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Ellensburg, WA 98926
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Kaycee K. Hathaway
Kittitas County
Community Development Services/Planner I
411 N. Ruby, Suite 2
Ellensburg, WA 98926



December 23, 2014

re: objection-public comments on McDonald CUP Application (CUP-14-00005) and related SEPA checklist

Dear Ms. Hathaway:

Please be certain that this letter of public comments/objections to the above noted applications are included in the official files. I am hand carrying this letter with attachments to your office. Thank you.

CUP is not vested

Initially it should be noted that CUP applications do not vest under Washington State land use principles. In the recent case of Potala Village Kirkland LLC v. City of Kirkland (Wash.App. 8-25-2014) 334 P.3d 1143, it was held clearly that "while it originated at common law, the vested rights doctrine is now statutory". Vesting of a land use proposal, does not occur unless (1) a local code specifies or (2) it is authorized by state statute such as when a party applies for a building permit (RCW 19.27.095(1)), or an application for preliminary plat approval of a subdivision or short plat approval of a short plat subdivision. (RCW 58.17.033(1)).

There is no local ordinance specifying that a CUP application vests. There is no RCW for the proposition that a CUP application vests. The case relied by many for the application of the vested rights doctrine to CUP applications, Weyerhaeuser v. Pierce County 95 Wn.App.883, 976 P.2d 1279 (1999), was specifically discussed in Potala, and its reasoning was rejected. As the cases from the State Supreme Court held since the Weyerhaeuser case was decided, which are noted in Potala, vesting is now a statutorily limited doctrine, and therefore in this instance, this CUP has not vested (even if the application is deemed complete). As the current county land use ordinances regarding marijuana production and processing do not allow this activity in Agricultural zoned properties, this application should be denied.

CUP is not complete

In addition, this CUP is not vested for its failure to be "valid and fully complete under the zoning or other land use control ordinances in effect at the date of the application." Kelly v. Chelan County 157 Wn.App. 417 (2010). Specifically, this application is not signed by the owner of the property, as required by KCC section 15A.03.030(3), and is not complete even as of the date of this objection.

Attached as Exhibit A to this objection is a copy of the recorded statutory warranty deed for this property where the grantor is noted to be "Carol L. Eng, Trustee of the Mary Curley Robinson

Irrevocable Trust.” A trustee of this trust is the only party with authority to encumber this property with the rights and obligations requested in this CUP application. RCW 11.98.070.

The only signature noted on the application is a “Mary Gonzales” with no indication of capacity. As the property is currently owned by a trust, and not an individual, with the only known trustee being someone different than “Mary Gonzales”, the owner’s signature is not on this application.

Agreements signed by parties with a lack of capacity, such as a lease signed with an individual acknowledgment as compared to the required corporate form, are legally void. (Ben Holt Industries v. Milne 36 Wn.App. 468 (1984).

This CUP signed by an individual and not the trustee of the trust which owns the land is not complete, and is legally void, and totally invalid.

And this deficiency may not be cured by a corrected signature. Kittitas County clearly requires that applications be processed under codes in effect as the time a complete application is received, (see November 20, 2014 letter to this CUP applicant from CDS stating initially presented CUP was incomplete and specifying consequences). This means that even if a “trustee” of the trust owning this property sometime after the date of this objection signs a corrected CUP application, this application will not be properly be deemed “complete” until that day, and as stated above, it is currently legally void and invalid. The codes in place at the time of any possible correction, with the new marijuana laws then applicable, would clearly require that this CUP be denied even if it is corrected as some future date.

SEPA objections

1) The notice of application is deficient in that it fails to list the conditions being considered to mitigate environmental impacts: Under WAC 197-11-355(2)(b) the lead agency must “[l]ist in the notice of application the conditions being considered to mitigate environmental impacts if a MDNS is expected.” Kittitas County has failed to identify any specific mitigation measures. Kittitas County’s notice simply states that it “expects to issue a Determination of Non-Significance (DNS) for this proposal.” The public was provided no information regarding mitigation. A new notice needs to be published and a new period established for comment.

2) The SEPA application and project information is incomplete, insufficient, and contradictory:

It is vital that a SEPA determination be based upon information reasonably sufficient to determine the true environmental impacts of a proposal. In this case, (i) the information provided in the application fails to clearly state and specify the scope of the actual project proposal as well as (ii) contains information in the Environmental Checklist with is incomplete, and insufficient to evaluate potential environmental impacts.

2(i) the application describes the project as being “less than one acre” initially with an expansion presumably in line with the site plan being completed in a number of phases. This is a grossly inadequate indication of what the applicant is requesting permission to do. Before the State Liquor Control Board, “Old McDonald’s Farm” has two “Tier 3” marijuana producer facility applications and one for processing. License # 415857 is a single “Tier 3” and a single processing application for the address of this CUP, 1006 Emerson Road, Suite C. Old McDonald’s Farm also has another “Tier 3” on file referencing an address of 6011 Cooke Canyon Road, Ellensburg (license # 415856). Even though no

license has been issued by the Washington State Liquor Control Board as of the date of this letter, the size of the proposed growing area in this application is not just two "Tier 3" locations.

