and are located at . One sprayer and a repurposed 1L Evian bottle (located at) tested positive for malathion. **However, all sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.**

Telephone 2018

Telephone 2018 is a moderate-sized cultivation site in the Shasta-Trinity National Forest in Trinity County eradicated of 10,000 plants in August 2018. To access the site, park on the side of road at the access point and hike from a power line opening on top of the ridge. It is a moderate hike up and over a ridge for approximately 500 meters then a somewhat steep drop (with an elevation change of 150 meters) to the site on the side of a slope. A helicopter will be necessary for reclamation.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Camp 1	
Camp 2	
Source 1	
Cistern 1	
Cistern 2	
Cistern 3	
Drying	



Access:

Estimated Personnel Required:

10 - 12

Trash Estimate:

16 – 20 trash bags (600 - 1000 lbs)

Source:

Two source lines were found. One source line lead into the old plot.

Irrigation Pipe Estimate:

5,000+ meters

Hazardous Materials:

Several hazardous materials were found at this site. Three containers of over the counter pesticides were visually confirmed, as well as two containers of zinc phosphide and one bottle of malathion. These containers were mitigated in an orange bucket at [REDACTED]. One container with confirmed carbaryl and sporimesifen was not mitigated. Three sprayers were sampled but tested negative for all pesticides. ***However, all sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Shiell Gulch 3

Shiell Gulch 3 is a moderate-sized cultivation site on the Shasta-Trinity National Forest in Trinity County eradicated of 1,019 plants in August 2018. Site access is an easy 450-meter hike slightly uphill in open forest. A helicopter will be necessary for reclamation.

Location of TMCC Features:

Plot 1	
Plot 2	
Camp	
Cistern 1	
Cistern 2	
Cistern 3	
Cistern 4	

Access:

Estimated Personnel Required:

10

Trash Estimate:

25 trash bags (1,000 – 1,250 lbs)

Source:

No source lines were found.

Irrigation Pipe Estimate:

100 meters minimum (no pipe estimate for main plot)

Hazardous Materials:

Several hazardous materials were located at this site. One labeled bottle of carbofuran, one container of zinc phosphide and several bottles of over-the-counter pesticides were visually confirmed. The carbofuran is mitigated in a bucket at . ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Tule Divide is a small-to-moderate-sized cultivation complex on the Shasta-Trinity National Forest in Trinity County eradicated of 4,638 plants in August 2018. Site access is an easy 100-meter downhill hike through open forest. With a sufficient labor force, it is possible to manually transport refuse to the road.

Plot 1	
Plot 2	
Plot 3	
Source 1	
Camp	
Trash 1	
Trash 2	
Cistern 1	
Cistern 2	



15 (for manual removal)

6 trash bags (240 - 300 lbs)

The exact source locations were not identified but two source lines were discovered entering drainages on both the east and west of the site.

3200+ meters

Several over-the-counter pesticides were identified as well as a labelled bottle of carbofuran. All hazardous materials were mitigated in a bucket located at [REDACTED]. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Plummer Peak 2018

Plummer Peak 2018 is a large cultivation site in Trinity County on Shasta-Trinity National Forest. The site was eradicated in 2018 and shows no sign of 2019 use; however, the TCCC shows evidence of multiple years of extended use prior to eradication. Access to the site is a moderate 1-km hike with an approximately 600-foot elevation gain. During eradication, extensive use of banned pesticides was discovered and reclamation teams should display increased caution and situational awareness when interacting with TCCC infrastructure and refuse.

Location of TMCC Features:

Plot 1		
Plot 2		
Plot 3		
Plot 4		
Plot 5		
Plot 6		
Plot 8		
Plot 9		
Plot 10		
Camp 1		
Camp 2		
Camp 3		
Camp 4		
Drying 1		
Drying 2		
Prep 1		
Trash 1		
Trash 2		
Trash 3		
Trash 4		
Cistern 1		
Cistern 2		
Cistern 3		
Cistern 4		



Access:

Estimated Personnel Required:

20 – 25

Trash Estimate:

53 trash bags (1,590 – 2,120 lbs)

Source:

Four source lines were discovered.

Source 1		
Source 2		
Source 3		
Source 4		

Irrigation Pipe Estimate:

10,000+ meters

Hazardous Materials:

This site has multiple bottles of confirmed carbofuran and sprayers staged in orange buckets and orange plastic bags at [REDACTED]. ***Non-qualified reclamation personnel should not approach this area for any reason. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Hoop Valley Indian Reservation and Klamath National Forest

Trespass Cannabis Cultivation Complexes

Reclamation Operational Plan: July 23 - 26, 2019



Integral Ecology Research Center



www.IERCecology.org

July 22, 2019

Background

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on July 23 – 26, 2019 are located on the Hoopa Valley Indian Reservation (HVIR) and Klamath National Forest (KNF) within Humboldt and Siskiyou Counties, respectively. This operational plan includes site-specific reclamation plans for three TCCC of which two have already been partially pre-staged. An inventory of confirmed and suspected hazardous materials was collected, and all were mitigated and warning flagged to reduce exposure risk to reclamation teams. ***Hazardous materials will not be removed during this operation.***

A diverse collaboration of reclamation teams from Integral Ecology Research Center (IERC), California Conservation Corps (CCC), and United States Forest Service will participate in a multi-day reclamation effort under the supervision and coordination of IERC staff at these three complexes. Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

Operational Information

No air operations are scheduled for this reclamation effort.

Operational dates for reclamation efforts: July 23 - 26, 2019

Meeting Times and Locations for July 23 – 26 reclamation activities:

Tuesday and Wednesday, July 23 and 24 (CCC only): 0830, IERC Office in Blue Lake (239 Railroad Ave)

Thursday, July 25: 0900, Trail Creek Campground, Klamath NF

Friday, July 26: 0730 (unless otherwise planned the prior day), Trail Creek Campground, Klamath NF

***** From meeting location, teams will be assigned and proceed to field locations**

Order of sites is as follows:

Tuesday, July 23, 2019: Ranger Mountain (HVIR); partially staged

Wednesday, July 24, 2019: Pump Iron (HVIR); partially staged

Thursday and Friday, July 25 and 26, 2019: Six Mile Mine (KNF); unstaged

Contact Information for Reclamation Organizers

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Greta Wengert: (707) 845-7848; gwengert@ierceecology.org

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Ranger Mountain

Ranger Mountain is a moderate-sized cultivation site on the Hoopa Valley Reservation in Humboldt County. The site was eradicated by law enforcement personnel in summer 2011. Access requires an easy 250 to 300-meter hike down an old skid road with less than 200 ft. of elevation

Location of TMCC Features:

Camp	
Drying	
Trash1	
Trash2	
Trash3	
Plot 1	
Plot 2	
Plot 3	
Plot 4	
Plot 5	
Source 1	
Source 2	
Source 3	



Access:

Estimated Personnel Required:

12

Trash Estimate:

Unknown; Much of the site was covered in snow during the full assessment

Source:

Three sources were identified during the full assessment:

Source 1	
Source 2	
Source 3	

Irrigation Pipe Estimate:

Unknown; Much of the site was covered in snow during the full assessment

Hazardous Materials:

Two 1-gallon sprayers were discovered. One located at and the other at

Pump Iron

Pump Iron is a moderate-sized cultivation site on the Hoopa Valley Reservation in Humboldt County. The site was likely active prior to 2010 and shows no signs of recent activity. Access is a 600m moderately steep hike approximately 900 ft. elevation drop downhill off Hostler B Road.

Location of TMCC Features:

Plot 1

Plot 2

Plot 3

Source

Camp

Trash 1

Trash 2



Access:

[REDACTED]

Estimated Personnel Required:

6

Trash Estimate:

12 trash bags (480 - 600 lbs)

Source:

Source was identified at [REDACTED]. There is approximately 1,500m of pipe. A tent is buried in the source stream.

Irrigation Pipe Estimate:

1,500 meters

Hazardous Materials:

A 1-gallon sprayer was discovered at [REDACTED].

Six Mile Mine

Six Mile Mine is a moderate-sized cultivation located in the Klamath National Forest (KNF) within Siskiyou County. The site was eradicated by law enforcement personnel in 2013. Access is about a 3km long hike along an old, decommissioned road.

Location of TMCC Features:

Camp 1	
Camp 2	
Drying	
Drying	
Drying	
Plot 1	
Plot 2	
Plot 3	
Plot 4	
Source	
Trash 1	
Trash 2	



Access:

Estimated Personnel Required:

8

Trash Estimate:

24 trash bags (960-1200 lbs)

Source:

One source was identified during the full assessment at .



Irrigation Pipe Estimate:

1,750 meters

Hazardous Materials:

Two 5-gallon sprayers were discovered at .

Shasta - Trinity National Forest Trespass Cannabis Cultivation Complexes

Reclamation Operational Plan: August 12 - August 16, 2019



www.IERCecology.org

August 8, 2019

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SHIELL GULCH 2	12
SHIELL GULCH 3	13
THURSDAY, AUGUST 15TH, 2019	14
<hr/>	
CHINA PEAK	14
FRIDAY, AUGUST 16TH, 2019	15
<hr/>	
MODEL HIT H078	15
STUTTER	16

Background

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on August 12-16 are located on the Shasta-Trinity National Forest in Trinity and Siskiyou Counties. This reclamation plan includes seven different TCCCs (Table 1). An inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation. A collaboration of teams from the Watershed Research and Training Center (WRTC) and United States Forest Service (USFS) will participate in a multi-day reclamation effort under the supervision and coordination of Integral Ecology Research Center (IERC) staff at Twisted Tree, Shiell Gulch 2018, Shiell Gulch 2, Shiell Gulch 3, China Peak 2018, H078, and Stutter (Table 1, Figures 1 – 4). Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

This document contains operational information primarily for trash and refuse staging activities. Helicopter extraction operations to remove all staged material are scheduled for September 2019, with a detailed aerial operations plan developed as a separate document.

Operational Information

Operational dates for reclamation efforts: August 12-16, 2019

Meeting Times and Locations:

August 12, 2019: 0800 Hayfork Sheriff Substation, Hayfork, CA

August 13, 2019: 0800 Hayfork Sheriff Substation, Hayfork, CA

August 14, 2019: 0800 Hayfork Sheriff Substation, Hayfork, CA

August 15, 2019: 0800 Intersection of Big French Creek Road and Highway 299, near Big Bar, CA

August 16, 2019: 0800 Hayfork Sheriff Substation, Hayfork, CA

*****From meeting locations, teams will be assigned and proceed to field locations**

Table 1: Summary of the seven trespass cannabis cultivation complexes prepared for reclamation and air operations on August 12-16, 2019, site coordinates and schedule.

