

**NOTICE OF MEETING  
REGULAR MEETING AGENDA**

**1. CALL TO ORDER**

**2. AGENDA APPROVAL**

**3. PUBLIC COMMENT UPON MATTERS ALREADY ON THE AGENDA**

(The Public may comment on any item on the agenda with the exception of items shown under Public Hearings. The standard time limit is 3 minutes.)

**4. RECONSIDERATION**

**5. ADOPTION OF CONSENT AGENDA** *(Items listed below will be enacted by one motion. If separate discussion is desired on an item, that item may be removed from the Consent Agenda and placed on the Regular Meeting Agenda at the request of a Commissioner.)*

A. Meeting Minutes from the May 28, 2015 Regular Meeting *Page 3*

**6. STAFF REPORTS**

**7. PUBLIC HEARING**

**8. PENDING BUSINESS**

A. Review of the Draft Bylaws *Page 113*

**9. NEW BUSINESS**

A. Staff Report CAC 15-01 by Rick Abboud, City Planner *Page 11*

1. Zoning Districts for Marijuana Related Activities; Cultivation, Manufacturing, Testing, and Retail
2. Intensity of Activities; Limitation of Local Licenses, Distance Between Facilities
3. Exclusion of Operations in Certain Areas

**10. INFORMATIONAL MATERIALS**

A. Commissioner Attendance at City Council Meetings *Page 117*

**11. COMMENTS OF THE AUDIENCE**

**12. COMMENTS OF THE STAFF**

**13. COMMENTS OF THE CHAIR**

**14. COMMENTS OF THE COMMISSION**

**15. ADJOURNMENT**

Next Regular Meeting is tentatively scheduled for Thursday, July 23, 2015 at 5:00 pm in the City Hall

Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

Session 15-01, a Regular Meeting of the Cannabis Advisory Commission was called to order by Chair Aryn Young at 5:02 p.m. on May 28, 2015 at the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

PRESENT: COMMISSIONERS ROBL, HARRIS, STEAD, YOUNG, MONROE, JONES, BURGESS, LEWIS

ABSENT: COMMISSIONER ETZWILER (EXCUSED)

STAFF: CITY PLANNER ABBOD  
DEPUTY CITY CLERK KRAUSE

### APPROVAL OF AGENDA

Acting Chair Young called for a motion to approve the agenda as presented.

LEWIS/BURGESS - SO MOVED.

There was no discussion.

VOTE. YES. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

### PUBLIC COMMENT

The public may speak to the Commission regarding matters on the agenda that are not scheduled for public hearing. (3 minute time limit).

There were no comments from the audience present.

### RECONSIDERATION

No items were scheduled for reconsideration.

### ADOPTION OF CONSENT AGENDA

*(Items listed below will be enacted by one motion. If separate discussion is desired on an item, that item may be removed from the Consent Agenda and placed on the Regular Meeting Agenda at the request of a Commissioner.)*

There were no items on the consent agenda for this meeting.

### STAFF REPORTS

There were no staff reports.

### PUBLIC HEARINGS

*(Public Testimony is limited to 3 minutes. The Commission conducts Public Hearings by hearing a staff report if any, hearing public testimony and then acting on the Public Hearing items. Once the public hearing is closed the Commission cannot hear additional comments on the topic.)*

There were no items for public hearing.

### PENDING BUSINESS

There were no items under pending business.

**NEW BUSINESS**

A. Election of Chair and Vice Chair

Acting Chair Young read the title into the record.

Commissioner Lewis nominated Commissioner Young for Chair. Commissioner Burgess seconded the motion.

Acting Chair Young called for further nominations. None were offered. Commissioner Lewis moved to close the nominations for Chair, seconded by Commissioner Burgess.

VOTE. YES, LEWIS, BURGESS, JONES, MONROE, STEAD, HARRIS, ROBL

Motion carried.

Chair Young called for nominations of Vice Chair.

Commissioner Lewis nominated Commissioner Monroe for Vice Chair. Commissioner Burgess seconded the motion. Chair Young called for further nominations; seeing none Chair Young closed the nominations for Vice Chair.

VOTE. YES. ROBL, HARRIS, STEAD, YOUNG, JONES, BURGESS, LEWIS

Motion carried.

B. Establishing a Regular Meeting Schedule of the Commission

Chair Young introduced the item for discussion.

BURGESS/LEWIS - MOVED TO ESTABLISH 5:30 P.M. AS THE REGULAR START TIME FOR ALL MEETINGS OF THE COMMISSION.

There was a brief discussion.

VOTE. YES. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

BURGESS/LEWIS - MOVED TO ESTABLISH THE FOURTH THURSDAY OF THE MONTH AS THE REGULAR MEETING DAY WITH THE EXCEPTION OF THE NOVEMBER AND DECEMBER MEETINGS WHICH WILL BE THE LAST MONDAY OF THE MONTH IN NOVEMBER AND THE THRID THURSDAY IN DECEMBER.

There was a brief discussion and clarification on the meeting date of the fourth Thursday being preferable for staff and the Clerk's Office due to existing workload.

VOTE. YES. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

C. Request to Consider Renaming the Commission to Follow the State of Alaska

Chair Young introduced the item into the record and asked for discussion.

Commissioner Burgess called for a point of order and inquired of the Clerk if they were indeed allowed to change the name of the commission. The Clerk stated that if they were to change the name this was the appropriate time to do that.

BURGESS/LEWIS - MOVED TO RECOMMEND TO COUNCIL TO RENAME THE CANNABIS ADVISORY COMMISSION TO MARIJUANA ADVISORY COMMISSION TO FOLLOW THE STATE OF ALASKA.

Discussion ensued with the following points noted:

- Countering the Council's decision on naming the commission as Cannabis
- The idea to be consistent with the State at this time since the state is inconsistent with its use of the terminology and is also not consistent with the Federal Government.
- The use of Cannabis is botanically correct as well as allows the commission to consider and enter discussion in the future on industrial hemp which the term marijuana would provide limitations
- The term marijuana was intentionally introduced to obfuscate that cannabis was what was being talked about at that time.
- Cannabis products were part of the pharmacopeia and available in the Sears Roebuck Catalog and in order to ban its use it was vilified unjustly.
- Whether the inconsistency in naming would be germane to the regulatory bodies when and if the state assigns authority to those regulatory bodies there may be a potential to be ineligible. They could consider changing the name at that time if there is precedent.
- Compromise including both names in the name in the title.
- Preference to have one name or the other

Commissioner Burgess would do further research on the issue for the next meeting but opined that it did not necessitate rapid attention unless there is some regulatory issue with naming consistency with the State or Federal Government.