The application states the growing canopy is a total of 7 acres, or just over 300,000 square feet.

If each "Tier 3" is maximized at approximately 30,000 square feet each, the application is for the location of at least 10 "Tier 3" producer locations. If each "Tier 3" is the current size of approximately 21,000 square feet, this would be an application for 14 "Tier 3" locations.

None of the answers provided, relating to traffic, water usage, chemical/fertilizer use, waste disposal, number of employees, or any of the environmental checklist answers appear at all to address this type of really gigantically sized proposal. The SEPA, as well as the CUP, applications should be rejected with no further action being taken for the applicant's intentional making of false statements related to the nature of this proposal.

2(ii) The Environmental checklist is vague, incomplete and inaccurate: In addition to understating the ultimate extent of this project, the application provides in the SEPA checklist information which is inaccurate.

First, on the issue of water availability, there is the proposed use of an exempt well for an additional 1000 gallon withdrawal of water for the production of marijuana. As of June 2, 2014, any new exempt well withdrawal of water in the lower Kittitas Valley portion of the Yakima River Basin requires the purchase of mitigation certificate from the Department of Ecology (DOE). All of the mitigation certificates available have as a condition, a statement that their use will be in compliance with the Department of Ecology's storage contract with the Federal Bureau of Reclamation (Bureau). The Bureau has issued clear directives that the federal water it is charged with supervising not be utilized for the production or processing of marijuana and this includes water stored pursuant to the DOE and Bureau contract which supports the mitigation water bank. Because of this, a mitigation certificate cannot be purchased for marijuana production. **Applicant does not have water for this project**, even as it is described as the first phase of the project, "something less than an acre of growing" The list of necessary governmental approvals listed in answer to question number 10 should be rejected as incomplete as a Department of Ecology water mitigation certificate is not noted.

In addition, there is no verification or information regarding actual usage. According to data provided by the Department of Ecology, a single Tier 3 facility uses in excess of 3900 gallons per day. See attached Exhibit B Department of Ecology publication 14-11-003, July 2014. This higher figure is also more likely for an "outdoor grow" operation in our arid and windy environment.

Therefore, the actual water expected to be used on the project on Emerson Road by Old McDonald's Farm is more likely to be in the range of 39,000 gallons per day, (10 Tier 3 production facilities using 3900 gallons each per day).

It should be noted that the applicant states that as an alternative there is the buying from local vendors, presumably this being the trucking water from some phantom source not disclosed in the documentation. But at least this option should affect the traffic trips contemplated to be caused by this proposal. The SEPA checklist information is so flawed that it should be rejected in its entirety.

Because water use is understated, it follows that the need for water treatment-sewage is therefore vastly underestimated

In addition, given the actual size of the ultimate proposal, that is 10 Tier 3 facilities, the water system proposal is incorrect and inadequate. Significantly more than a residential hookup is required for this marijuana factory. The state and/or county department of health must evaluate this proposal for the need of either a Group A or Group B water system.

As the growing canopy is so very large, the applicant will likely be required to install a Group A system-as well as a community septic system--for the entire property. This level of department of health scrutiny would be required by the fact that the proposal seems to involve a large number of employees and trainees. It is likely that over 25 or more nonresidential people will be serviced by this facility, a Group A system is therefore required. (WAC 246-294-010(8)(b)) The list of necessary governmental approvals listed in answer to question number 10 should be rejected as incomplete as a Department of Health, either state or county level, review is not noted.

Finally, because of the anticipated increases in air pollution caused by this facility a Department of Ecology Air Quality Permit assessment and program are necessary. The wastes created by 10 "Tier 3" production facilities, which are known to be excessive are also not even mentioned as being an issue. The list of necessary governmental approvals listed in answer to question number 10 should be rejected as incomplete as a Department of Ecology Air Quality Permit is not noted.

Overall, this SEPA application is incredibly insufficient. The types of environmental concerns related to marijuana production have been summarized by various commentators, including Sheila Hosner from the Washington State Office for Regulatory Innovation and Assistance. The materials from a presentation of hers done in June 2014 is attached as Exhibit C to this letter, and can be found at this web location:

<http://www.jcr3.org/Marijuana%20Presentation%20by%20Sheila%20Hosner%20ORIA%20%203%2012%2014.pdf>.

This application addresses none of the types of environmental inputs or concerns noted in this presentation and either this SEPA application should be rejected in its entirety or at least, a full Environmental Impact Report should be required, and given the less than forthright provision of information provided by this applicant, the information provided should be in the form of declarations under penalty of perjury.

Other CUP objections

Applying the analysis of consistency with the provisions of KCC 17.60A, Conditional Uses: This proposal is not consistent with the Kittitas County Zoning Code for Conditional Uses.