Day	Date	TCCC Name	Location
1	Monday, August 12, 2019	Twisted Tree	[REDACTED]
2	Tuesday, August 13, 2019	Shiell Gulch 2018	[REDACTED]
3	Wednesday, August 14, 2019	Shiell Gulch 2	[REDACTED]
		Shiell Gulch 3	
4	Thursday, August 15, 2019	China Peak 2018	[REDACTED]
5	Friday, August 16, 2019	H078	[REDACTED]
		Stutter	

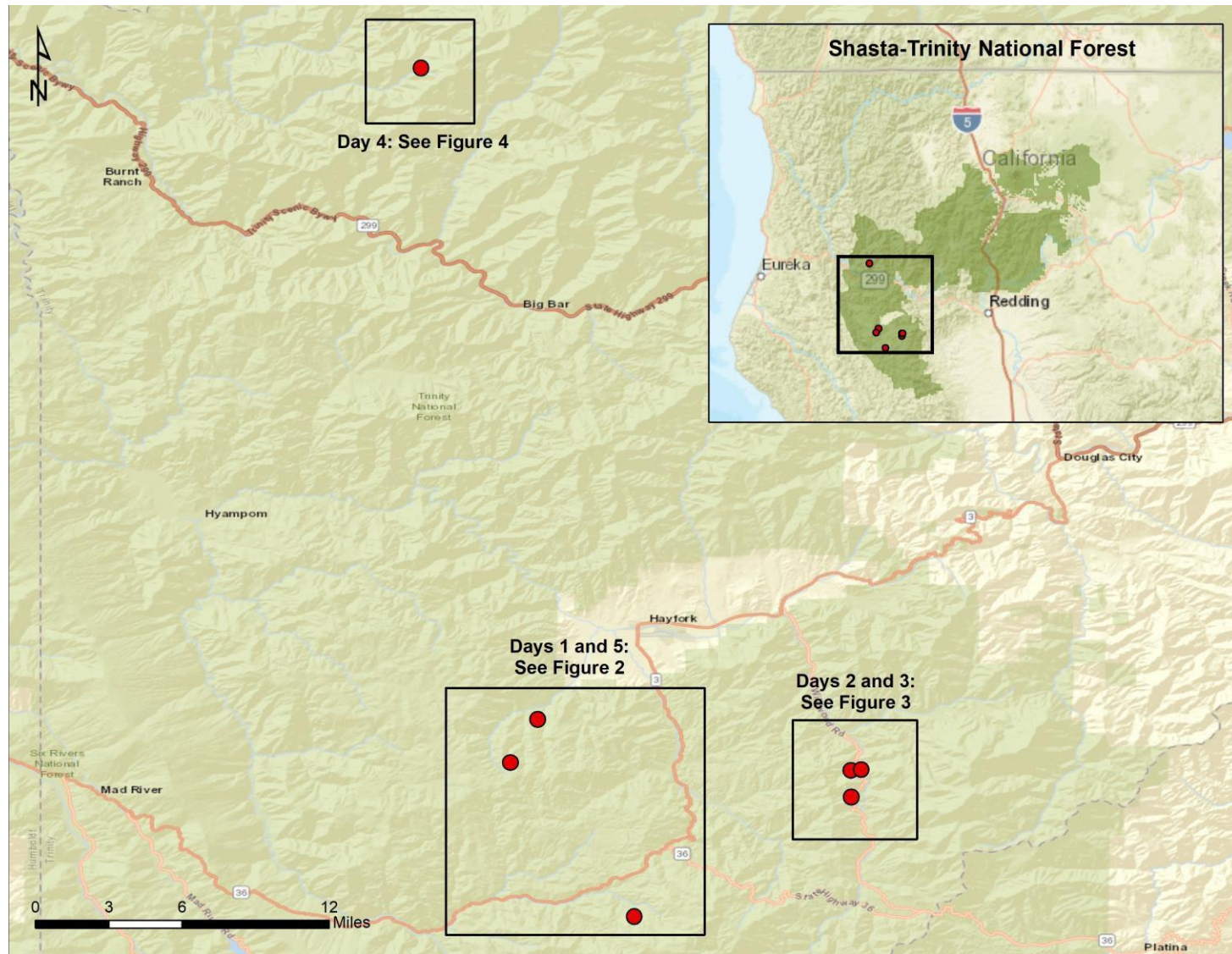


Figure 1. Regional overview map of the seven TCCC scheduled for reclamation staging activities between August 12 – August 16, 2019 on Shasta-Trinity National Forest lands in Trinity County.

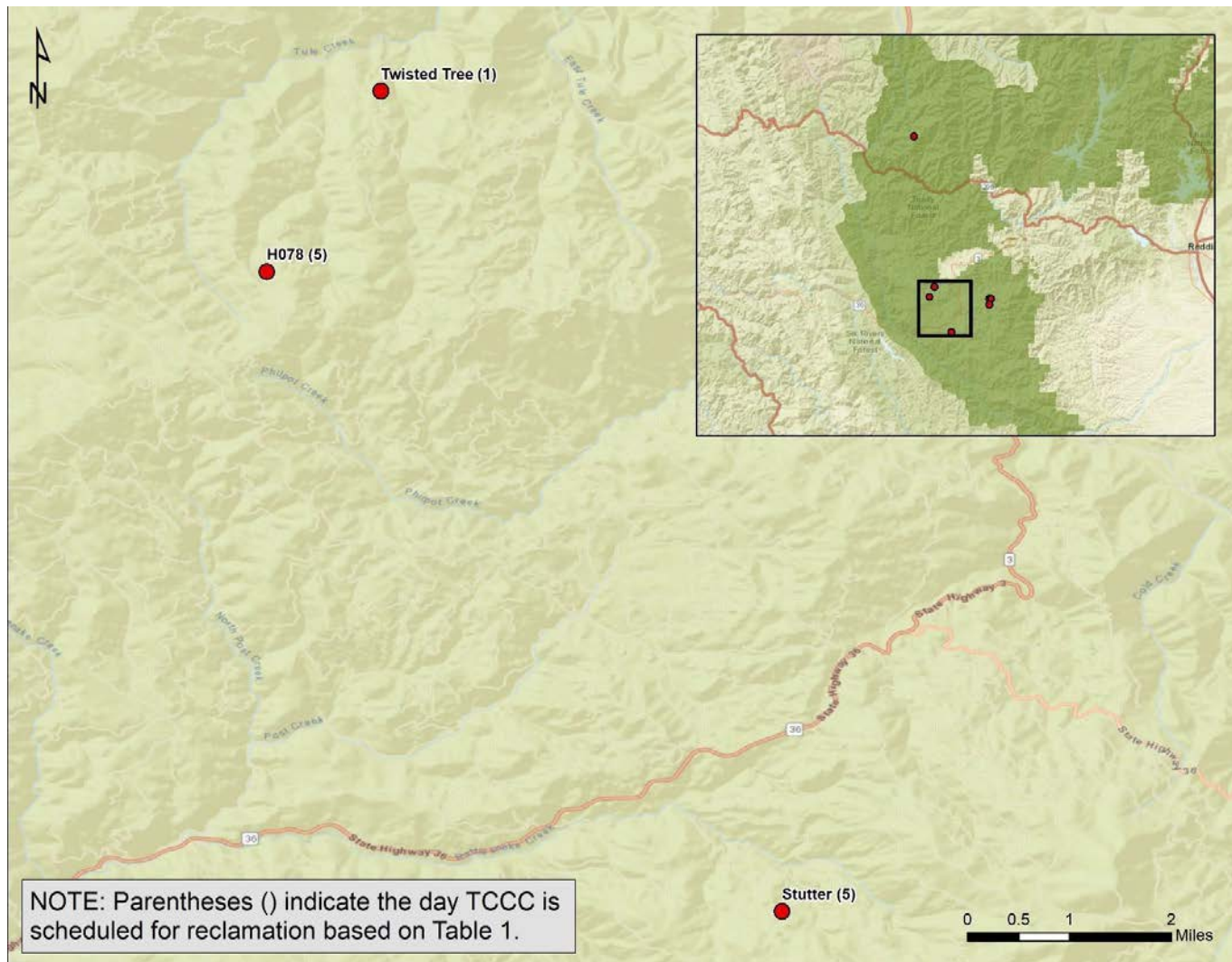


Figure 2. Map showing sites that will be reclaimed on days 1 and 5.

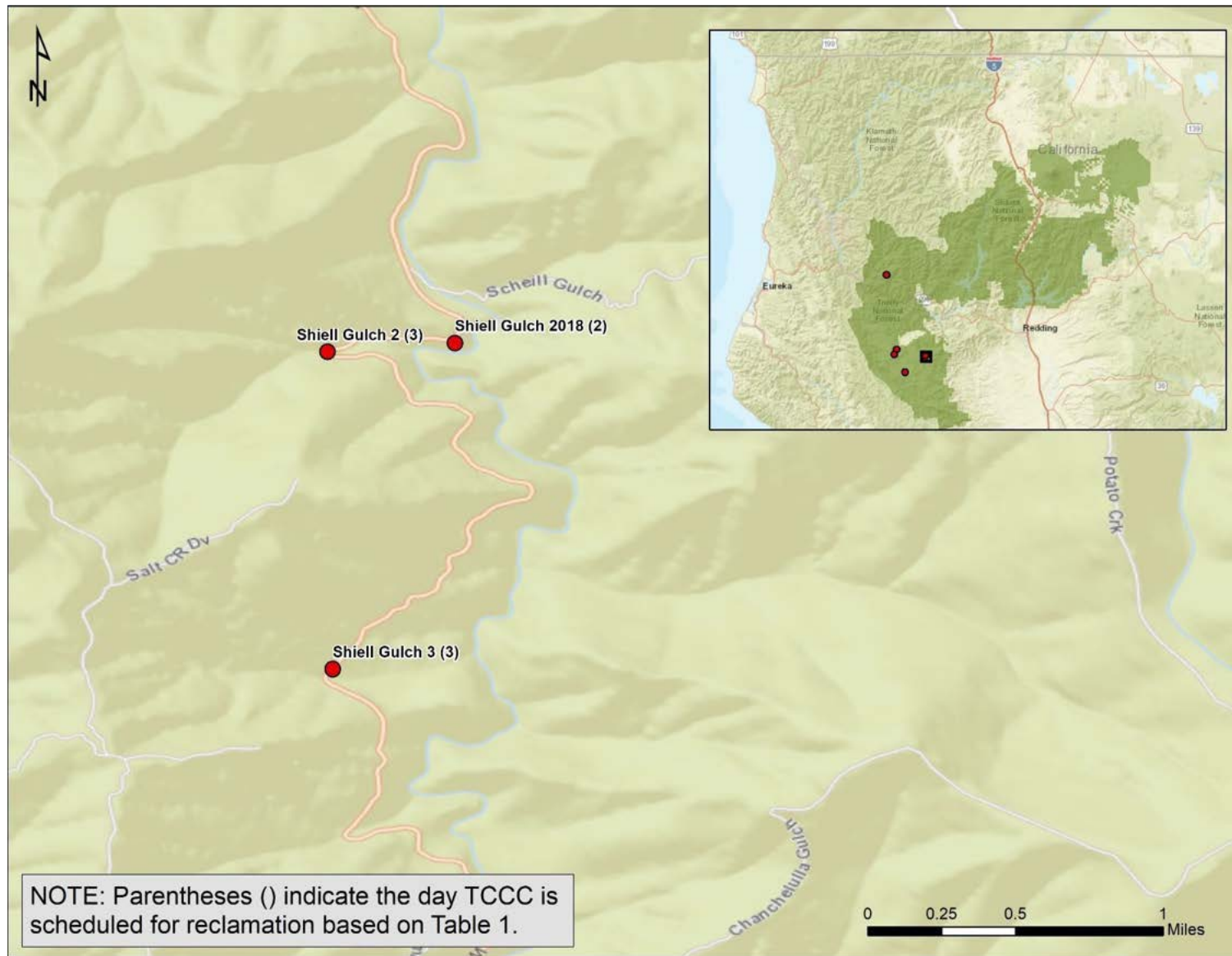


Figure 3. Map showing sites that will be reclaimed on days 2 and 3.