Commissioner Monroe added that in regards to meeting statutory requirements, with regard to licensing, the commission currently does not meet those and unless they meet additional benchmarks they will not be eligible for consideration of the State Board to collect fees, etc.

VOTE. YES. LEWIS, ROBL.

NO. BURGESS, JONES, MONROE, YOUNG, STEAD, HARRIS.

Motion failed.

It was clarified that this item could be brought back at a later date if necessary.

D. Attendance at City Council Meetings to Provide Status Updates

Chair Young read the title into the record and inquired if there were any volunteers at this time.

Commissioner Harris requested clarification on the start of the council meeting. Commissioner Burgess suggested that since Commissioner Lewis and he are in attendance at most all the Council meetings if a commissioner is unable to attend they can provide an update. Commissioner Monroe requested clarification on the intent tonight was to fill all the meetings or just the first ones.

Deputy City Clerk responded that was the preferred process and also noted that it is not required to have someone at each Council meeting but to have a presence at one each month.

Commissioner Jones offered to attend the June 15<sup>th</sup> meeting.

Commissioner Robl offered to attend the August 10<sup>th</sup> meeting.

Commissioner Monroe volunteered for October 12<sup>th</sup> and Commissioner Stead took October 26<sup>th</sup>

A discussion ensued regarding attendance at each meeting or just one meeting preferably after the commission meetings so that they will have something to report to council. Commissioner Burgess responding to Commissioner Harris

LEWIS/MONROE - MOVED TO HAVE A COMMISSIONER ATTEND THE FIRST COUNCIL MEETING SCHEDULED AFTER A COMMISSION MEETING.

There was no discussion.

VOTE. YES. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

BURGESS/LEWIS - MOVED TO MODIFY THE PREVIOUS MOTION TO ATTEND THE COUNCIL MEETING IMMEDIATELY FOLLOWING A COMMISSION MEETING SINCE SOME MONTHS THERE IS ONLY ONE COUNCIL MEETING.

There was no discussion.

VOTE. YES. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

- E. Drafting the Cannabis Advisory Commission Bylaws
1. Parks and Recreation Advisory Commission Bylaws
  2. Homer Advisory Planning Commission Bylaws
  3. Economic Development Advisory Commission Bylaws

Chair Young read the title into the record and noted that there were no recommendations from staff.

Commissioner Burgess requested clarification from the Clerk regarding procedures and process.

BURGESS/MONROE - MOVED TO USE THE PARKS AND RECREATION ADVISORY COMMISSION BYLAWS AS A TEMPLATE WITH ANY MODIFICATIONS AND BRING TO THE NEXT REGULAR MEETING FOR REVIEW FURTHER AMENDMENTS AND ADOPTION.

There was no discussion.

VOTE. YES. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

#### **INFORMATIONAL MATERIALS**

A. Colorado's Legalization of Marijuana and the Impact on Public Safety: A Practical Guide for Law Enforcement

The commissioners discussed the document indicating appreciation for Commissioner Robl's forethought to include the document in their first packet. While a lengthy document there was good information in it.

Commissioner Burgess read the document and stated his take is on the following two items and requested input from Commissioner Robl on:

- Robberies and Thefts associated with retail facilities and how could the commission address that; and
- Gathering data matrixes as legalization goes forward to analyze the impact of the legalization

Commissioner Robl responded that he thought Commissioner Burgess' observations were accurate and was unsure how they would do that and one of the things they should keep in mind and seen in Colorado, was increased use among youth and underage persons. He is not sure how to track that. He wanted the commission to review stats that came from a vetted source noting that when you go to the

internet there are things on there that seem to be a very solid source of information but are not, so you need to be careful when obtaining information from the internet.

Commissioner Lewis inquired about the increase use in youth how that compared with the use in alcohol in Colorado, Commissioner Robl has not seen any stats on that and there may be studies out there in that regard but he is not sure where they could find that information.

Commissioner Harris commented on the accessibility issues and the use of pot replacing the use of other drugs such as heroin, cocaine or prescription drugs.

Commissioner Monroe agreed with Commissioner Robl on the resources available online, he cited the information available in a Safe Kids study that indicated pockets of increased use and that most of these places are only in their second year since legalization so it's really hard to determine the overall effect of something and that they should keep their eyes on.

Further points made by the commissioners were:

- Consideration for the foot traffic and kinds of activities with the types of businesses in regards to zoning
- Inadequate infrastructure for handling All Cash Businesses
- Recommendations of types of security systems such as forward face cameras when people walk in the door, Silent Alarms, and safes bolted to the floor
- Required Picture Identification to enter a premise
- Limiting the number of persons in the store
- Review of drafted state requirements since that was outlined in the Ballot Initiative

#### B. Appointments to the Commission

There were no comments or discussion on the item.

#### C. State of Alaska Proposed Regulations Regarding Marijuana and Local Options

There was a brief discussion on responding to this and the commission agreed by consensus that at this time they did not need to respond. However, they requested the Clerk to send a notification to Cynthia A Franklin, Director, Alcoholic Beverage Control Board/Marijuana Control Board and the Legislative Representatives of the creation and activation of the Commission along with contact information requesting they be notified through the Clerk's Office of any and all legislation, meetings, events, etc. related to cannabis.

#### COMMENTS OF THE AUDIENCE

Members of the audience may address the Commission on any subject. (3 minute time limit)

Ginny Espenshade, city resident, thanked the commissioners, this was important, she was the executive director and legal advisory of the Kenai Peninsula Youth Court which is a diversion program for youths under the age of 18, they get into trouble with the law, they receive alcohol and marijuana cases from the District Court and Juvenile Justice, they could provide you the stats, that agency on kids that are caught, the School District could provide the stats for kids suspended from school, they can tease out the alcohol and marijuana cases from those stats she believed; the Kasey Foundation does an annual kids count report and there is a Youth Risk Survey that is done every other year in the schools. She would be glad to share those reports with the commission. She was gratified that the commission was keeping in mind the impact on youth; she was not present to argue what is a Gateway Substance. She believed that there were Gateway situations and Gateway messages. Ms. Espenshade further believes that like alcohol, some things, more normalized are not bad for you, just too early. She hopes that when they make their recommendations of policy they have a check off - did we think of the kids? The 18-21 will not be kids, it will be illegal for them to possess, they are not juveniles so those records are public, if they are convicted they will not be able to get a student loan, some states they can't get licenses or adopt. She did not want to set up their youth for those obstacles down the road.