The proposal does not meet all the criteria and regulations found in WAC 314.55 and RCW 69.50 as it is within 1000 feet of a school.

The proposed conditional use, even with significant conditions, will not be adequately served by rural levels of service. In addition, it is not desirable to public convenience, will be detrimental to public health, safety or welfare, is economically detrimental to the public, and is inadequately serviced by public facilities.

The proposal is not served adequately by rural levels of service. First, it is clear that the applicant has understated the number of facilities planned, see paragraph 2(i) above, but even one facility requires

significant levels of services. The Old McDonald's Farm proposal of a Tier 3 producer facility (or fourteen) is of a type that demands a level of public services more in line with what would be required for an "industrial" or "urban" type setting. Describing the activity as agricultural is debatable, but the value of the marijuana creates unique and certainly anticipated increased needs for public services. It is totally inadequate for a proponent to not address the increase in security needs for both itself and the neighborhood around such as facility. State regulations, quite appropriately concerned for the safety of the actual facility and its employees, require a certain level of security be installed as part of any licensed unit. But these regulations do not create a risk/crime free environment. There will be increased police services required.

There could easily be product on site with a value well exceeding multiple millions of dollars, even if it is only one facility. Each facility is allowed to maintain a large inventory of product, as well as the items being grown; and these together are very likely to require significant additional police work to combat foreseeable criminal behavior. Rural neighbors are also likely to be affected. It is the height of ignorance to expect that a facility requiring strict security, would not invite potential attempts of burglary or robbery. Banks and convenience stores are similarly well "armed" with security systems, but the crime rate at these facilities is still significant. The solitude of the neighborhood also increases the risk for the rural neighbors. It is not uncommon in the areas like where this proposal is sited, for neighbors to know almost every car that is on the road, and many matters which would go unnoticed in an urban area are likely to be very much known by all. There is no animity in a rural setting, and this would include the potential identification of perpetrators of crimes. Neighbor-witnesses, as well as the employee-witnesses on the proposed site, face increased needs of police resources for their personal protection whenever one of these foreseeable burglary or robbery is attempted. Marijuana is expensive. Marijuana is easily disposed of illegally as there is a long established criminal black market. Marijuana stolen and fenced is not taxed. Marijuana production in a neighborhood such as that proposed by Old McDonald's Farm creates a significant increase in criminal activity. At very least it is likely to be a public inconvenience and detrimental to public health and safety.

In addition, the Conditional Use Permit should be denied because there is no adequate supply for water and the proposal requires a complicated, community type, septic system to adequately clean the large amounts of water needed for the contemplated use, see paragraph 2(ii) above, which waste and water needs to be treated as fertilizers, pesticides, and herbicides will be involved. This proposal is inconsistent with rural levels of service and should simply just be located at another location.

For the above reasons, either the SEPA application should be rejected outright, or the proper official response should be that Old McDonalds' Farm be required to complete a full Environmental Impact Study (EIS) which should also be required to review all proposals more carefully defined and at full build out. A MDNS is completely inappropriate.

In addition, and separately, but for many of the same noted reasons, the CUP application should be rejected for failure to comply with county code requirements, including its failure to vest or be a complete application even today.

John Ufkes



EXHIBIT A

03/24/2014 02:02:16 PM
\$73.00
Warranty Deed STWT
Kittitas County Auditor

201403240052
Page 1 of 2



WHEN RECORDED RETURN TO:

Name: Carol L. Eng
Address: 522 W. 37th Ave
Spokane WA 99203

RE EXCISE TAX PAID

Amount \$ 5283.50
Date March 24, 2014
Kittitas County Treasurer
B. Blumenstetter

#73

Escrow Number: 31902ec

Filed for Record at Request of: Stewart Title of Kittitas County

STATUTORY WARRANTY DEED

The Grantor(s), Timothy A. Stowe and Lisa Stowe, as tenants in common, for and in consideration of Ten Dollars and other good and valuable consideration in hand paid, conveys, and warrants to Carol L. Eng, Trustee of the Mary Curley Robinson Irrevocable Trust dated November 26, 1998 the following described real estate, situated in the County of Kittitas, State of Washington:

SEE ATTACHED EXHIBIT A

TOGETHER WITH all water rights and irrigation ditches appurtenant thereto, if any.

Abbreviated Legal: (Required if full legal not inserted above.) Lot 2, Erdman Short Plat

SUBJECT TO: All matters, including reservations, restrictions, exceptions, easements and rights-of-way, apparent or of record.

Tax Parcel Number(s): 19660/17-19-27053-0002

Dated: March 14, 2014

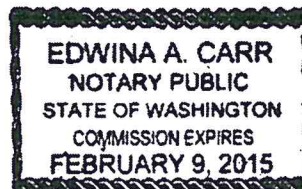
Timothy A. Stowe

Lisa Stowe

STATE OF Washington

COUNTY OF Kittitas

ss.