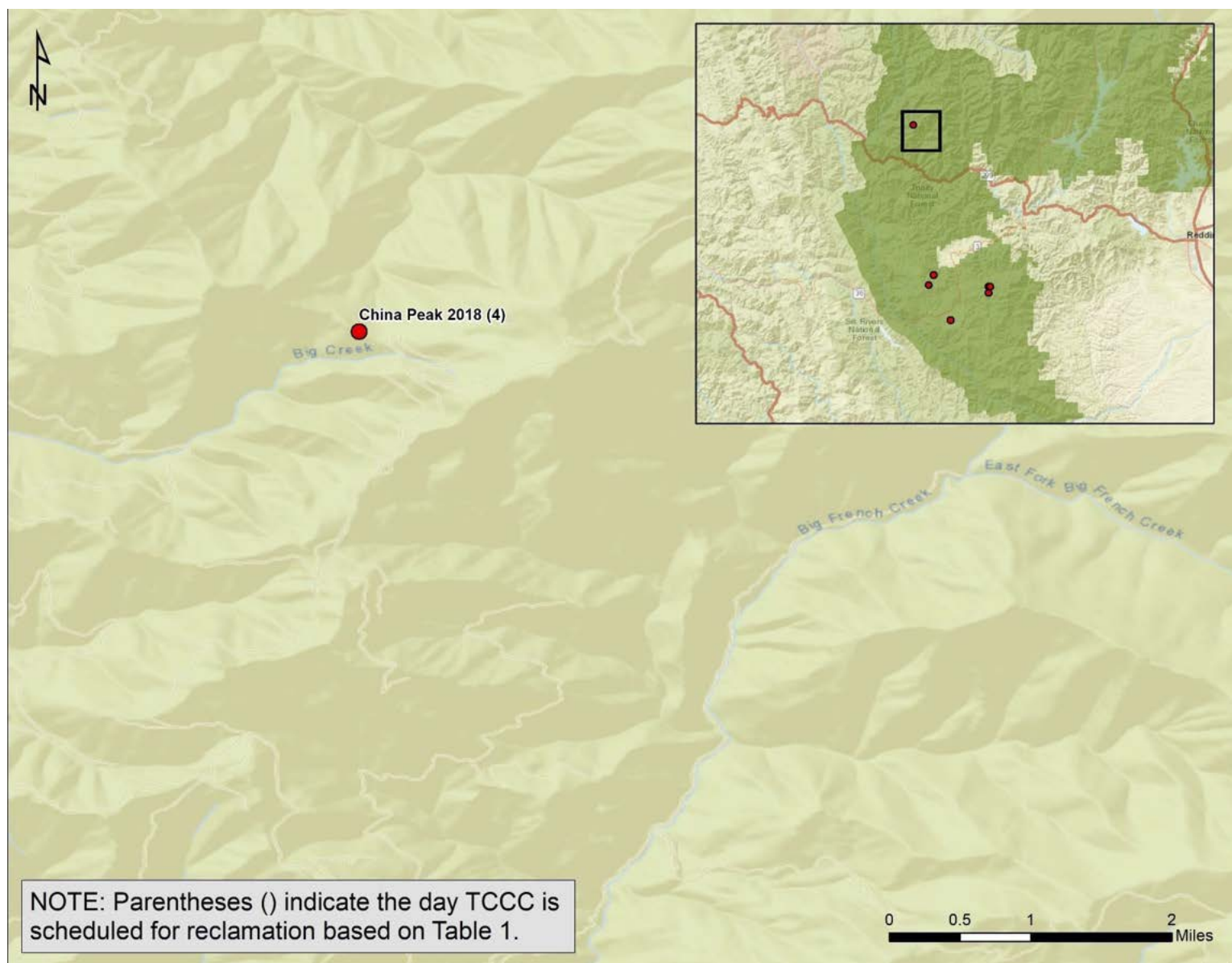


Figure 4. Map showing sites that will be reclaimed on day 4.

Description of Reclamation Summary Information

Estimated Personnel Requirements

The trespass cannabis cultivation complexes scheduled for reclamation vary in size, amount of pipe and trash present and necessary resources needed to complete a successful reclamation. Depending on the days and size of the sites, the team may be required to split up between sites. It is strongly recommended that sufficient human resources with experience be assigned to all sites allocated for reclamation.

Site Access

Most sites are considered easy-to-moderate in terrain but could be difficult due to brush and lack of road access. It is plausible that personnel will hike an average of 2-4 miles a day while conducting hard manual labor for these sites.

Trash Estimates

Based on standard mixed refuse weight estimates of 40lbs of weight per one full 55-gallon garbage bag, the total weights for each trespass grow site are formulated for each site. Every trash estimate is a dry amount and if a rain event were to occur between assessment and collection, weights and number of bag requirements may increase by 30-40%. The trash weight estimate also does not take into account the weight of irrigation pipe.

Irrigation Pipe Estimates

Estimate of irrigation pipe within a grow site are preliminary and likely conservative and should be considered the minimum amount of pipe present. The pipe assessment for each site includes the estimated length of pipe present within the cultivation plots and, when located, the pipe diverting water from the water source. The pipe estimates do not take into account of any 1/4" "spaghetti" line that may be present in the site.

Net (trash) and cobiner (pipe) loads

A helicopter can haul an average of 500lb net load or cobiner capacity. Estimated number of net and cobiner loads can be calculated using the estimated amount of trash and pipe within a site. The trash weight is calculated with an estimate of 40lbs of weight per one full 55-gallon garbage bag of trash. The pipe weight is calculated with an estimate of 400lbs of weight per one mile of pipe.

Hazardous Materials

IERC collected several samples during the assessment of the cultivation sites to test for a suite of pesticides; however, not all results are available by the initial pre-staging reclamation date. IERC will make sure that all sprayers and other hazardous material will be removed from the general refuse, sequestered in 3mm waterproof garbage bags and in air-tight buckets, and staged for removal at a later date. Nevertheless, all participants should always use caution when handling trash and infrastructure.

Monday, August 12th, 2019

Twisted Tree

Twisted Tree is a small-sized cultivation site in Trinity County in the Shasta-Trinity National Forest. The site was eradicated on July 7, 2011 and 5,780 plants were removed. To access the site, park at [REDACTED] (room for 3-4 vehicles) and follow a trail downhill for about 275 m. After crossing the creek (about 15 m up) there are two source lines (not followed). Follow the source lines to the left for about 40 m to reach the edge of Plot 1.

Location of TCCC Features:

Camp 1 [REDACTED]

Plot 1 [REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

12

Trash Estimate:

15 (600 – 750 lbs) bags, five propane tanks, and two stoves.

Source:

The source line crosses the path into the site. It has not yet been followed.

Irrigation Pipe Estimate:

2,500 m

Hazardous Materials:

Three sprayers were found on the site and a sample was submitted for toxicant analyses. Results are pending.



Tuesday August 13th, 2019

Shiell Gulch 2018

Shiell Gulch 2018 is a large-sized cultivation site in Trinity County on Shasta-Trinity National Forest eradicated of 6,544 plants in 2018. To access the site, cross Hayfork Creek south of Wildwood Road, possibly using a fallen log and follow a trail to the plot. The hike is approximately 1.4 kilometers and is considered moderate in difficulty. Reclamation will require a helicopter.

Location of TCCC Features:

Plot 1	
Plot 2	
Plot 3	
Old Plot	
Camp 1	
Day Camp	
Trim	
Kitchen	
Trash 1	
Trash 2	



Access:

Estimated Personnel Required:

12

Trash Estimate:

50 trash bags (2,000 – 2,500 lbs)

Source:

Source was not identified.

Irrigation Pipe Estimate:

2,000 meters

Hazardous Materials:

Five sprayers were found at this site. One sprayer tested positive for carbofuran and another tested positive for organophosphates (malathion). All sprayers are properly mitigated in orange bags at [REDACTED]. **All sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.**

Wednesday, August 14th, 2019

Shiell Gulch 2

Shiell Gulch 2 is a moderate-sized cultivation site in Trinity County on Shasta-Trinity National Forest eradicated in 2018 of 3,000 plants. Accessing the site requires an easy-to-moderate 350-meter hike along the side of a hill. Reclamation will require a helicopter.

Location of TCCC Features:

Plot 1	
Plot 2	
Plot 2B	
Source	
Trash	
Camp 1	
Camp 2	
Platform	
Trim	

Access:

Estimated Personnel Required:

8

Trash Estimate:

35 trash bags (1,400 – 1,750 lbs)

Source:

Source was identified as a nearby creek.

Irrigation Pipe Estimate:

1,740 meters

Hazardous Materials:

Two sprayers were identified at the site. One had just the nozzle and spare parts. The other sprayer tested positive for carbofuran as did a plant sampled from the site. **All sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.**



Shiell Gulch 3

Shiell Gulch 3 is a moderate-sized cultivation site on the Shasta-Trinity National Forest in Trinity County eradicated of 1,019 plants in August 2018. Site access is an easy 450-meter hike slightly uphill in open forest. A helicopter will be necessary for reclamation.

Location of TCCC Features:

Plot 1	
Plot 2	
Camp	
Cistern 1	
Cistern 2	
Cistern 3	
Cistern 4	

Access:

Estimated Personnel Required:

10

Trash Estimate:

25 trash bags (1,000 – 1,250 lbs)

Source:

No source lines were found.

Irrigation Pipe Estimate:

100 meters minimum (no pipe estimate for main plot)

Hazardous Materials:

Several hazardous materials were located at this site. One labeled bottle of carbofuran, one container of zinc phosphide, and several bottles of over-the-counter pesticides were visually confirmed. The carbofuran is mitigated in a bucket at . The soil and two sprayers also tested positive for carbofuran. **All sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.**



Thursday, August 15th, 2019

China Peak

China Peak 2018 is a moderate sized cultivation site on the Shasta-Trinity National Forest in Trinity County. The site had 11,223 plants and was eradicated on September 12, 2018. Access is a moderate 1-mile hike along a decent trail with open understory. A helicopter will be necessary for reclamation.

Location of TCCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Camp	
Source 1	
Source 2	
Cistern 1	
Cistern 2	

Access:

Estimated Personnel Required:

10

Trash Estimate:

10 trash bags (400 - 500 lbs)

Source:

Two source lines were found. One source line lead to a drip spring under a tree. The line for source 2 was followed to the waypoint.