Wes Schacht, non-resident, longtime advocate of regulation and legalization and cannabis is the true name of the plant not marijuana and they named the commission, Cannabis and since they hope to include industrial Cannabis in their legislation. He hopes the State will change their name to Cannabis too.

Larry Slone, city resident, agreed with the previous comments, with regard to retaining the name of the commission, marijuana still retains negative emotional connotations to the general public and it would be best for the commission to start out on the most neutral of positions and try to maintain that neutrality throughout until they are compelled by the state to keep the name of Cannabis Commission. He appreciated the commissioners for serving and appreciates them taking this first step of the journey for the benefit of the community.

#### **COMMENTS OF STAFF**

Mr. Abboud commented on his minor involvement thus far with the issue in conferences in Seattle and he looks at this as four things - places that sell it, places that manufactures it, places that test it and places that grow it. As staff he will try to coordinate with what the commission is required to do and objectives to accomplish what the commission wants to do and how to get there; he suggested work on defining these activities and they can talk about negative or positive “exponentialities”, like how it affects your neighbors and other people and where they want this and don’t want this; the commission can review what other municipalities have done, debate and make recommendations. The one thing he does not have a lot of information is the cannabis operation and how this will be regulated by the State but as a crop he is not sure how it will be treated or separated and agricultural activities in the city are another issue.

Ms. Krause stated the commission did very well for the first meeting, motions were well done, clear and Commissioner Burgess can do her job when he’s done, awesome use of Robert’s Rules.

#### **COMMENTS OF THE CHAIR**

Chair Young stated she was very excited, they have lots of work ahead of the commission and she is looking forward to it.

#### **COMMENTS OF THE COMMISSION**

Commissioner Robl stated he views his presence on the commission as one of law enforcement perspective and definitely has the best interest of youth at all time, he definitely has concern for the impact and effect on the children, well he calls them kids, those 18-21 years of age, they can make one stupid mistake that plaques them for the rest of their life. He is not sure what the commission can do to impact that but he knows how it works in the world he lives and works in and hopefully he can bring a viewpoint of that to the commission.

Commissioner Harris never thought about the student loan issue, she has a 20 year and that scare her. She does not smoke, one day she plans to when she no longer has responsibilities at home, but she thinks that when you have 70% voting for something they deserve representation and she believes that she can do that.

Commissioner Stead had no comments.

Commissioner Monroe it is a pleasure to sit on this commission with Commissioner Robl as people who in times past been put on opposite sides of an issue, to have all of us look into an issue and find out what is best and not be polarized because of a device of policy that makes some of us as proponents overstate our cases and some of us who are opposed overstate their case, hopefully we are at a point where we can have rational and open discussions and can move forward practically with policies here. Hopefully we can recommend policy that is useful and in the best interest of the community as a whole. For myself, feeling for the most part on the outside of society this is quite a step and



appreciative of the magnitude of the shift. Commissioner Monroe stated he has been involved with the recent Community Conversations on Cannabis. There was no money made or charged. He is hopeful that the Commission will have a voice in that and the intent is the safety issues involved in wholesale experimentation and safety is in all of our interests and maybe he will bring it up as an agenda item and the commission can discuss on how they want to interact with that. He thanked the Commission.

Commissioner Jones commented that he is really excited to be a part of the commission.

Commissioner Burgess stated that he too is really excited to be part of this commission; grateful to be part of any body that has civil and rational discussion and that it is very important to keep in mind how precedent setting this really is in a lot of ways. He was reading the main script from the Colorado Police Commissioner and it shows that there is a lot happening here for the first time and we need to keep in mind how important it is to gather the data, be civil and remember what we do here may be used as an example for others in the future. Commissioner Burgess then stated his agenda is public safety and youth access be first and foremost filters on any decision, second to those, you could refer them to large macro important things or concerns and good for the commission to focus on, as they think about zoning, he would offer from an economic statement in this time of tight budgets, that they need to see this as a resource as well as anything else and that this resource serves the public agenda as well has the costs to regulate and enforce it as well. We certainly will be enforcing safety issues and youth issues arising from the use of this substance whether they regulate it poorly or well and whether they collect money as a result of it or not. He would rather see a revenue stream to cover those additional expenses that will occur. Now, as for zoning he would like to keep in mind that the state as broken it down into three general areas or components of the process: growing, manufacturing and retail. He believes that if they stay within those lines that the state is considering with our zoning regulations that will paint us in a good light. From a job standpoint, most crime and civil unrest has a root in economic livelihood. People want jobs and access to a higher standard of living they can play a key role in making sure that dollars, good dollars that come from this industry that used to be in the shadows stays in the community, by making small businesses have an access to participate in this business. Mr. Burgess opined that if people want to set up large indoor grow businesses they will do it in the valley where the cost of electricity is half the cost of here. It is less labor intensive to do things that way. As we are offering legislative recommendations regarding zoning they need to keep in mind that they are creating employment and business opportunities here and not push those opportunities to the Kenai Peninsula Borough since Homer will still have the costs associated with enforcement and not have the means to do it. The City is currently facing a budget shortfall of \$1 million dollars for next year from current projections. So this is important to keep in mind when they are making their recommendations. He is really excited to be here working on this with everyone on the commission.

Commissioner Lewis commented that it is really interesting seeing this going full circle from growing up in the sixties and seventies. He believed it was going to be entertaining. He never thought it would ever happen. As for the youth, those 18-21 he advocated that they do not impose criminal penalties, they do civil penalties such as \$1000 fine, make it hurt but don't give them a record when they work on regulations and asked Commissioner Robl if he could look into that for them.

#### **ADJOURN**

There being no further business to come before the Commission, the meeting adjourned at 8:35 p.m. The next regular meeting is scheduled for THURSDAY, JUNE 25, 2015 at 5:30 p.m. in the City Hall Cowles Council Chambers.