I certify that I know or have satisfactory evidence that Timothy A. Stowe and Lisa Stowe are the persons who appeared before me, and said persons acknowledged that they signed this instrument and acknowledged it to be their free and voluntary act for the uses and purposes mentioned in this instrument.

Dated: March 19, 2014

EXHIBIT A, P. 1

Notary Public in and for the State of Washington
Residing at [Signature]

EXHIBIT A

Parcel A:

Lot 2 of ERDMAN SHORT PLAT, SP 04-02, recorded April 20, 2004, in Book G of Short Plats at Page(s) 157 and 158, under recording number 200404200021, Being a portion of the Southwest quarter of Section 27, Township 17 North, Range 19 East, W.M., records of Kittitas County, State of Washington.

Parcel B:

TOGETHER WITH an easement for ingress and egress over and across Lot 1 of BRUKETTA SHORT PLAT, as described and/or delineated on Kittitas County Short Plat No. 95-30, recorded February 2, 1996 under Auditor's File No. 199602020019 and filed in Book E of Short Plats, page 39, records of Kittitas County, State of Washington. Said Easement being 20.00 feet in width, lying Northerly of, adjacent to and abutting the following described line:
Beginning at the Northeasterly corner of Lot 2 of said Bruketta Short Plat;
Thence North 88°14'40" West, along the North line of said Lot 2, 584.01 feet to the terminus of said described line.

Parcel C:

TOGETHER WITH that certain 40 foot access easement as delineated on Lot 1 of said BRUKETTA SHORT PLAT.

Parcel D:

TOGETHER WITH a 20 foot access easement as disclosed on the ERDMAN SHORT PLAT, recorded April 20, 2004, in Book G of Short Plats at Page(s) 157 and 158, under recording number 200404200021, Being a portion of the Southwest quarter of Section 27, Township 17 North, Range 19 East, W.M., records of Kittitas County, State of Washington.

EXHIBIT B

Frequently Asked Questions



Water Resources Program

July 2014

Water resource rules and regulations for marijuana growing in Washington state

Under Initiative 502, Washington voters in 2012 approved licensing for the production, possession, delivery and sale of marijuana.

The initiative makes marijuana subject to the same water use regulations as any other commercial crop in Washington state.

Water availability for outdoor growing operations can vary significantly from county to county or water source to water source. Generally, outdoor growing operations have three options for supplying water to plants:

- Obtaining water from a water right purveyor such as a public utility district or irrigation district.
- Relying on the water right permit exemption for small uses of water.
- Obtaining a water right permit.

Q: How do I obtain a water right permit in Washington state?

A: First check if your property is in an area that allows you to withdraw a limited amount of groundwater under the permit-exemption. This is a simpler solution (see next question).

If you cannot use the exemption, a permit is typically obtained by acquiring land with a water right certificate attached to it. If you are a new owner of the property, you must apply to have a permit assigned to you.

Applying for a change in the purpose and use of an existing water right is more cost-effective and accomplished easier than applying for and obtaining a new water right.

If you have to apply for a new water right or have questions about purchasing an existing water right, contact the Water Resources staff of the regional Dept. of Ecology (Ecology)

FOR MORE INFORMATION

Contact your nearest Ecology office

Central Region (Yakima):
509-457-7140

Eastern Region (Spokane):
509-329-3464

Southwest Region (Lacey):
360-407-6058

Northwest Region
(Bellevue): 425-649-7077

Guidance for indoor and outdoor marijuana growing operations is available through the Liquor Control Board at:

<http://liq.wa.gov/mjlicense/permitting>

Special accommodations

If you need this document in a format for the visually impaired, call the Water Resources Program 360-407-6872.

Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.



office closest to your marijuana growing operation. Staff can direct you on the best way to obtain water for your operation before you spend money and effort preparing a water right application.

For more information on the water right application process, go to:

<http://www.ecy.wa.gov/programs/wr/rights/water-right-home.html>

For more information, on changes and transfers of water rights, go to

http://www.ecy.wa.gov/programs/wr/rights/change_transfer_use.html

Q: How do I obtain a water right permit exemption for small uses of water?

A: Washington state's water right permit exemption allows the use of well water (groundwater) to:

- Provide a water supply of no more than 5,000 gpd for a home or group of homes.
- Water a non-commercial lawn or garden one-half acre in size or less with no gpd limit.
- Water livestock with no gpd limit.
- Provide a water supply of no more than 5,000 gpd for a commercial or industrial purpose including indoor and outdoor use.

gpd = gallons per day.
Measurement of how much water is used daily.

Growers holding a water right under the commercial/industrial exemption may use it to cultivate marijuana but the half acre non-commercial lawn or garden exemption in some basins cannot be transferred to a commercial/industrial exemption for growing marijuana.

Find out if your project is exempt from a water right permit:

http://www.ecy.wa.gov/programs/wr/comp_enforce/gwpe.html

Use of any exemption varies from watershed to watershed depending upon water availability, mitigation requirements and water use regulations.