Irrigation Pipe Estimate:

1,500+ meters

Hazardous Materials:

No hazardous materials were visually confirmed by IERC personnel, however plant foliage was seen coated with white substance. Four plant and four soil samples were collected and tested negative for carbamates, organophosphates, pyrethrins, and anticoagulant rodenticides.



Stutter

Stutter is a small sized cultivation site on the Shasta-Trinity National Forest in Trinity County. The site was last active in 2017. Access is an easy 250 m hike down an old dirt bike trail, located about 30 m from the parking area ([REDACTED]). The trail leads right to the camp. *Bring multitools for barbed wire.

Location of TCCC Features:

Source	[REDACTED]
Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Prep 1	[REDACTED]
Trash 1	[REDACTED]
Trash 2	[REDACTED]
Trash 3	[REDACTED]
Trash 4	[REDACTED]
Trash Kitchen	[REDACTED]
Camp 1	[REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

6 people needed for reclamation if staging; 10 people needed if pulling to road

Trash Estimate:

12 trash bags (approximately 480 to 600 lbs) and a stove.



Source:

One source line was found (see location above).

Irrigation Pipe Estimate:

A minimum of 770 m

Hazardous Materials:

A total of five bottles of over the counter pesticides were discovered at the site. These contained the active ingredients: malathion, gamma-cyhalothrin, and bacillus subtilis. Samples were collected from two sprayers and will be submitted for testing of toxicants.

Klamath National Forest
Trespass Marijuana Cultivation Complex Reclamation
Siskiyou County, CA

Aerial Operation Plan: August 13, 2019



Integral Ecology Research Center



www.IERCecology.org

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on August 13, 2019 are located on the Klamath National Forest in Siskiyou County. This reclamation operational plan includes three TMCC, two of which was previously assessed and staged by IERC and partners prior to this planned air operation, (Table 1, Figure 1). For the two sites which have been assessed, an inventory of confirmed and suspected hazardous materials was collected and all were mitigated to reduce exposure risk to reclamation teams. Hazardous materials will not be removed during this operation.

Operational Information

Operational date for reclamation efforts: **August 13, 2019**

Meeting Time and Location

August 13, 2019: 0830 at Shadow Creek Campground on Cecilville Road ([REDACTED])

*****From meeting location, teams will be assigned and proceed to field locations or LZ**

Landing and Drop Zone Coordinates

Landing Zone 1: [REDACTED] – Summit LZ

Land Zone 2 (if usable): [REDACTED] – Deacon Lee Trailhead

Landing Zone 3 (if usable): [REDACTED]

Helicopter Information

Time of Arrival at LZ: 1030

Company: Air Shasta, Redding, CA

Pilot: Gavin Woelful, CDFW Warden

Tail number: N555AS

Make: Bell

Model: 407

Table 1: Summary of three trespass marijuana cultivation complexes, site locations, individual staging locations, drop locations, hazmat status and refuse quantities planned for aerial removal on August 13, 2019 on Klamath National Forest.

Site Name	Coordinates	Long-line Loads	Nets	Cobiners	HazMat	Drop Point
6 Mile Mine		1	1	0	15 lb propane tank	LZ
6 Mile Mine					Two Sprayers (bagged)	LZ
6 Mile Mine		1	0	1	No	
6 Mile Mine		2	1	1	15 lb propane tank	
6 Mile Mine		1	1	0	No	
Shadow Creek		Not staged (estimated 7 55-gallon bags of trash)	?	?	1 mitigated sprayer, pending lab results (tested pepto bismol container)	LZ
*****China Gulch 2018		Unvisited (unknown)	?	?	?	LZ
**** Only if time after Shadow and Six Mile						

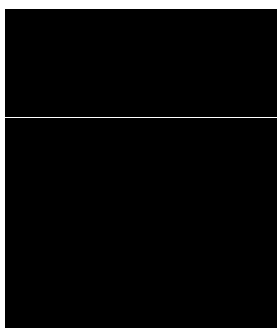
Shadow Creek

August 20, 2019

Shadow Creek is moderate-sized cultivation site in Siskiyou County in the Klamath National Forest. The site was eradicated in 2016 and 17,809 plants were removed. The site showed no signs of recent activity. To access the site park at the access coordinates and hike along game trail for ~500m, then drop straight downhill for 550m, cross creek, then hike up ridge to the site for about 400m. Hike is moderately difficult due to steep slope, but mostly clear of brush.

Location of TCCC Features:

Camp 1
Plot 1
Plot 2
Plot 3
Plot 4
Plot 5
Plot 6
Trash 1
Trash 2



Access:



Estimated Personnel Required:

5

Trash Estimate:

7 bags (200 - 280 lbs)

Source:

All three sources need to be followed to instream location.

Source 1
Source 2
Source 3



Irrigation Pipe Estimate:

4,370 meters

Hazardous Materials: Sprayers are mitigated in orange plastic bags at [REDACTED]. All sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.

Daily meet time and location: 0800 hrs every day at the intersection of CA Highway 299 and Big French Creek Road (see below photo) in Trinity County (40° 46.805'N, 123° 18.593'W). From here, teams will caravan to the landing zone and Falcon 97 is to arrive at 0900.



Dates and locations of reclamation operations planned for 8/22 to 8/30/2019 on the Shasta-Trinity National Forest within the Trinity Alps Wilderness.

Date	Landing Zone	Site Name	Site Location	Teams
8/22/2019	LZ1	Big French Wild 1 2015		8
8/23/2019	LZ1	Big French Wild 2 2015		6
		Big French Wild 2 2017		2
8/26/2019	LZ2	China Peak 2016		1
		China Peak 2018		1
		Green Mountain		6
8/27/2019	LZ2	Big French 6 2016		4
		Big French 7 2016		4
8/28/2019	LZ2	Big French 4 2016		4
		Big French 4 2017		2
		Big French 5 2017		2
8/29/2019	LZ2	Big French 2 2016		4
		Big French 3 2016		4
8/30/2019	LZ1	Prairie Creek 1		2
		Prairie Creek 2		6

LZ1: [REDACTED] Private Landowner with open and secure field. Used during 2015-2017 CAMP Seasons with H-500 and Bell 206. Easy non-4wd road, easy for fuel vehicle.



LZ2: [REDACTED] Public Land road-end trailhead. Used during 2015-2018 CAMP Seasons with H-500 and Bell 206. Easy non-4wd road, easy for fuel vehicle.



Thursday, August 22, 2019 (150 ft long line)

Big French Wild 1: Eradicated September 2015 (8 teams)

- Plot 1: [REDACTED]
- Plot 2: [REDACTED] (Estimated Location: No IERC Visit)
- Camp 1: [REDACTED]
- Camp 2: [REDACTED] (Estimated Location: No IERC Visit)

Friday, August 23, 2019 (150 ft long line)

Big French Wild 2: Eradicated September 2015 (6 teams)

- Plot 1: [REDACTED]
- Plot 2: [REDACTED]
- Plot 3: [REDACTED]
- Plot 4: [REDACTED]
- Camp: [REDACTED]

Big French Wild #2 2017: Eradicated in 2017 (2 teams)

- Camp: [REDACTED] (Removed during Eradication)
- Plot 1: [REDACTED]
- Cistern 1: [REDACTED]

Monday, August 26, 2019 (150 ft long line)

China Peak 2016: Eradicated in 2016 (1 team; already-staged, but may need re-bagging)

- Staging 1: [REDACTED] (1 cobiner)
- Staging 2: [REDACTED] (1 net, 1 cobiner)
- Staging 3: [REDACTED] (2 nets, 2 cobiners)

China Peak 2018: Eradicated in 2018 (1 team; to be staged prior to operation)

- Site: [REDACTED]

Green Mountain: Eradicated in 2018 (6 teams)

- Camp: [REDACTED]
- Plot 1: [REDACTED]
- Cistern: [REDACTED]

Tuesday, August 27, 2019 (150 ft long line)

Big French #6: Eradicated in 2016 (4 teams)

- Plot 1: [REDACTED]
- Plot 2: [REDACTED]
- Plot 3: [REDACTED]
- Camp 1: [REDACTED]
- Cistern1: [REDACTED]
- Cistern 2: [REDACTED]
- Cistern 3: [REDACTED]

Big French #7: Eradicated in 2016 (4 teams)

- Plot 1: [REDACTED]
- Camp 1: [REDACTED]

- Cistern 2: [REDACTED]

Wednesday, August 28, 2019 (150 ft long line)

Big French #4: Eradicated in 2016 (4 teams)

- Plot 1: [REDACTED]
- Cistern 1: [REDACTED]
- Camp 1: [REDACTED]

Big French #4: Eradicated in 2017 (2 teams; not assessed by IERC)

- Site: [REDACTED]

Big French #5: Eradicated in 2017 (2 teams; not assessed by IERC)

- Site: [REDACTED]

Thursday, August 29, 2019 (150 ft long line)

Big French #2: Eradicated in 2016 (4 teams)

- Plot 1: [REDACTED]
- Camp 1: [REDACTED]
- Camp 2: [REDACTED]
- Camp 3: [REDACTED]
- Cistern 1: [REDACTED]

Big French #3: Eradicated in 2016 (4 teams)

- Plot 1: [REDACTED]
- Cistern1: [REDACTED]

Friday, August 30, 2019 (150 ft long line)

Prairie Creek 1: Eradicated in 2016 (2 teams)

- Plot 1: [REDACTED]
- Cistern 1: [REDACTED]

Prairie Creek 2: Eradicated in 2016 (6 teams)

- Plot 1: [REDACTED]
- Plot 2: [REDACTED]
- Plot 3: [REDACTED]
- Plot 4: [REDACTED]
- Plot 5: [REDACTED]
- Plot 6: [REDACTED]
- Camp 1: [REDACTED]
- Cistern 1: [REDACTED]

Aerial operations Plan: September 24 – September 27

Reclamation on Klamath and Shasta-Trinity National Forests

Daily meet times and locations:

Tuesday, September 24, 2019: 0900 hrs at LZ1 located at XXXXXXXXXXXXXXXXXXXX off Cecilville Road in Siskiyou County (no street view photo available). Falcon 97 to arrive at 0930 hrs.

Wednesday, September 25, 2019: 0900 hrs at LZ2 located at XXXXXXXXXXXXXXXXXXXX off Forks of Salmon Road in Siskiyou County (no street view photo available). Falcon 97 to arrive at 0930 hrs.

Thursday, September 26, 2019: 0800 hrs at the intersection of CA Highway 299 and Big French Creek Road (see below photo) in Trinity County (XXXXXXXXXXXXXXXXXXXX). From here, teams will caravan to the landing zone and Falcon 97 is to arrive at 0900 hrs.



Friday, September 27, 2019: 0800 hrs 100 yards west of the intersection of CA Highway 299 and Denny Road (large turnout on the east bound side at XXXXXXXXXXXXXXXXXXXX). From here, teams will caravan to the landing zone and Falcon 97 is to arrive at 0900 hrs.