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Renee Krause, CMC, Deputy City Clerk

Approved: \_\_\_\_\_





# City of Homer

[www.cityofhomer-ak.gov](http://www.cityofhomer-ak.gov)

## Planning

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### Staff Report CAC 15-01

TO: Cannabis Advisory Commission  
THROUGH: Rick Abboud, City Planner  
DATE: June 25, 2015  
SUBJECT: Local Control

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**Introduction:** According to the initiative there are several aspects of the industry that may be regulated by a municipality. My goal is to identify these activities and set the stage for recommending future regulation.

#### Analysis:

The State has responsibility to make regulations regarding several aspects of marijuana spelled out in the Rulemaking section of AS 17.38.090. Local governments may act upon Local Control per AS 17.38.110. At this meeting, I hope to formulate a recommendation for Planning Commission review that will be forwarded to the City Council for adoption in an ordinance.

#### Requested action

1. Make recommendation to the Planning Commission on appropriate zoning for marijuana related activities; cultivation, manufacturing, testing, and retail.
2. Discuss and make recommendation on the intensity of activities, such as limiting the number of local licenses and or a minimum distance between activities.
3. Consider appropriate areas of exclusions.

#### Our responsibilities

##### Local Control, AS 17.38.110

- a. Local government may prohibit cultivation, manufacturing, testing and/or retail marijuana activities by ordinance or voter initiative.
- This is zoning issue and intimately related with (b.) below. I will assume that we will not propose any prohibitions.
- b. Local government may (without conflict to the initiative) regulate time, place, manner, and number of marijuana establishment operations. They may also establish civil penalties for violation of these regulations.

- This is zoning. We will need to talk about provisions that will be recommended to the Planning Commission in order to get it to the Council for adoption. I am including a map of protected areas from which to start. We may add additional protected.
- c. Local government may designate an authority for processing applications should this be necessary from failure of the state to do so.
  - This I will review with the City Attorney. I assume that a task force separate from the CAC will be formed to do this. I am marking the rest of the item with “task force” so that we may categorize the activity. We may just want to prepare recommendations for the task force to consider.
- d. Local government may establish procedures for issuance, suspension, and revocation issued by the local government.
  - Task force
- e. Local government may establish a schedule of annual operating, registration, and application fees.
  - Task force
- f. Local government may act on applications not acted upon by the state within the timeframes of the initiative, 90 days without response or for those applications not issued after 15 months after effective date of the act.
  - Task force
- g. If the state does not adopt regulations application may be sent to the local government for action.
  - Task force

The rest of the section deals with administrative procedures for acting upon application mentioned above.

In light of the above local control, the federal government has several expectations in regards to the states that adopt a regulated marijuana industry. The number one concern for us is protection of minors. What this means in a regulatory environment is distances from places that minor frequent and ensuring that they are not able to access product in the activities that are proposed (cultivation, manufacturing, testing, and sale).

I plan to give a presentation to familiarize everyone with the issues surrounding the rights forwarded by the initiative. I have included the text of the initiative to review the exact regulation, so far. Included is the Environmental Risks and Opportunities in Cannabis Cultivation paper which provides a useful cited academic perspective on cultivation. I do realize that this leads down a path where our local regulations have not gone or are likely to do so, that said it does provide a wealth of information and somethings that we can consider when we have our conversations. Finally, I have included permitting material for the City of Seattle.

**Regulations expectations for the state.** When we discuss our local control, we need to keep in mind the expected regulation from the state per AS 17.38.090 (attachment). Some items are more related to zoning aspects of the activities such as security requirements and “reasonable restrictions on advertising and display of marijuana and marijuana products”.

I will check with the City Attorney in regards to the City’s responsibility and report back next meeting.

**Action**

Propose recommendations for zoning requirements.

**Zoning District Groupings**

<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Special</b>
Rural residential	Central business	East End Mixed	Bridge Creek
Urban residential	Town center	General commercial 2	Marine Commercial
Residential office	Gateway		Marine Industrial
	General commercial 1		

**Current allowance for marijuana related activities**

Cultivation

<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Special</b>
Rural residential (permitted) only	Greenhouses –CBD, TCD(COnditional Use) only	EEMUD (permitted) only	Conditional Permit Bridge Creek only

## Manufacturing

<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Special</b>
Not allowed	CBD (Conditional – light) only	EEMUD (permitted) only	Not allowed

## Testing

<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Special</b>
Not allowed	Not allowed	Allowed	Not allowed

## Retail

<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Special</b>
Not allowed	Allowed	Allowed	Not allowed

## Staff Recommendation

### A. Zoning districts

I would suggest a few changes which can be forwarded for a recommendation to the Planning Commission with a motion. A motion can be made to on each of the items, especially if modifications are suggested.

1. Eliminate cultivation in rural residential
  - This activity is not one that is seen as compatible with residential activities.
  - Residential uses are clearly favored in the district.
  - The district supports many families with children.
  - Many parts of the district are closer to urban standards which makes this activity even more incompatible.
2. If not eliminating cultivation in rural residential
  - Make it a conditional use.
  - Make special conditions for CUP consideration.
    - o Minimum lot size
    - o Minimum setback
    - o Security
    - o Screening
3. Allow unlimited manufacturing in General Commercial 2.
4. Allow testing in General Commercial 1.

## **B. Intensity**

Consider if you would like to forward anything beyond being subject to state regulations. I would assume that the state may not have any restriction on the number of licenses that are available. If there are limits we are bound to them, unless we propose to be more restrictive.

1. Should activities have a designated spacing between them (individually or collectively) to avoid undue concentration? 1000, or 500 feet, or something else?
2. Should facilities be limited to a specific amount citywide?

## **C. Exclusions**

1. Are the proposed areas of exclusion adequate (per presentation page 38, "*What FNSB is Proposing for Buffers*")? 1000ft – k-12, playgrounds; 500ft – post-secondary; 100 – youth center. The proposed area is the minimum recommended. Should they be extended or should other activities/uses be considered?