Q: What restrictions apply to the use of permit-exempt wells?

A: Once you drill a water well under Washington's permit exemption and put that water to beneficial use, you hold a water right in Washington state. However, newer water rights are "junior" to older, senior water rights. Therefore the water use of junior water right holders is the first to be curtailed in the event of a drought or impairment of a senior water right drawing from the same water source.

Water management rules in certain areas of the state may prohibit new groundwater uses or impose conditions on new groundwater uses that must be met before water can be used. Growers with questions on possible restrictions of their water use should contact their nearest Ecology regional office.



Q: Will the water use limit of 5,000 gpd under the commercial/industrial exemption provide enough water for growing marijuana?

A: Growers are responsible for researching and evaluating their water needs. Current information regarding marijuana water use is largely anecdotal. Growers are being licensed by the state Liquor Control Board in three tiers depending on how much marijuana they intend to grow, but all three tiers are estimated to require less than 5,000 gpd. The tiers by maximum amount (square feet, sf) of marijuana canopy allowed and the estimated amounts of water (gallons per day, gpd) needed for indoor grow operations are:

- **Tier 1**— 2,000 sf; 260 gpd
- **Tier 2** – 10,000 sf; 1,300 gpd
- **Tier 3** – 30,000 sf; 3,900 gpd

Water needs for outdoor grow operations, where environmental conditions cannot be controlled, are likely much higher and climate variations at different locations in the state is a significant factor in determining the water needs for growing marijuana. Given that marijuana previously has been illegal to cultivate, the state does not have the same level of data regarding the irrigation needs for various locations across the state as it possesses for traditional crops.

Q: Will I be able to use water from my irrigation district to grow marijuana?

A: In May 2014, the U.S. Bureau of Reclamation (USBR) announced that use of USBR water or facilities (reservoirs, canals, pumps, etc.) for any activities related to the cultivation and distribution of marijuana is prohibited under the Controlled Substance Act of 1970. This means any irrigation district supplied by USBR projects can not provide water for marijuana irrigation.

In Washington state, the USBR operates two large reclamation projects: the Yakima Basin Project and the Columbia Basin Project. Even though marijuana cultivation is legal under state law, Washington cannot require USBR – and the irrigation districts it contracts with – to supply water for marijuana production. There are no USBR projects in western Washington but you should contact your irrigation district to determine if water is available for marijuana irrigation.

Q: Can rainwater be collected and stored to cultivate marijuana?

A: Yes. Rainwater collection systems are legal in Washington state and do not require a water right. They can be used to store water collected in the wet season for later use. Groundwater from exempt wells can also be pumped to a storage tank or cistern that is part of the rainwater collection system and stored until needed, as long as the 5,000 gpd limit is not exceeded.

Collected rain or groundwater can only be used on the same parcel from which it was captured. More information on rainwater collection: <http://www.ecy.wa.gov/programs/wr/hq/rwh.html>

EXHIBIT C

I-502 and Environmental Permitting

skhosner/Jun-14

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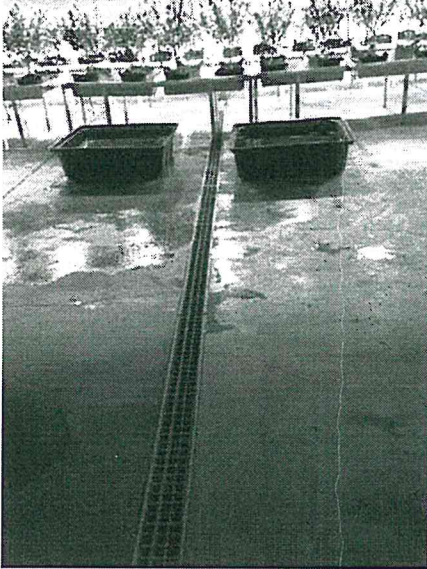
Marijuana Today

A new industry in town

- Not the marijuana grow of the past
- A sophisticated industry using modern indoor technology to grow a commercial agricultural product
- Processes crops with commercial methods
- Only 2,000,000 “canopy” feet (about 46 acres) allowed to be grown statewide
- Three tiers – 1) <2,000 sq ft; 2) 2,000 to 10,000 sq ft; 3) 10,000 to 30,000 sq ft (indoor or outdoor)