Dates and locations of reclamation operations planned for 9/24 to 9/27/2019 on the Klamath and Shasta-Trinity National Forests.

Date	Landing Zone	Drop Zone	Site Name	Site Location	Access Method
9/24/2019	LZ1 [REDACTED]	---	Plummer Creek	[REDACTED]	Short-haul
		---	Cody Creek	[REDACTED]	Short-haul
	---	DZ1	Shadow Creek	[REDACTED]	Hike-In
9/25/2019	LZ2 [REDACTED]	---	Indian Bottom	[REDACTED]	Short-haul
	---	DZ2	5 Mile	[REDACTED]	Hike-In
9/26/2019	LZ3 [REDACTED]	---	Prairie Creek 2	[REDACTED]	Short-haul
		---	Big French 6 2016	[REDACTED]	Short-haul
		---	Big French 7 2016	[REDACTED]	Short-haul
9/27/2019	LZ4a [REDACTED]	---	Denny 1	[REDACTED]	Short-haul
	LZ4b [REDACTED]	---	Denny 2	[REDACTED]	Short-haul
		---	Bake Oven	[REDACTED]	Short-haul

LZ1: [REDACTED] - Public land with open and secure field located on Cecilville Road. Used during 2019 IERC reclamation operations with Bell 206. Paved, non-4wd road, easy for fuel vehicle but trailers may want to access the LZ from CA State Highway 3 from the East due to tight, windy roads.



DZ1: [REDACTED] – Open switchback on public land road approximately 1.4 mile off Cecilville Road. Dirt, non-4wd road, easy for all vehicles.



LZ2: [REDACTED] - Public land with open field located off Salmon River Road. Used during 2015 CAMP operations with Bell 206. Paved, non-4wd road, easy for fuel vehicle.



DZ2: [REDACTED] – Public land open field located off CA State Highway 299. Used during 2018 USFS Exclusive Use reclamation operations with Bell 206 Long Ranger.



LZ3: [REDACTED] Private Landowner with open and secure field. Used during 2015-2017 CAMP Seasons and 2019 USFS Exclusive Use reclamation operation with H-500 and Bell 206. Gravel, non-4wd road, easy for fuel vehicle.



LZ4a: [REDACTED] Public land open field located off Denny Road. Used during 2015-2018 CAMP operations. Paved, non-4wd road, easy for fuel vehicle. From this LZ, long-line operations will be unable to be conducted at Bake Oven.



LZ4b: [REDACTED] Public land open field located near Denny Road. Used during 2018 CAMP operations. Gravel, non-4wd road, easy for fuel vehicle.

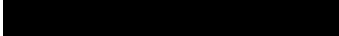






Tuesday, September 24, 2019 (150 ft long line)

Cody Creek: Eradicated July 2015 (4 teams)

- Plot 1: 
- Plot 2: 
- Camp: 
- Cistern: 

Plummer Creek: Eradicated August 2017 (No IERC visit; 3 teams)






- Plot 1: 
- Plot 2: 
- Plot 3: 
- Plot 4: 
- Camp 1:  (pulled on eradication day)

Shadow Creek: Eradicated September 2015 (1 Hike-in Team; 1 Hike-In Team; Refuse delivered to Drop Zone 1)

- Stage 1:  (1 cobiner)
- Stage 2:  (1 cobiner)

Wednesday, September 25, 2019 (150 ft long line)

Indian Bottom: Eradicated August 2015 (5 teams)



- Plot 1 
- Plot 2 
- Camp 1 
- Camp 2 
- Cistern 1 
- Cistern 2 

5 Mile: Eradicated in 2017 (1 Hike-In Team; Refuse delivered to Drop Zone 2)

- Stage 1:  (1 cobiner)
- Camp 1:  (mostly reclaimed)

Thursday, September 26, 2019 (150 ft long line)

Prairie Creek 2: Eradicated in 2016 (6 teams)

- Plot 1: 
- Plot 2: 
- Plot 3: 
- Plot 4: 
- Plot 5: 
- Plot 6: 

- Camp 1: [REDACTED]
- Cistern 1: [REDACTED]

Big French #6: Eradicated in 2016 (Recon and possible insertion for back-haul)

- Camp 1: [REDACTED]

Big French #7: Eradicated in 2016 (Recon and possible insertion for back-haul)

- Camp 1: [REDACTED]

Friday, September 27, 2019

Denny 1: Eradicated in 2016

- Plot 1: [REDACTED]
- Plot 2: [REDACTED]
- Plot 3: [REDACTED]
- Camp 1: [REDACTED]
- Cistern 1: [REDACTED]
- Cistern 2: [REDACTED]

Denny 2: Eradicated in 2016

- Site: [REDACTED]
- Site: [REDACTED]

Bake Oven: Eradicated in 2017 (5 teams)

- Plot 1: [REDACTED]
- Plot 2: [REDACTED]
- Plot 3: [REDACTED]
- Plot 4: [REDACTED]
- Camp 1: [REDACTED]

OPERATION SUMMARIES AND PRESS RELEASES



Reclamation of Cannabis Cultivation Complexes Klamath National Forest Air Operation Synopsis and Statistics: August 13, 2019

Organizations Involved

Governmental: United States Forest Service Law Enforcement and Investigations (USFS-LEI), and California Department of Fish and Wildlife Law Enforcement Division (CDFW-LED), California Conservation Corps (CCC)

Non-Governmental: Integral Ecology Research Center (IERC), Rocky Mountain Elk Foundation (RMEF)

Reclamation Organizers: Dr. Greta Wengert, Dr. Mourad Gabriel, Ivan Medel (IERC); Lt. DeWayne Little (CDFW-LED); Captain Chris Magallon (USFS-LEI)

Funding Support: Funding for the reclamation of this trespass cannabis cultivation complex was provided by a **Rocky Mountain Elk Foundation Grant** with matching funds provided by **California Department of Fish and Wildlife Cannabis Restoration Grant** to Integral Ecology Research Center.

Logistical Support: The California Department of Fish and Wildlife Law Enforcement Division, Trinity County Sheriff's Office and United States Forest Service Law Enforcement and Investigations assisted with coordination and provided law enforcement officers and vehicles as a force multiplier for this effort.

Statistics

Number of cannabis complexes reclaimed: Two (2)

Total number of independent sites reclaimed: Three (3)

Location: United States National Forest Lands: Klamath National Forest

Watersheds affected: East Fork South Fork Salmon River draining into the Salmon River

Species of conservation concern affected: northern spotted owl (sites within Critical Habitat), Pacific fisher, California wolverine, Pacific tailed frog, and steelhead trout

Personnel: IERC (6), CDFW-LED (2), USFS-LEI (3), CCC (9)

Trash and infrastructure removed during reclamation: 1,450 lbs (0.725 tons)

Irrigation pipe removed during reclamation: 2.85 miles (15,056 ft)

Long-line loads: 5 loads (Total long-line flight time ~ 0.8 hrs)



Top Photo: Before and after photos of reclamation within a camp at one of the trespass cannabis cultivation complexes on the Klamath National Forest located in Siskiyou County northeast of Cecilville.

Bottom Left Photo: Conservation Corpsmembers working to stage refuse at one of the trespass cannabis cultivation complexes on the Klamath National Forest located in Siskiyou County northeast of Cecilville.

Bottom Right Photo: Over 300 lbs. of refuse and grow site infrastructure staged for helicopter removal refuse at one of the trespass cannabis cultivation complexes on the Klamath National Forest located in Siskiyou County northeast of Cecilville.





Top Photo: Over 1,400 lbs. of refuse and grow site infrastructure after being removed from two trespass cannabis cultivation complexes on the Klamath National Forest located in Siskiyou County northeast of Cecilville.

Bottom Left Photo: An excited California Conservation Corps crew after staging over 1,000 lbs of refuse and infrastructure at one of the trespass cannabis cultivation complexes on the Klamath National Forest located in Siskiyou County northeast of Cecilville.





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A 501(c)3 Research Organization

September 5, 2019

Press Release - Operation Wild Fisher: August 22 - 30

This week marks the 55th anniversary of the Wilderness Act which was passed by the 88th Congress and signed by President Lyndon Johnson on September 3, 1964. Under this Act, the National Wilderness Preservation System was established to protect designated wilderness areas that federal land agencies are tasked with managing. Unfortunately, clandestine cannabis cultivation on federally designated wilderness areas protected under the Wilderness Act is common. Drug trafficking organizations use these pristine lands to cultivate cannabis with destructive methods where they divert water from protected salmon streams, remove forest structure essential for wildlife, and pose hazards to recreationists while abusing these unspoiled lands.

The Trinity Alps Wilderness was designated by the 98th Congress in 1984, and the United States Forest Service is responsible for its management. This wilderness provides refugia for threatened flora and fauna, including northern spotted owls, coho and chinook salmon, Pacific tailed frog, Pacific fishers, and Humboldt martens.

In celebration of this anniversary and to respect the framework and goals of the Act, we at Integral Ecology Research Center (IERC) and our partners set out to reduce negative human impacts and remove hazards to threatened and endangered species on the undeveloped, natural lands of the Trinity Alps Wilderness. A seven-day operation named Operation Wild Fisher in this wilderness was completed in which non-profits alongside United States Forest Service Law Enforcement and Fire, California Army National Guard, and local resource agencies tirelessly cleaned up trespass cannabis cultivation complexes (TCCC). During Operation Wild Fisher, an interdisciplinary partnership of highly qualified teams cleaned up a total of nine expansive cultivation complexes including the removal of water diversions, food and cultivation refuse, and toxicants that pose considerable threats to fish, wildlife and humans. Collectively, over 7,000 pounds of trash and 8 miles of irrigation line were removed from this wilderness, some of which was hauled from over 5 miles into the wilderness. This effort marked the first time that more trespass cannabis complexes were removed from this wilderness setting than were established for the year. Operation Wild Fisher was a model for future efforts where qualified and diverse groups join forces and work collaboratively towards a focused goal aimed at removing the stranglehold trespass cannabis cultivation has on our wilderness areas. Please see the below list of operational statistics as well as all those involved that were instrumental for Operation Wild Fisher's success.

Cordially,

Dr. Mourad Gabriel and Dr. Greta Wengert, Co-Directors of IERC



Operation Wild Fisher: Reclamation of Cannabis Cultivation Complexes

Shasta – Trinity National Forest: Trinity Alps Wilderness Area

Organizations Involved

Governmental: United States Forest Service Law Enforcement and Investigations (USFS-LEI), USFS Fire and Investigations, Trinity County Resource Conservation District (TCRCD) and California National Guard Counterdrug Task Force (CNG-CDTF)

Non-Governmental: Integral Ecology Research Center (IERC), Watershed Research and Training Center (WRTC),

Reclamation Organizers: Dr. Mourad Gabriel, Dr. Greta Wengert, Ivan Medel (IERC); Captain Chris Magallon, Officer Logan Brown (USFS-LEI)

Funding Support: Funding for the reclamation of these trespass cannabis cultivation complexes was provided by United States Forest Service Law Enforcement and Investigations and a California Department of Fish and Wildlife Cannabis Restoration Grant to Integral Ecology Research Center.