**Next meeting** - review of rule-making tasks to be brought before the CAC

## **Attachments**

1. Initiative text
2. Environmental Risks and Opportunities in Cannabis Cultivation
3. Seattle Permits, Tip 134
4. Fairbanks North Star Borough Town Hall Presentation
5. Map - City Wide Draft Commercial Marijuana Areas
6. Map – Draft Commercial Marijuana Areas





**“An Act to tax and regulate the production, sale, and use of marijuana.”**

**BE IT ENACTED BY THE PEOPLE OF THE STATE OF ALASKA:**

**\*Section 1.** AS 17 is amended by adding a new chapter to read:

**Chapter 38. The regulation of marijuana**

**Sec. 17.38.010. Purpose and findings.**

(a) In the interest of allowing law enforcement to focus on violent and property crimes, and to enhance individual freedom, the people of the state of Alaska find and declare that the use of marijuana should be legal for persons 21 years of age or older.

(b) In the interest of the health and public safety of our citizenry, the people of the state of Alaska further find and declare that the production and sale of marijuana should be regulated so that:

- (1) Individuals will have to show proof of age before purchasing marijuana;
- (2) Legitimate, taxpaying business people, and not criminal actors, will conduct sales of marijuana; and
- (3) Marijuana sold by regulated businesses will be labeled and subject to additional regulations to ensure that consumers are informed and protected.

(c) The people of the state of Alaska further declare that the provisions of this Act are not intended to diminish the right to privacy as interpreted by the Alaska Supreme Court in *Ravin v. State of Alaska*.

(d) Nothing in this Act proposes or intends to require any individual or entity to engage in any conduct that violates federal law, or exempt any individual or entity from any requirement of federal law, or pose any obstacle to federal enforcement of federal law.

**Sec. 17.38.020. Personal use of marijuana.**

Notwithstanding any other provision of law, except as otherwise provided in this chapter, the following acts, by persons 21 years of age or older, are lawful and shall not be a criminal or civil offense under Alaska law or the law of any political subdivision of Alaska or be a basis for seizure or forfeiture of assets under Alaska law:

- (a) Possessing, using, displaying, purchasing, or transporting marijuana accessories or one ounce or less of marijuana;
- (b) Possessing, growing, processing, or transporting no more than six marijuana plants, with three or fewer being mature, flowering plants, and possession of the marijuana produced by the plants on the premises where the plants were grown;
- (c) Transferring one ounce or less of marijuana and up to six immature marijuana plants to a person who is 21 years of age or older without remuneration;
- (d) Consumption of marijuana, except that nothing in this chapter shall permit the consumption of marijuana in public; and
- (e) Assisting another person who is 21 years of age or older in any of the acts described in paragraphs (a) through (d) of this section.

**Sec. 17.38.030. Restrictions on personal cultivation, penalty.**

(a) The personal cultivation of marijuana described in AS 17.38.020(b) is subject to the following terms:

(1) Marijuana plants shall be cultivated in a location where the plants are not subject to public view without the use of binoculars, aircraft, or other optical aids.

(2) A person who cultivates marijuana must take reasonable precautions to ensure the plants are secure from unauthorized access.

(3) Marijuana cultivation may only occur on property lawfully in possession of the cultivator or with the consent of the person in lawful possession of the property.

(b) A person who violates this section while otherwise acting in compliance with AS 17.38.020(b) is guilty of a violation punishable by a fine of up to \$750.

**Sec. 17.38.040. Public consumption banned, penalty.**

It is unlawful to consume marijuana in public. A person who violates this section is guilty of a violation punishable by a fine of up to \$100.

**Sec. 17.38.050. False identification, penalty.**

(a) A person who is under 21 years of age may not present or offer to a marijuana establishment or the marijuana establishment's agent or employee any written or oral evidence of age that is false, fraudulent or not actually the person's own, for the purpose of:

(1) Purchasing, attempting to purchase or otherwise procuring or attempting to procure marijuana or marijuana products; or

(2) Gaining access to a marijuana establishment.

(b) A person who violates this section is guilty of a violation punishable by a fine of up to \$400.

**Sec. 17.38.060. Marijuana accessories authorized.**

Notwithstanding any other provision of law, it is lawful and shall not be an offense under Alaska law or the law of any political subdivision of Alaska or be a basis for seizure or forfeiture of assets under Alaska law for persons 21 years of age or older to manufacture, possess, or purchase marijuana accessories, or to distribute or sell marijuana accessories to a person who is 21 years of age or older.

**Sec. 17.38.070. Lawful operation of marijuana-related facilities.**

(a) Notwithstanding any other provision of law, the following acts, when performed by a retail marijuana store with a current, valid registration, or a person 21 years of age or older who is acting in his or her capacity as an owner, employee or agent of a retail marijuana store, are lawful and shall not be an offense under Alaska law or be a basis for seizure or forfeiture of assets under Alaska law:

(1) Possessing, displaying, storing, or transporting marijuana or marijuana products, except that marijuana and marijuana products may not be displayed in a manner that is visible to the general public from a public right-of-way;

(2) Delivering or transferring marijuana or marijuana products to a marijuana testing facility;

(3) Receiving marijuana or marijuana products from a marijuana testing facility;

(4) Purchasing marijuana from a marijuana cultivation facility;

(5) Purchasing marijuana or marijuana products from a marijuana product manufacturing facility; and

(6) Delivering, distributing, or selling marijuana or marijuana products to consumers.

(b) Notwithstanding any other provision of law, the following acts, when performed by a marijuana cultivation facility with a current, valid registration, or a person 21 years of age or older who is acting in his or her capacity as an owner, employee or agent of a marijuana cultivation

facility, are lawful and shall not be an offense under Alaska law or be a basis for seizure or forfeiture of assets under Alaska law:

- (1) Cultivating, manufacturing, harvesting, processing, packaging, transporting, displaying, storing, or possessing marijuana;
- (2) Delivering or transferring marijuana to a marijuana testing facility;
- (3) Receiving marijuana from a marijuana testing facility;
- (4) Delivering, distributing, or selling marijuana to a marijuana cultivation facility, a marijuana product manufacturing facility, or a retail marijuana store;
- (5) Receiving or purchasing marijuana from a marijuana cultivation facility; and
- (6) Receiving marijuana seeds or immature marijuana plants from a person 21 years of age or older.