Indoor Production

Possible Environmental Issues



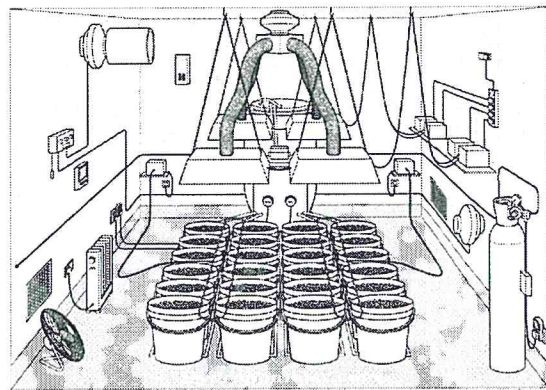
- SEPA
- Wastewater Discharge
- Solid Waste Disposal
- Hazardous Waste Disposal
- Odors
- CO2 use

skhosner/Jun-14

3

Methods of growing

- Soil growing
- Hydroponic media – rock wool, coco fiber, clay marbles, other inert media
 - bucket systems
 - tray systems
- High-Intensity Discharge and other Mercury-containing Lamps



skhosner/Jun-14

Indoor Production

4

Methods of watering

- Drain-to-waste
- Deep water culture; Recirculating
- Ebb and flow or flood and drain
- Final flush



skhosner/Jun-14

Indoor Production

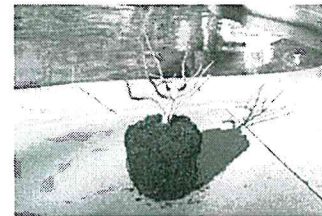
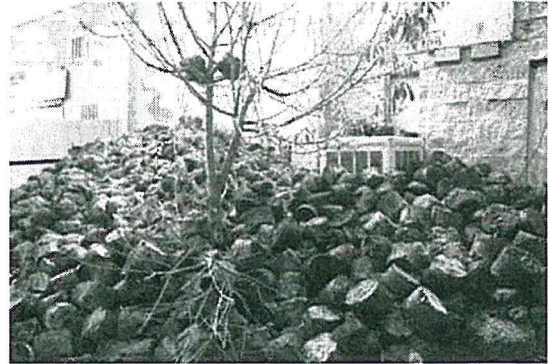
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CO2 Supplementation

- During flowering cycle; 12 hours of light, 12 hours of darkness
- Use CO2 during light phase to increase plant growth and flowering
- CO2 raised from 400ppm to 1200-1800ppm
- Use CO2 tanks or special propane or natural gas burners

Potential Regulatory Issues

- **Solid waste** – marijuana waste is ground and mixed 50% with other wastes; how much, how long, where does it go?
- **Hazardous Waste** – used mercury-containing lamps, must be recycled; waste pesticides; hospital concerns



Regulatory Issues, con't.

- **Wastewater discharges** – may include fertilizers, pesticides, sanitizers, and cleaning chemicals
- **Chemigation and Fertigation** – systems must be installed according to rules - WAC 16-202-1001 and WAC 16-202-2002
- **Air Quality** – CO2 use, boilers, gas burners, odors



Outdoor and Greenhouse Production

Possible Environmental Issues



skhosnet, Jan 14

Outdoor Production

- SEPA
- Water Rights
- Pesticide and fertilizer use
- Odors
- Haz-Waste Disposal
- Land use

Water Use

- Exempt wells – 5,000 gallons per day, can be used for small commercial
- Exempt wells subject to water law
- Ground water use over 5,000 gallons a day needs a water right
- Any surface water withdrawal needs a water right

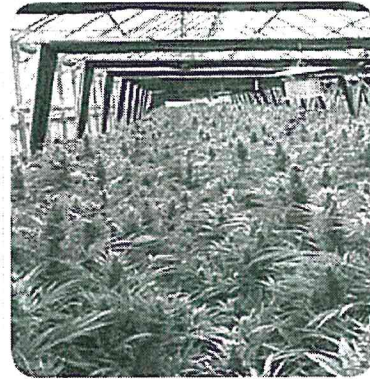
Greenhouses – Point or Non Point?

Watering systems -

- Primarily drain-to-waste
- Possibly some type of recirculating system
- Maybe final flush

Drainage systems -

- Drain-to-ground
 - Trench drains
 - Infiltration trenches

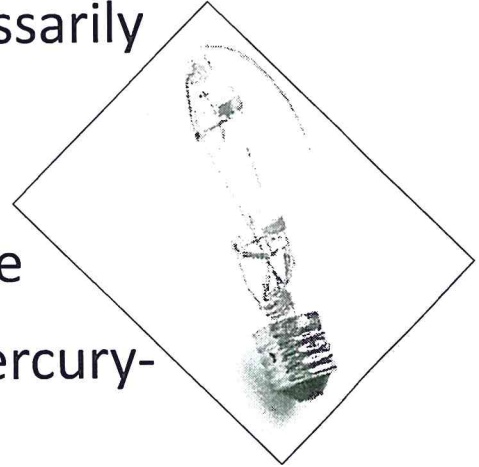


Potential Regulatory Issues

- **Water Right** – large outdoor grows may need more than 5,000 gallons a day
- **Air Quality** – agricultural odors may be an issue; boilers for greenhouses – heating and CO2 supplementation; outdoor burning
- **Water Quality** – proper pesticide and fertilizer applications, chemigation and fertigation systems; drainage systems in greenhouses