Logistical Support: The United States Forest Service Law Enforcement and Investigations and California National Guard Counterdrug Task Force assisted with coordination and provided law enforcement officers and vehicles as a force multiplier for this effort. The US Forest Service Exclusive Use helicopter was provided as the aerial asset for the entire operation.

Statistics

Number of cannabis complexes reclaimed: Nine (9)

Total number of independent sites reclaimed: Twelve (12)

Location: Shasta – Trinity National Forest, Trinity Alps Wilderness

Watersheds affected: Big French Creek, Little French Creek, Big Creek, and Devil's Canyon all draining into the Trinity River

Species of conservation concern affected: northern spotted owl, Pacific fisher, Humboldt marten, Pacific tailed frog, foothill yellow-legged frog, and salmon.

Personnel: IERC (8), USFS-LEI (12), WRTC (8), CNG-CDTF (5), TCRCD (3)

Trash and infrastructure removed during reclamation: 7,560 lbs (3.78 tons)

Irrigation pipe removed during reclamation: 8.24 miles (43,520 ft)

QUARTERLY PROGRESS SUMMARY: ATTACHMENTS

AGREEMENT # P1796020

Reclaiming our Public Lands and Watersheds from the Environmental Threats of
Trespass Cannabis Cultivation



October 01 – December 31, 2019

Prepared by: Integral Ecology Research Center



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January 9, 2020

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QUARTER 4 OF 2019, PROGRESS SUMMARY, ATTACHMENTS

In partial fulfillment of California Department of Fish and Wildlife's Cannabis Restoration Grant Program Agreement #P1796020, this document provides a quarterly summary of grant progress-to-date and includes documents developed by Integral Ecology Research Center (IERC) during the 8th Quarter of grant implementation (Quarter 4 of 2019, 01 October 2019 through 31 December 2019). Supplementary documents include reclamation and aerial operation plans (when necessary) and summary statistics and press releases for four multi-day operations and a single staging day not associated with a larger-scale operation.

Due to the law enforcement sensitivity of clandestine cannabis operation locations, and their ongoing potential to contain materials hazardous to the environment and human health, the exact locations have been redacted from the aforementioned documents; however, broad-scale maps have been included to demonstrate the regional scope and distribution of reclamation activities.

Per the grant agreement, all trespass cannabis cultivation complexes (TCCC) are located within the Klamath Basin and were visited with the objective of implementing up to three of the following activities:

1. **Assessment:** perform scientific assessments and evaluations ascertaining the magnitude of environmental impacts associated with the TMCC, including the inventory and sequestration of hazardous materials to reduce the risk of exposure during reclamation efforts. Reclamation plans are developed based on the results and findings of these assessments.
2. **Staging:** the collection, bagging, and preparation of non-hazardous grow site refuse and infrastructure into areas accessible to helicopter long-lines, or manual removal, using a varied workforce of IERC staff, federal, state, and local agency personnel, and teams of subcontracted non-governmental organization employees.
3. **Reclamation:** the manual or helicopter removal of grow site refuse and infrastructure utilizing a varied workforce of IERC staff, federal, state, and local agency personnel, and teams of subcontracted non-governmental organization employees.

Quarter 4 of 2019 was the most productive reporting period to date for reclamation efforts (45 independent sites). For the entire duration of the grant, IERC has assessed 154 potential TMCC locations. Of these, 128 TMCCs have been fully reclaimed, composing 186 independent cultivation sites which exceeds the 170 independent sites outlined in the grant agreement by 9.4%. From these areas, IERC has cumulatively removed 133,940 lbs. of refuse and 659,723 ft. (124.95 miles) of irrigation piping.

Grant Quarter	Activities at Cultivation Complexes			Removed Refuse and Grow Site Infrastructure		
	Assessment	Staging	Reclamation	Independent Sites	Total Refuse (lbs)	Irrigation Line (ft)
1: Jan – March 2018	13	2	0	0	0	0
2: April – June 2018	21	18	6	12	23,295	82,428
3: July – Sep 2018	23	11	21	36	26,023	118,673
4: Oct – Dec 2018	25	20	27	37	34,372	157,252
5: Jan – March 2019	34	2	5	5	620	1,048
6: April – June 2019	18	16	23	30	16,134	127,827
7: July – Sep 2019	15	16	18	21	12,039	79,616
8: Oct - Dec 2019	5	7	28	45	21,457	92,880
	154	92	128	186	133,940	659,723

OPERATIONAL PLANS

Ray's Peak: October 04, 2019

Ray's Peaks is a moderate sized cultivation complex in Trinity County on Shasta-Trinity National Forest. The site was eradicated on July 8, 2019, removing 3,516 plants. The site had been previously eradicated in 2017 with the removal of 7,087 plants. Access the site at [REDACTED] and follow the ridgeline down. The hike is approximately 2.3km with 1,500-foot elevation change.

Location of TCCC Features:

Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Source 1	[REDACTED]
Source 2	[REDACTED]
Trash 1	[REDACTED]
Trash 2	[REDACTED]
Trim	[REDACTED]
Camp 1	[REDACTED]
Camp 2	[REDACTED]
Cistern 1	[REDACTED]
Cistern 2	[REDACTED]
Cistern 3	[REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

15

Trash Estimate:

50 trash bags (2,000 – 2,500 lbs), 2 propane tanks, multiple 6-volt batteries.

At Trash 1 there are two 500ft rolls of new 3/4" pipe.

Irrigation Pipe Estimate:

3,075 m



Hazardous Materials:

In 2017, four sprayers were found at the site and mitigated in orange bags. Two were sampled for toxicants with one testing positive for carbofuran and located at [REDACTED].

In 2018, three more sprayers were found at the site and mitigated in orange bags. All three 2018 sprayers tested negative for carbofuran, organophosphates, and pyrethroids.

All sprayers should be considered contaminated and only handled by qualified personnel. Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.

Shasta - Trinity National Forest
Trespass Cannabis Cultivation Complexes

Reclamation and Air Operational Plan: October 9 – October 10, 2019



Integral Ecology Research Center



www.IERCecology.org

January 9, 2020

Background

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on October 09 and 10, 2019 are located on the Shasta - Trinity National Forest around the Hayfork and Hyampom areas in Trinity County. This operational plan includes aerial removal information for eight TCCC previously assessed and staged by IERC and partners before the planned air operation (Table 1). An inventory of confirmed and suspected hazardous materials was collected, and all were mitigated and flagged to reduce exposure risk to reclamation teams. ***Hazardous materials will not be removed during this operation.***

A diverse collaboration of teams from Integral Ecology Research Center (IERC), Trinity County Resource Conservation District, California Department of Fish and Wildlife, Trinity County Sheriff's Office, and United States Forest Service will participate in a multi-day reclamation effort under the supervision and coordination of IERC staff at Plummer Peak 2018, Tule Divide, Twisted Creek, Ray's Peak, Creeky Tiki, James Creek3 2016, Nameless, and No Name (Table 1, Figures 1 – 2). Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

Operational Information

Operational dates for reclamation efforts: October 09 – 10, 2019

Meeting Time and Locations: 0830 (each day), Trinity County Sheriff's Substation, Hayfork, CA (corner of Hwy 3/ Hyampom Rd.)

*****From meeting location, teams will be assigned and proceed to field locations, LZ, or DZ**

Landing and Drop Zone Coordinates

Wednesday October 9, 2019:

Landing Zone (LZ 01): [REDACTED]

Drop Zone (DZ 01): [REDACTED]

Thursday October 10, 2019:

Landing Zone (LZ 02): [REDACTED]

Helicopter Information

Company: Air Shasta, Redding, CA

Pilot: Gavin Woelful, CDFW Warden

Tail number: N913RL

Make/ Model: Bell 206B3

***** Helicopter to arrive at landing zones at 1000 hours each day.**

Table 1. Summary of eight trespass cannabis cultivation complexes, pre-staged locations, estimated refuse quantities*, and drop locations planned for aerial removal on October 9 – October 10, 2019 on Shasta - Trinity National Forest.

		<u>Aerial Removal Information</u>			
TCCC Name	Coordinates	Nets	Cobiners	Long-line Loads	Drop Point
Wednesday: October 9, 2019					
Ray's Peak		4*	2*	4*	DZ01
No Name		2	2	2	LZ01
Creeky Tiki		---	1	1	LZ01
James Creek.3 2016		---	1	1	LZ01
James Creek.3 2016		1	1	1	LZ01
Nameless		---	1	1	LZ01
Nameless		---	1	1	LZ01
Nameless		---	1	1	LZ01
Nameless		1	---	1	LZ01
Nameless†		1	1	1	LZ01
Nameless†		1	1	1	LZ01
Thursday: October 10, 2019					
Plummer Peak 2018		1	1	1	LZ02
Plummer Peak 2018		6	2	5	LZ02
Plummer Peak 2018		---	1	1	LZ02
Plummer Peak 2018		1	1	1	LZ02
Plummer Peak 2018		1	1	1	LZ02
Plummer Peak 2018		6	1	4	LZ02
Plummer Peak 2018		---	1	1	LZ02
Tule Divide		2	1	2	LZ02
Tule Divide		1	3	2	LZ02
Twisted Tree		2	1	1	LZ02