(c) Notwithstanding any other provision of law, the following acts, when performed by a marijuana product manufacturing facility with a current, valid registration, or a person 21 years of age or older who is acting in his or her capacity as an owner, employee or agent of a marijuana product manufacturing facility, are lawful and shall not be an offense under Alaska law or be a basis for seizure or forfeiture of assets under Alaska law:

- (1) Packaging, processing, transporting, manufacturing, displaying, or possessing marijuana or marijuana products;
- (2) Delivering or transferring marijuana or marijuana products to a marijuana testing facility;
- (3) Receiving marijuana or marijuana products from a marijuana testing facility;
- (4) Delivering or selling marijuana or marijuana products to a retail marijuana store or a marijuana product manufacturing facility;
- (5) Purchasing marijuana from a marijuana cultivation facility; and
- (6) Purchasing of marijuana or marijuana products from a marijuana product manufacturing facility.

(d) Notwithstanding any other provision of law, the following acts, when performed by a marijuana testing facility with a current, valid registration, or a person 21 years of age or older who is acting in his or her capacity as an owner, employee or agent of a marijuana testing facility, are lawful and shall not be an offense under Alaska law or be a basis for seizure or forfeiture of assets under Alaska law:

- (1) Possessing, cultivating, processing, repackaging, storing, transporting, displaying, transferring or delivering marijuana;
- (2) Receiving marijuana or marijuana products from a marijuana cultivation facility, a marijuana retail store, a marijuana products manufacturer, or a person 21 years of age or older; and
- (3) Returning marijuana or marijuana products to a marijuana cultivation facility, marijuana retail store, marijuana products manufacturer, or a person 21 years of age or older.

(e) Notwithstanding any other provision of law, it is lawful and shall not be an offense under Alaska law or be a basis for seizure or forfeiture of assets under Alaska law to lease or otherwise allow the use of property owned, occupied or controlled by any person, corporation or other entity for any of the activities conducted lawfully in accordance with paragraphs (a) through (d) of this section.

(f) Nothing in this section prevents the imposition of penalties upon marijuana establishments for violating this chapter or rules adopted by the board or local governments pursuant to this chapter.

(g) The provisions of AS 17.30.020 do not apply to marijuana establishments.

#### **Sec. 17.38.080. Marijuana Control Board.**

At any time, the legislature may create a Marijuana Control Board in the Department of Commerce, Community, and Economic Development or its successor agency to assume the power, duties, and responsibilities delegated to the Alcoholic Beverage Control Board under this chapter.

**Sec. 17.38.090. Rulemaking.**

(a) Not later than nine months after the effective date of this act, the board shall adopt regulations necessary for implementation of this chapter. Such regulations shall not prohibit the operation of marijuana establishments, either expressly or through regulations that make their operation unreasonably impracticable. Such regulations shall include:

(1) Procedures for the issuance, renewal, suspension, and revocation of a registration to operate a marijuana establishment, with such procedures subject to all requirements of AS 44.62, the Administrative Procedure Act;

(2) A schedule of application, registration and renewal fees, provided, application fees shall not exceed \$5,000, with this upper limit adjusted annually for inflation, unless the board determines a greater fee is necessary to carry out its responsibilities under this chapter;

(3) Qualifications for registration that are directly and demonstrably related to the operation of a marijuana establishment;

(4) Security requirements for marijuana establishments, including for the transportation of marijuana by marijuana establishments;

(5) Requirements to prevent the sale or diversion of marijuana and marijuana products to persons under the age of 21;

(6) Labeling requirements for marijuana and marijuana products sold or distributed by a marijuana establishment;

(7) Health and safety regulations and standards for the manufacture of marijuana products and the cultivation of marijuana;

(8) Reasonable restrictions on the advertising and display of marijuana and marijuana products; and

(9) Civil penalties for the failure to comply with regulations made pursuant to this chapter.

(b) In order to ensure that individual privacy is protected, the board shall not require a consumer to provide a retail marijuana store with personal information other than government-issued identification to determine the consumer's age, and a retail marijuana store shall not be required to acquire and record personal information about consumers.

**Sec. 17.38.100. Marijuana establishment registrations.**

(a) Each application or renewal application for a registration to operate a marijuana establishment shall be submitted to the board. A renewal application may be submitted up to 90 days prior to the expiration of the marijuana establishment's registration.

(b) The board shall begin accepting and processing applications to operate marijuana establishments one year after the effective date of this act.

(c) Upon receiving an application or renewal application for a marijuana establishment, the board shall immediately forward a copy of each application and half of the registration application fee to the local regulatory authority for the local government in which the applicant desires to operate the marijuana establishment, unless the local government has not designated a local regulatory authority pursuant to AS 17.38.110(c).

(d) Within 45 to 90 days after receiving an application or renewal application, the board shall issue an annual registration to the applicant unless the board finds the applicant is not in compliance with regulations enacted pursuant to AS 17.38.090 or the board is notified by the relevant local government that the applicant is not in compliance with ordinances and regulations made pursuant to AS 17.38.110 and in effect at the time of application.

(e) If a local government has enacted a numerical limit on the number of marijuana establishments and a greater number of applicants seek registrations, the board shall solicit and consider input from the local regulatory authority as to the local government's preference or preferences for registration.

(f) Upon denial of an application, the board shall notify the applicant in writing of the specific reason for its denial.

(g) Every marijuana establishment registration shall specify the location where the marijuana establishment will operate. A separate registration shall be required for each location at which a marijuana establishment operates.

(h) Marijuana establishments and the books and records maintained and created by marijuana establishments are subject to inspection by the board.

### **Sec. 17.38.110. Local control.**

(a) A local government may prohibit the operation of marijuana cultivation facilities, marijuana product manufacturing facilities, marijuana testing facilities, or retail marijuana stores through the enactment of an ordinance or by a voter initiative.

(b) A local government may enact ordinances or regulations not in conflict with this chapter or with regulations enacted pursuant to this chapter, governing the time, place, manner and number of marijuana establishment operations. A local government may establish civil penalties for violation of an ordinance or regulation governing the time, place, and manner of a marijuana establishment that may operate in such local government.

(c) A local government may designate a local regulatory authority that is responsible for processing applications submitted for a registration to operate a marijuana establishment within the boundaries of the local government. The local government may provide that the local regulatory authority may issue such registrations should the issuance by the local government become necessary because of a failure by the board to adopt regulations pursuant to AS 17.38.090 or to accept or process applications in accordance with AS 17.38.100.

(d) A local government may establish procedures for the issuance, suspension, and revocation of a registration issued by the local government in accordance with (f) of this section or (g) of this section. These procedures shall be subject to all requirements of AS 44.62, the Administrative Procedure Act.