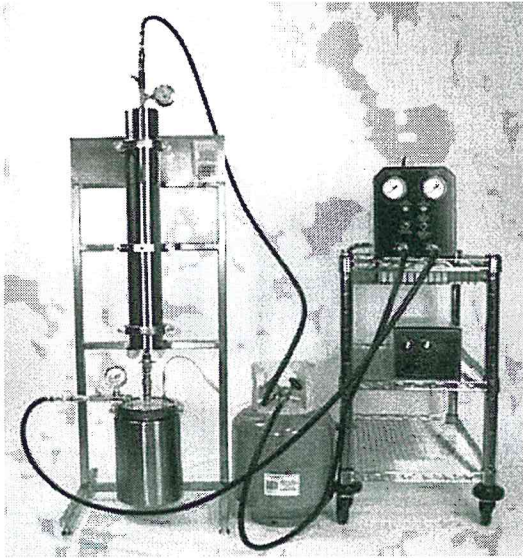
Regulatory Issues, con't

- **Solid Waste** – disposal of marijuana ground and mixed with 50% other waste – not necessarily crop residue
- **Land use** – possible Forest Practices Permit, for example
- **Hazardous Waste** – used mercury-containing lamps, must be recycled; waste pesticides



Extraction Processes

- Solvents – liquid or gas
- Oil-based
- Ice Water



skhosner/Jun-14



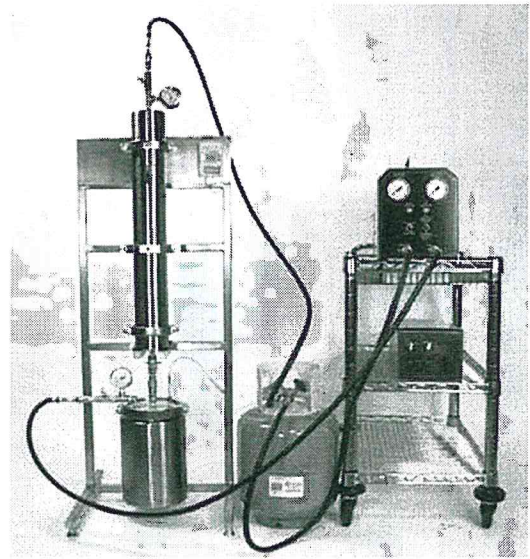
Extraction



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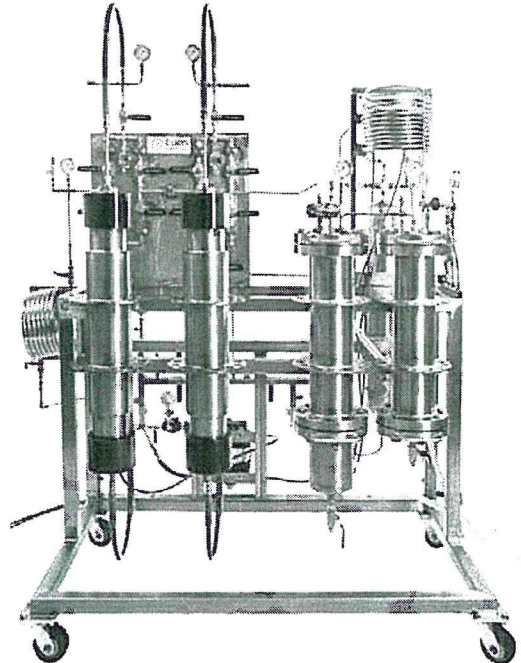
Hydrocarbon Solvent Processing

- Plant matter is placed in pressure vessel and treated with solvent to extract resin
- Use hydrocarbon solvents; N-butane, isobutane, etc.
- Closed-loop systems required and only certain solvents allowed



CO2 Processing

- “Supercritical” CO2 processing – under extreme pressure. More expensive but considered cleaner than solvents
- Closed-loop required
- Used to extract essential oils and other uses

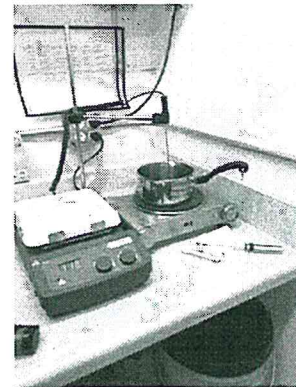
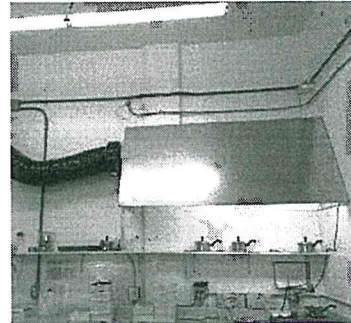


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Other solvent processes

- Alcohols – ethanol, propylene glycol; make tinctures
- Vegetable glycerin – hot and cold processing; produce tinctures and syrups