†Pick up location is distant from other sites and has small amount of refuse

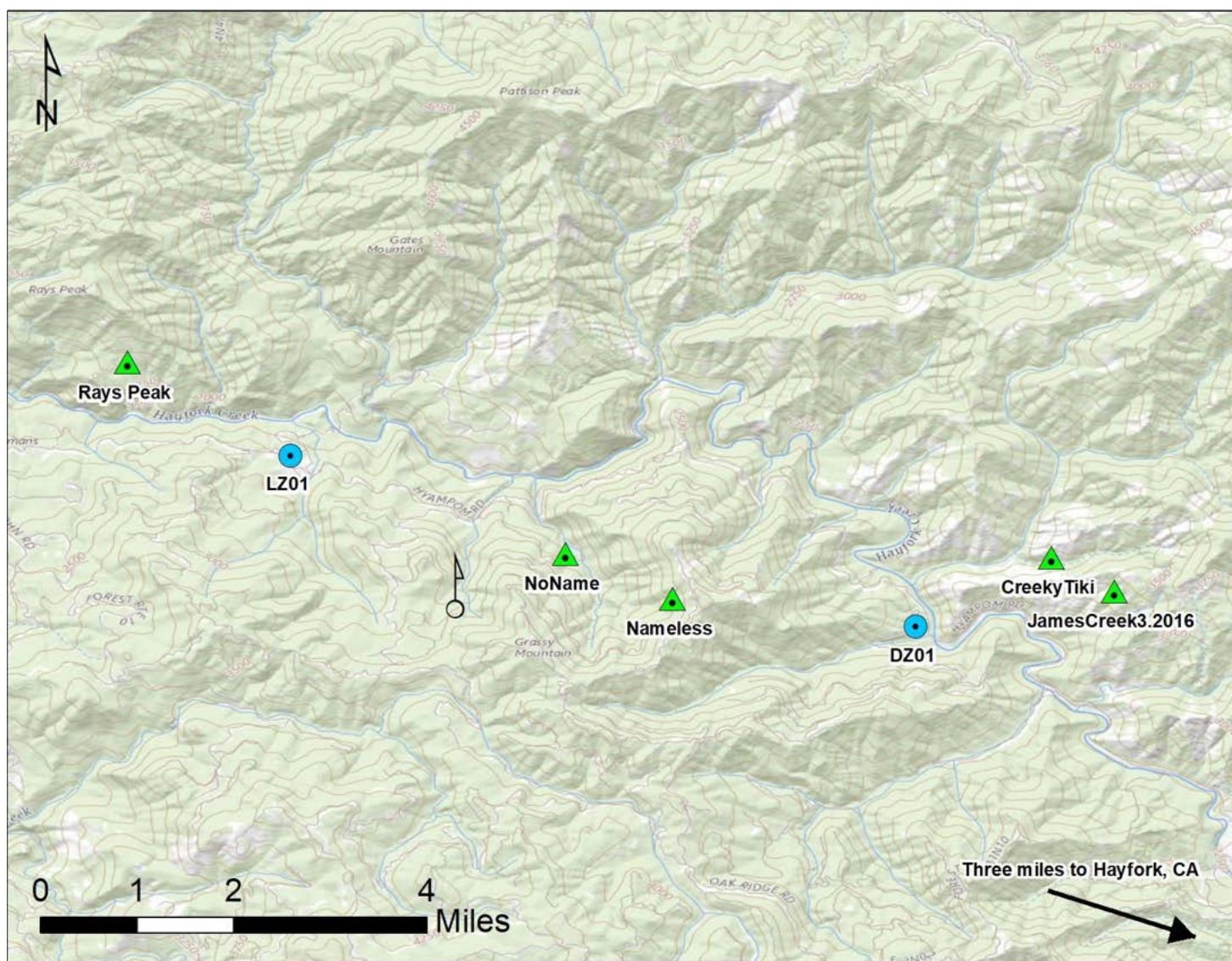


Figure 1. Map of five trespass cannabis cultivation complexes, landing zone, and drop zone designated for reclamation activities off Hyampom Rd. west of Hayfork, CA on the Shasta - Trinity National Forest in Trinity County.

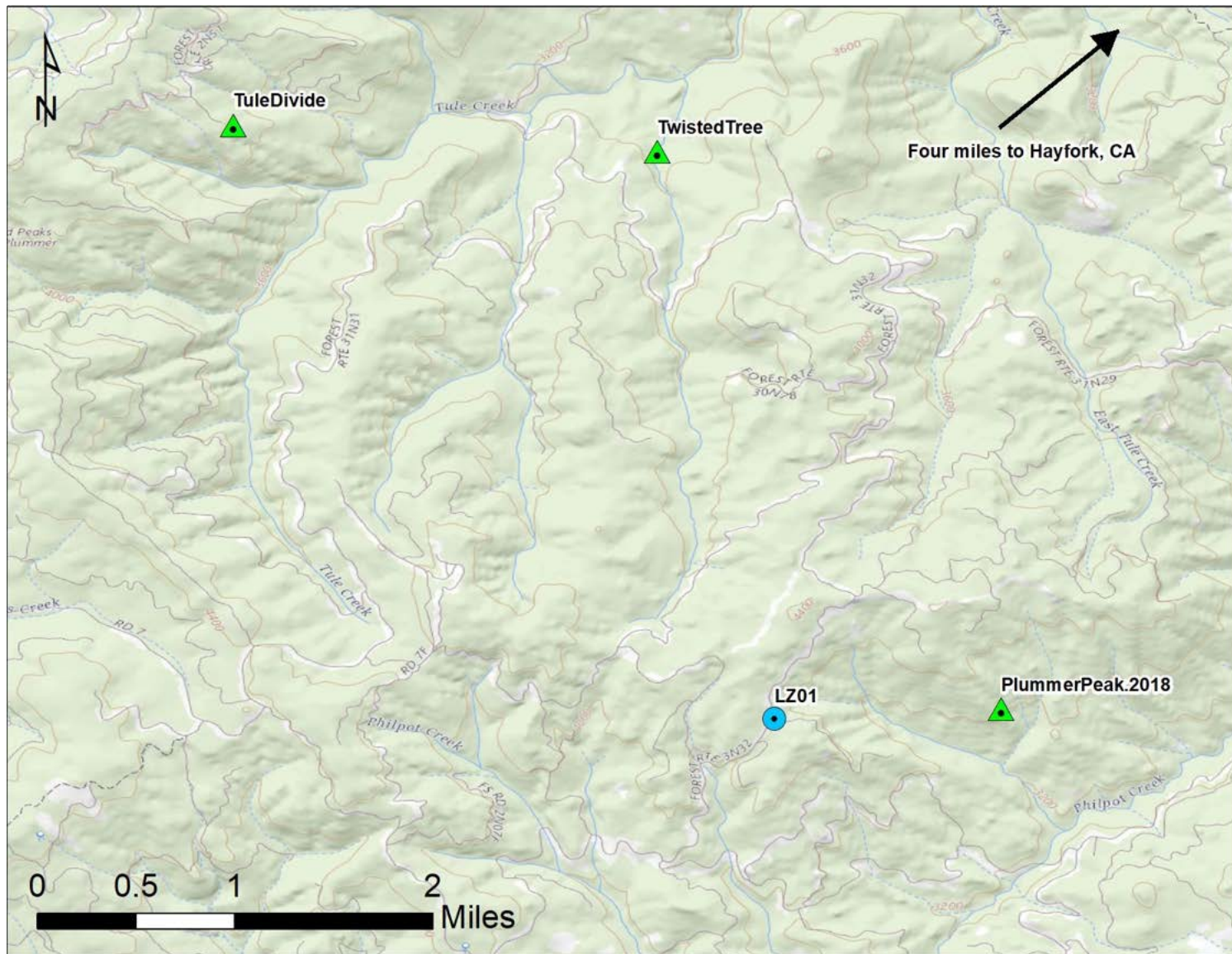


Figure 2. Map of three trespass cannabis cultivation complexes, landing zone, and drop zone designated for reclamation activities southwest of Hayfork, CA on the Shasta - Trinity National Forest in Trinity County.

Shasta - Trinity National Forest

Reclamation Operational Plan: October 28 – 31, 2019



Integral Ecology Research Center



www.IERCecology.org

January 9, 2020

BACKGROUND

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on October 28 - 31, 2019 are located on the Shasta-Trinity National Forest within Trinity County. This operational plan includes site-specific reclamation plans for five TCCC where refuse will be manually removed and dragged to the road for transportation and disposal. An inventory of confirmed and suspected hazardous materials was collected, and all were mitigated and warning flagged to reduce exposure risk to reclamation teams. ***Hazardous materials will not be removed during this operation.***

A diverse collaboration of reclamation teams from Integral Ecology Research Center (IERC), California Conservation Corps (CCC), and United States Forest Service will participate in a multi-day reclamation effort under the supervision and coordination of IERC staff. Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

OPERATIONAL INFORMATION

No air operations are scheduled for this reclamation effort.

Operational dates for reclamation efforts: October 28 - 31, 2019

Meeting Times and Locations for October 28 - 31 reclamation activities:

Monday: 0830, Integral Ecology Office, 239 Railroad Ave, Blue Lake, CA

Tues, Wednesday, Thursday: Field activities will commence from the campground at 0700

Camp Information:

Location: Forest Glen Campground (12 miles west of CA Hwy 3/ Hwy 36 intersection on Hwy 36)

Dates: 3 nights (Monday, 10/28; Tuesday, 10/29; Wednesday 10/30)

***** From meeting location, teams will be assigned and proceed to field locations**

Order of sites is as follows:

Monday, October 28, 2019: Blue Ditch (already staged)

Tuesday, October 29, 2019: Dub Rap

Wednesday, October 30, 2019: Stutter

Thursday, October 31, 2019: Completion of any site not finished during the week

*****If a site is completed early on any day, labor resources will be redirected to staging (i.e. likely no manual removal depending on time) of:** Red Mountain (preferred), Smoke Water

Contact Information for Reclamation Organizers

Greta Wengert: (707) 845-7848; gwengert@iercecolology.org

Ivan Medel: (805) 304-7070; imedel@iercecolology.org

Blue Ditch

Blue Ditch is a moderate-sized cultivation site in Trinity County in the Shasta-Trinity National Forest eradicated in 2010 of 7,434 plants. To access the site, park at the head of the overgrown dirt road leading to the site, then hike along the road for approximately 800 meters. The hike is relatively short with less than a 50-meter elevation change. The grow site is on the opposite side of where the road washed out and the plot rests on the dirt road with the camp and trash pile off the right side just past the plot. Reclamation may require a helicopter, though it may also be possible to drag pipe and trash to a nearby road for vehicular removal.

Location of TMCC Features:

Plot 1	[REDACTED]
Source 1	[REDACTED]
Trash 1	[REDACTED]
Camp 1	[REDACTED]

Access:

[REDACTED]

Estimated Personnel Required:

10

Trash Estimate:

12 trash bags (450-600 lbs.)

Source:

unknown

Irrigation Pipe Estimate:

300 meters

Hazardous Materials:

Three sprayers found at the site were bagged in a hazmat bag and are sitting within the plot at [REDACTED]. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***



Dub Rap

Dub Rap is a moderate sized cultivation site within Trinity County in Shasta-Trinity National Forest eradicated in 2011 of 12,898 plants. To access the site, park next to and follow a decommissioned skid road and turn upslope. The hike to the site is less than 500 meters with minimal elevation change. A camp was not identified during the assessment. Reclamation may require a helicopter, though there is the potential for refuse to be dragged to a nearby road.

Location of TMCC Features:

Plot 1	
Source	
Trash 1	

Access:

Estimated Personnel Required:

10

Trash Estimate:

5 Trash Bags (200-300 lbs.)

Source:

Source line was located and leads to a stream west of the site.

Irrigation Pipe Estimate:

600 meters

Hazardous Materials:

No hazardous materials were visually detected during the assessment.



Stutter

Stutter is a small sized cultivation site on the Shasta-Trinity National Forest in Trinity County. The site was last active in 2017. Access is an easy 250 m hike down an old dirt bike trail, located about 30 m from the parking area ([REDACTED]). The trail leads right to the camp. *Bring multitools for barbed wire.

Location of TCCC Features:

Source	[REDACTED]
Plot 1	[REDACTED]
Plot 2	[REDACTED]
Plot 3	[REDACTED]
Prep 1	[REDACTED]
Trash 1	[REDACTED]
Trash 2	[REDACTED]
Trash 3	[REDACTED]
Trash 4	[REDACTED]
Trash Kitchen	[REDACTED]
Camp 1	[REDACTED]



Access:

[REDACTED]

Estimated Personnel Required:

6 people needed for reclamation if staging; 10 people needed if pulling to road

Trash Estimate:

12 trash bags (approximately 480 to 600 lbs) and a stove.