(e) A local government may establish a schedule of annual operating, registration, and application fees for marijuana establishments, provided, the application fee shall only be due if an application is submitted to a local government in accordance with (f) of this section and a registration fee shall only be due if a registration is issued by a local government in accordance with (f) of this section or (g) of this section.

(f) If the board does not issue a registration to an applicant within 90 days of receipt of the application filed in accordance with AS 17.38.100 and does not notify the applicant of the specific, permissible reason for its denial, in writing and within such time period, or if the board has adopted regulations pursuant to AS 17.38.090 and has accepted applications pursuant to AS 17.38.100 but has not issued any registrations by 15 months after the effective date of this act, the applicant may resubmit its application directly to the local regulatory authority, pursuant to (c) of this section, and the local regulatory authority may issue an annual registration to the applicant. If an application is submitted to a local regulatory authority under this paragraph, the board shall forward to the local regulatory authority the application fee paid by the applicant to the board upon request by the local regulatory authority.

(g) If the board does not adopt regulations required by AS 17.38.090, an applicant may submit an application directly to a local regulatory authority after one year after the effective date of this act and the local regulatory authority may issue an annual registration to the applicant.

(h) A local regulatory authority issuing a registration to an applicant shall do so within 90 days of receipt of the submitted or resubmitted application unless the local regulatory authority finds and notifies the applicant that the applicant is not in compliance with ordinances and regulations made pursuant to (b) of this section in effect at the time the application is submitted to the local regulatory authority. The local government shall notify the board if an annual registration has been issued to the applicant.

(i) A registration issued by a local government in accordance with (f) of this section or (g) of this section shall have the same force and effect as a registration issued by the board in accordance with AS 17.38.100. The holder of such registration shall not be subject to regulation or enforcement by the board during the term of that registration.

(j) A subsequent or renewed registration may be issued under (f) of this section on an annual basis only upon resubmission to the local government of a new application submitted to the board pursuant to AS 17.38.100.

(k) A subsequent or renewed registration may be issued under (g) of this section on an annual basis if the board has not adopted regulations required by AS 17.38.090 at least 90 days prior to the date upon which such subsequent or renewed registration would be effective or if the board has adopted regulations pursuant to AS 17.38.090 but has not, at least 90 days after the adoption of such regulations, issued registrations pursuant to AS 17.38.100.

(l) Nothing in this section shall limit such relief as may be available to an aggrieved party under AS 44.62, the Administrative Procedure Act.

#### **Sec. 17.38.120. Employers, driving, minors and control of property.**

(a) Nothing in this chapter is intended to require an employer to permit or accommodate the use, consumption, possession, transfer, display, transportation, sale or growing of marijuana in the workplace or to affect the ability of employers to have policies restricting the use of marijuana by employees.

(b) Nothing in this chapter is intended to allow driving under the influence of marijuana or to supersede laws related to driving under the influence of marijuana.

(c) Nothing in this chapter is intended to permit the transfer of marijuana, with or without remuneration, to a person under the age of 21.

(d) Nothing in this chapter shall prohibit a person, employer, school, hospital, recreation or youth center, correction facility, corporation or any other entity who occupies, owns or controls private property from prohibiting or otherwise regulating the possession, consumption, use, display, transfer, distribution, sale, transportation, or growing of marijuana on or in that property.

#### **Sec. 17.38.130. Impact on medical marijuana law.**

Nothing in this chapter shall be construed to limit any privileges or rights of a medical marijuana patient or medical marijuana caregiver under AS 17.37.

#### **Sec. 17.38.900. Definitions.**

As used in this chapter unless the context otherwise requires:

(1) “Board” means the Alcoholic Beverage Control Board established by AS 04.06.

(2) “Consumer” means a person 21 years of age or older who purchases marijuana or marijuana products for personal use by persons 21 years of age or older, but not for resale to others.

(3) “Consumption” means the act of ingesting, inhaling, or otherwise introducing marijuana into the human body.

(4) “Local government” means both home rule and general law municipalities, including boroughs and cities of all classes and unified municipalities.

(5) “Local regulatory authority” means the office or entity designated to process marijuana establishment applications by a local government.

(6) “Marijuana” means all parts of the plant of the genus cannabis whether growing or not, the seeds thereof, the resin extracted from any part of the plant, and every compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds, or its resin, including marijuana concentrate. “Marijuana” does not include fiber produced from the stalks, oil, or cake made from the seeds of the plant, sterilized seed of the plant which is incapable of germination, or the weight of any other ingredient combined with marijuana to prepare topical or oral administrations, food, drink, or other products.

(7) “Marijuana accessories” means any equipment, products, or materials of any kind which are used, intended for use, or designed for use in planting, propagating, cultivating, growing, harvesting, composting, manufacturing, compounding, converting, producing, processing, preparing, testing, analyzing, packaging, repackaging, storing, vaporizing, or containing marijuana, or for ingesting, inhaling, or otherwise introducing marijuana into the human body.

(8) “Marijuana cultivation facility” means an entity registered to cultivate, prepare, and package marijuana and to sell marijuana to retail marijuana stores, to marijuana product manufacturing facilities, and to other marijuana cultivation facilities, but not to consumers.

(9) “Marijuana establishment” means a marijuana cultivation facility, a marijuana testing facility, a marijuana product manufacturing facility, or a retail marijuana store.

(10) “Marijuana product manufacturing facility” means an entity registered to purchase marijuana; manufacture, prepare, and package marijuana products; and sell marijuana and marijuana products to other marijuana product manufacturing facilities and to retail marijuana stores, but not to consumers.

(11) “Marijuana products” means concentrated marijuana products and marijuana products that are comprised of marijuana and other ingredients and are intended for use or consumption, such as, but not limited to, edible products, ointments, and tinctures.

(12) “Marijuana testing facility” means an entity registered to analyze and certify the safety and potency of marijuana.

(13) “Retail marijuana store” means an entity registered to purchase marijuana from marijuana cultivation facilities, to purchase marijuana and marijuana products from marijuana product manufacturing facilities, and to sell marijuana and marijuana products to consumers.

(14) “Unreasonably impracticable” means that the measures necessary to comply with the regulations require such a high investment of risk, money, time, or any other resource or asset that the operation of a marijuana establishment is not worthy of being carried out in practice by a reasonably prudent businessperson.