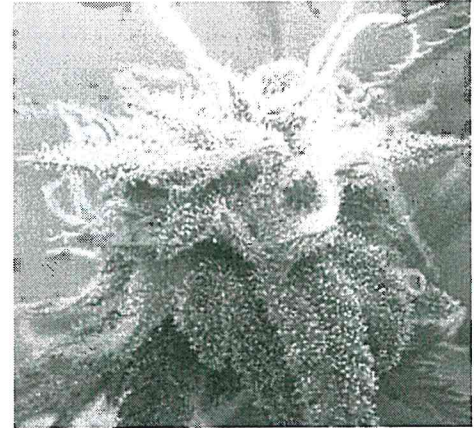


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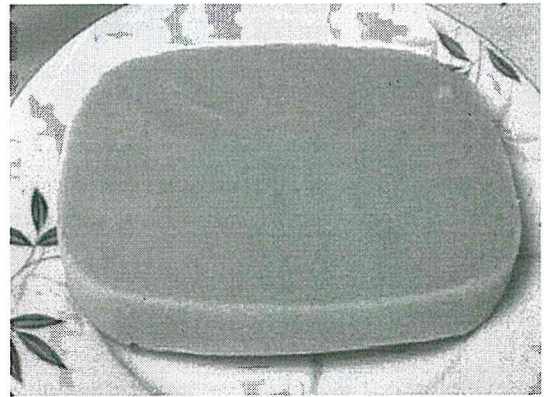
Ice Water Processing

- Ground up plant matter is mixed with ice and ice water and agitated in a series of porous bags with smaller and smaller holes
- Trichomes (resin bodies) break loose and pass through pores of bags and sink
- Resin is dried and pressed – **Hash**



Oil Processing

- Plant matter is mixed with hot water and butter or oil and stewed
- After cooking, it is strained, allowed to cool
- Butter or oil, now infused with marijuana resin, is skimmed off for future use



Cannabutter

Extraction Waste Products

- Solids, liquids, gases
 - Waste plant material
 - Wastewater
 - Fats, Oils, Grease
 - Solvents, gases
 - Bad batches

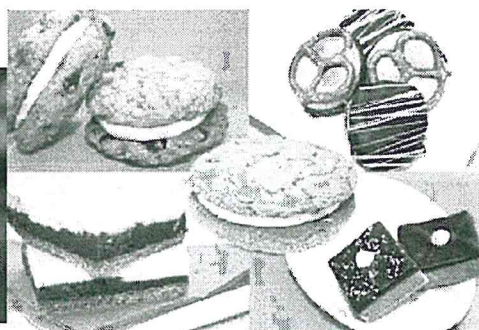
Potential Regulatory Issues

- **Fire Codes** – storage, use, and management of hazardous materials
- **Air Quality** – use of solvents, boilers
- **Hazardous and Solid Waste Disposal** – waste plant material, solvents
- **Wastewater discharges** – may include solvents, fats, oils and grease, waste plant material

A bit about food processing

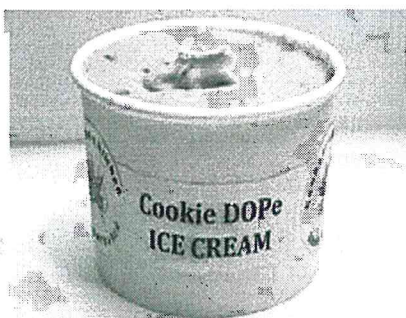
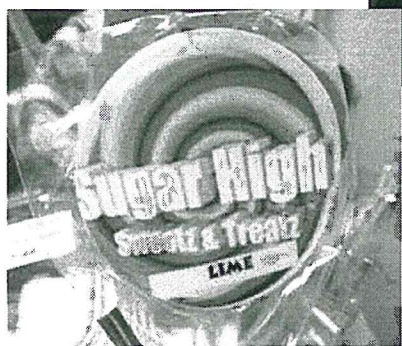
- Marijuana-infused products must be made in facilities that meet Dept of Agriculture requirements in WAC 16-165 and 16-167
- The WSLCB is working with the Dept of Agriculture to determine inspection requirements
- Local health departments typically inspect retail food establishments, but may not in this case
- Currently no restrictions on types of food products – but new rules may restrict “potentially hazardous foods” if passed

Products



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WAC 314-55

What the rules say

- Only certain pesticides allowed – list is available at [WSU-Pesticide Information Center Online database](#)
- Solid and liquid wastes and wastewater managed according to state and local laws
- Certain wastes from extraction and Q.A. testing must be evaluated against state dangerous waste regulations
- Marijuana wastes rendered unusable before disposal
- Closed-loop extraction required for CO2 and hydrocarbons
- Record of final destination kept
- All local codes must be followed

Permitting Guidance

For Producers and Processors

www.liq.wa.gov/mjlicense/permitting

Pesticide Data Base

<http://cru66.cahe.wsu.edu/LabelTolerance.html>

Liquor Control Board Contacts

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Thank you

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