Source:

One source line was found (see location above).



Irrigation Pipe Estimate:

A minimum of 770 m

Hazardous Materials:

A total of five bottles of over the counter pesticides were discovered at the site. These contained the active ingredients: malathion, gamma-cyhalothrin, and bacillus subtilis. Samples were collected from two sprayers and will be submitted for testing of toxicants.

Smoke Water

Smoke Water is a moderate to large-sized cultivation site in Trinity County in the Shasta-Trinity National Forest. Active years for the site are unknown as the site has never been eradicated by law enforcement and was discovered by a neural network grow site identification computer model. To access the site, park at the access point on Bramlet Rd. at Smoky Creek Trail sign, then hike approximately 7/10 of a mile down the nose. The hike is relatively long with an approximately 400 ft. elevation gradient. There is no obvious trail but the area is fairly open and free of brush. Reclamation will require a helicopter, so all site activities will involve staging refuse and infrastructure for future helicopter removal.

Location of TMCC Features:

Camp 1	
Camp 2	
Old Plot	
Plot 2	
Plot 3	
Plot 4	
Plot 5	
Plot 6	
Plot1	
Prep	
Trash 1	
Trash 2	



Access:

Estimated Personnel Required:

8 - 10

Trash Estimate:

unknown

Source:

- 1
- 2

Irrigation Pipe Estimate:

Unknown

Hazardous Materials:

Two sprayers found at the site were bagged in a hazmat bag and are located at and . ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Red Mountain

Red Mountain is a moderate-sized cultivation site in Trinity County in the Shasta-Trinity National Forest eradicated in 2010 of 4,494 plants. To access the site, park at on Red Mountain Rd. and hike downhill along a dirt bike trail approximately 1/3 mile. The hike is relatively short with an approximate 600 ft. elevation change. Reclamation may require a helicopter, though it may also be possible to drag refuse and infrastructure to Red Mountain Rd. road for vehicular removal. Depending on time, a decision will be made to remove the refuse or simply stage it for future helicopter removal.

Location of TMCC Features:

Plot1

Plot2

Plot3

Camp

Cistern

Access:

[REDACTED]

Estimated Personnel Required:

10



Trash Estimate:

15 trash bags (600-750 lbs.)

Source:

[REDACTED] (furthest location source was followed)

Irrigation Pipe Estimate:

170 meters

Hazardous Materials:

Two sprayers found at the site were bagged in an orange hazmat bag and are located at

[REDACTED]. ***Non-qualified reclamation personnel are not to handle any suspected hazardous material at any time.***

Shasta-Trinity National Forest
Trespass Marijuana Cultivation Complex Reclamation

Air Operational Plan: November 14 – 15, 2019



Integral Ecology Research Center



www.IERCecology.org

January 9, 2020

Background

All trespass marijuana cultivation complexes (TMCC) scheduled for reclamation efforts on November 14 - 15 are located on the Shasta-Trinity National Forest in Trinity County. This reclamation operational plan includes nine TMCC previously assessed by IERC prior to this planned air operation (Table 1).

Operational Information

Operational dates for reclamation efforts: November 14 – 15, 2019

Meeting Times and Locations:

November 14, 2019: 0830 at Landing Zone 1 - turnout at the corner of Wildwood Rd. and East Fork Hayfork Rd. [REDACTED]

November 15, 2019: 0800 at the corner of CA Hwy 299 and East Fork Rd. [REDACTED]

*****From meeting locations, teams will be assigned and proceed to field locations or LZ**

Helicopter Information:

Company: A and P Helicopters, Inc., Richvale, CA

Pilot: Jess Pinney

Tail number: 502HB

Make/ Model: H500

***** Helicopter to arrive at landing zones at 0900 hours each day.**

Landing and Drop Zone Coordinates

November 14, 2019 - Landing Zone 1: Turnout at the corner of Wildwood Rd. and East Fork Hayfork Rd.

[REDACTED]



November 15, 2019 - Landing Zone 2: Three-way junction on East Fork Rd.



Drop Zone: Large turnout on East Fork Rd. just north of the bridge over the North Fork Trinity River



Table 1: Summary of nine trespass marijuana cultivation complexes, landing and drop zones planned for aerial removal November 14 and 15, 2019 on the Shasta - Trinity National Forest in Trinity County.

Date	Site Name	Location	Nets	Cobiners
November 14, 2019	Shiell Gulch 1		8	3
	Shiell Gulch 2		3	3
	Shiell Gulch 3		3	2
	Shiell Gulch 4		3*	1*
	Telephone 2018		3	3
	Landing Zone		---	---
November 15, 2019	Tick Check		5	2
	Backbone		2	2
	Manzanita Ridge		2*	2*
	Gilmore Girls		1*	1*
	Landing Zone		---	---
	Drop Zone		---	---

*Estimated quantity, material is not yet staged

Hoop Valley Indian Reservation
Trespass Cannabis Cultivation Complexes

Reclamation Operational Plan: November 18 – 21, 2019



Integral Ecology Research Center



www.IERCecology.org

November 13, 2019

BACKGROUND

All trespass cannabis cultivation complexes (TCCC) scheduled for reclamation efforts on November 18-21, 2019 are located on the Hoopa Valley Indian Reservation (HVIR) within Humboldt County. This operational plan includes a list of four high priority TCCC of which three have already been pre-staged, a site-specific reclamation plan for the fourth TCCC, and two additional low priority sites. The order of reclamation activities will follow a prioritized list (Table 1) for all TCCC involving the manual removal of all TCCC trash and refuse. An inventory of confirmed and suspected hazardous materials was collected, and all were mitigated and identified with warning flagging to reduce exposure risk to reclamation teams. ***Hazardous materials will not be removed during this operation.***

A diverse collaboration of reclamation teams from Integral Ecology Research Center (IERC), California Conservation Corps (CCC), and Hoopa Valley Tribal Forestry will participate in a multi-day reclamation effort under the supervision and coordination of IERC staff at these six complexes. Additional sites may be opportunistically incorporated into this operation if they are discovered during reclamation activities.

OPERATIONAL INFORMATION

No air operations are scheduled for this reclamation effort.

Operational dates for reclamation efforts: November 18 - 21, 2019

Meeting Times and Locations for November 18 – 21 reclamation activities:

Monday (11/18/2019): 0900, IERC Office in Blue Lake (239 Railroad Ave)

Tuesday (11/19/2019) – Thursday (11/21/2019): 0830, IERC Office in Blue Lake (239 Railroad Ave)

*** From meeting location, teams will be assigned and proceed to field locations

Site Name	Coordinates	Staged	Priority
Ranger Mountain		Yes	1
Skid Row		No	2
Pump Iron		Yes	3
Mill Creek 4		Yes	4
Deerhorn		No	Low
Long Ridge		No	Low

Contact Information for Reclamation Organizers

Ivan Medel: (805) 304-7070; imedel@ierceecology.org

Greta Wengert: (707) 845-7848; gwengert@ierceecology.org

Mourad Gabriel: (707) 845-7847; mgabriel@ierceecology.org

Skid Row

Skid Row is a moderate-sized cultivation site on the Hoopa Valley Reservation in Humboldt County. The site showed no signs of recent activity. Access is an easy 260-meter uphill hike through brush that can be dense at times.

Location of TMCC Features:

Plot 1	
Plot 2	
Plot 3	
Plot 4	
Trash	

Access:

Estimated Personnel Required:

10

Trash Estimate:

6 trash bags (240 - 300 lbs)

Source:

Source was not identified.

Irrigation Pipe Estimate:

850 meters

Hazardous Materials:

No hazardous materials were visually confirmed.



OPERATION SUMMARIES AND PRESS RELEASES



Reclamation of Cannabis Cultivation Complexes, Shasta-Trinity National Forest Air Operation Synopsis and Statistics: October 11 – 15 and November 14 – 15, 2019

Organizations Involved

Governmental: United States Forest Service Law Enforcement and Investigations (USFS-LEI), California Department of Fish and Wildlife Law Enforcement Division (CDFW-LED), Trinity County Environmental Planning (TCEP), California Conservation Corps (CCC), United States Forest Service Fire and Aviation (USFS – FA), Trinity County Sheriff's Office (TCSO), Trinity County Resource Conservation District (TCRCD)

Non-Governmental: Integral Ecology Research Center (IERC), Watershed Research and Training Center (WRTC)

Reclamation Organizers: Dr. Greta Wengert, Dr. Mourad Gabriel, Ivan Medel, Jessie Bunkley (IERC); Officer Jennifer Linn, Officer Brooks Casady, Captain Carson Harris, Officer Lisa Wilson (USFS); Detective Nate Trujillo (TCSO)

Financial Support: Funding for the reclamation of these trespass cannabis cultivation complexes was provided by **United States Forest Service Law Enforcement and Investigations** and a **California Department of Fish and Wildlife Cannabis Restoration Grant** to Integral Ecology Research Center.

Logistical Support: The United States Forest Service Law Enforcement and Investigations and California Department of Fish and Wildlife Law Enforcement Division assisted with coordination and provided law enforcement officers, aviation resources, and vehicles as a force multiplier for this effort.

Statistics

Number of cannabis complexes reclaimed: Nineteen (19)

Total number of independent sites reclaimed: Thirty-five (35)

Location: United States National Forest Lands: Shasta-Trinity National Forest

Watersheds affected: Tule Creek, Philpot Creek, Salt Creek, Bear Creek, James Creek, Lower Hayfork Creek, Hayfork Creek, North Fork Trinity River and East Fork North Fork Trinity River all draining directly to the Trinity River

Species of conservation concern affected: northern spotted owl (sites within Federally Designated Critical Habitat), occupied Pacific fisher habitat, foothill yellow-legged frog, western pond turtle, Townsend's big-eared bat, and steelhead trout

Personnel: IERC (7), USFS-LEI (11), CDFW-LED (5), WRTC (7), TCRCD (8), TCSO (1), TCEP (1), USFS – FA (23), CCC (8)

Trash and infrastructure removed during reclamation: 24,245 lbs (12.12 tons)

Irrigation pipe removed during reclamation: 21.48 miles (113,440 ft)

Long-line loads: 64 loads (Total long-line flight time ~ 15.2 hrs)

Total pesticides discovered at sites: 191 pounds

Total fertilizers discovered at sites: 18,780 pounds



Top Photos: (Left) Members of the California Conservation Corps and (right) the United States Forest Service working to pack and transport refuse for aerial removal on Shasta-Trinity National Forest located in Trinity County southwest of Hayfork.

Bottom Photos: Two of the 64 total long-line loads needed to remove over 24,000 pounds of refuse including 21 miles of irrigation pipe from the Shasta-Trinity National Forest.





Top Photos: (Left) Before and (right) after photos of reclamation within a camp at one of the nineteen trespass cannabis cultivation complexes on the Shasta-Trinity National Forest.

Bottom Photo: A delighted team of diverse cooperators involved in removing over 24,000 pounds of refuse and 21 miles of irrigation pipe from nineteen trespass cannabis cultivation complexes on the Shasta-Trinity National Forest.