**\*Sec. 2.** AS 43 is amended by adding a new chapter to read:

## **Chapter 61. Excise tax on marijuana**

### **Sec. 43.61.010. Marijuana tax.**

(a) An excise tax is imposed on the sale or transfer of marijuana from a marijuana cultivation facility to a retail marijuana store or marijuana product manufacturing facility. Every marijuana cultivation facility shall pay an excise tax at the rate of \$50 per ounce, or proportionate part thereof, on marijuana that is sold or transferred from a marijuana cultivation facility to a retail marijuana store or marijuana product manufacturing facility.

(b) The department may exempt certain parts of the marijuana plant from the excise tax described in (a) of this section or may establish a rate lower than \$50 per ounce for certain parts of the marijuana plant.

**Sec. 43.61.020. Monthly Statement and Payments.**

(a) Each marijuana cultivation facility shall send a statement by mail or electronically to the department on or before the last day of each calendar month. The statement must contain an account of the amount of marijuana sold or transferred to retail marijuana stores and marijuana product manufacturing facilities in the state during the preceding month, setting out

- (1) the total number of ounces, including fractional ounces sold or transferred;
- (2) the names and Alaska address of each buyer and transferee; and
- (3) the weight of marijuana sold or transferred to the respective buyers or transferees.

(b) The marijuana cultivation facility shall pay monthly to the department, all taxes, computed at the rates prescribed in this chapter, on the respective total quantities of the marijuana sold or transferred during the preceding month. The monthly return shall be filed and the tax paid on or before the last day of each month to cover the preceding month.

**Sec. 43.61.030. Administration and Enforcement of Tax.**

(a) Delinquent payments under this chapter shall subject the marijuana cultivation facility to civil penalties under AS 43.05.220.

(b) If a marijuana cultivation facility fails to pay the tax to the state the marijuana cultivation facility's registration may be revoked in accordance with procedures established under AS 17.38.090(a)(1).

**\*Sec. 3.** The provisions of this Act are independent and severable, and, except where otherwise indicated in the text, shall supersede conflicting statutes, local charter, ordinance, or resolution, and other state and local provisions. If any provision of this Act, or the application thereof to any person or circumstance, is found to be invalid or unconstitutional, the remainder of this Act shall not be affected and shall be given effect to the fullest extent possible.



**Environmental Risks and Opportunities in Cannabis Cultivation**

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Final Revised

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## Executive Summary

The most important environmental cost of marijuana production (cultivation of cannabis) in the legal Washington market is likely to stem from energy consumption for indoor, and to a lesser extent, greenhouse, growing. Nearly all of this energy is electricity used for lighting and ventilating, and the energy bill can amount to 1/3 of production costs. While the price of electricity provides growers a market signal for efficient production, it does not reflect the climate effect of greenhouse gas released by electricity production nor other “externalities”—the value of environmental and other harms that are not included in the price of goods.

Though electricity in the Pacific Northwest is some of the lowest-GHG-intensity in the US, growing cannabis could still have a significant “carbon footprint.” Marginal electricity consumption (in addition to current levels) is much more carbon-intensive than average consumption in the region, since daily peaks are usually met with natural-gas fired generation rather than less GHG-intensive “baseload” hydro-power generation. Increased cannabis cultivation indoors will likely be a noticeable fraction (single-digit percentages) of the state’s total electricity consumption. Indoor cultivation that concentrates lighting in off-peak electricity periods at night will have a much smaller climate effect than if lighting is provided during peak electric use times. Greenhouse production requires much less energy, and for outdoor cultivation energy is an insignificant fraction of production costs.

Other environmental effects of cannabis are also worth attention, including water use, fertilizer greenhouse-gas emissions, and chemical releases, but are typical of similar horticultural and agricultural operations and should not be primary concerns of the Liquor Control Board (LCB). Even the climate effects are much less important than some other risks (and benefits) of a legal cannabis market. They should be mitigated *when that can be done without substantial sacrifice of other goals*, as appears to be the case.

Policies available to the LCB to respond to environmental concerns include adjusting the excise tax on indoor-cultivated marijuana to reflect about 9c per gram worth of global warming impact, labeling low-GHG marijuana as such, encouraging efficient LED lighting development and use, allowing outdoor cultivation, making energy-efficient production a condition of licensing, and leading other state agencies in the development of better technologies and diffusion of best practices to growers. If legal cannabis production moves toward national acceptance, the importance of developing environmentally sound production practices will grow, and policies made now in Washington and Colorado, the early adopters, may shape practices in the new industry nationwide and, develop in-state capacity to meet the equipment and expertise needs of the national industry.

## Introduction

This memo reviews the main environmental effects of cannabis cultivation (we do not analyze processing or distribution), emphasizing energy and climate issues with a briefer review of other considerations (water use, chemicals, etc.). We find that the predominant environmental concern in marijuana production is energy use for indoor production (less importantly for greenhouse production) and in particular the climate effects of this energy use. We then turn to the main opportunities for growers to reduce these environmental consequences, finding that the most important is substituting greenhouse and outdoor production for indoor operations, and managing indoor production for reduction of electricity use and especially electricity use during the day. We also sketch some ways the Liquor Control Board (LCB) can encourage better environmental practice in this industry.

Indoor cannabis production is very energy-intensive compared to other products on a per-pound basis, less so per unit value. However, environmental risks from cannabis production are nowhere near as salient a part of the overall policy framework for marijuana as (for example) the explosive and toxic hazards of methamphetamine, or the environmental costs of large-scale agriculture, mining, metallurgy, and other industries. Nor should legal cannabis production, licensed and inspected, generate the variety or degree of environmental damage inflicted by illegal production (Barringer 2013). Our bottom line is that environmental considerations should not be a major component of marijuana policy, but are worth explicit attention and policy design.

## Cannabis culture

This section briefly discusses the main methods of cannabis production, in particular growing the plants from which marijuana and other psychoactive materials are derived.

The cannabis varieties of psychoactive interest are dioecious annuals adapted to climates in the warm-temperate to subtropical range and grown primarily for the flowers of the female plant. Cultivation requirements are determined by these properties and the plant's flowering response to a prolonged diurnal dark period.

Cannabis can be grown from seed, with male and female plants separated after germination, or from cuttings (clones). Rooting clones assures an all-female stand of plants and preserves the respective use properties of the many varieties that have been developed.

The seedlings are grown to the desired size and maturity in a *vegetative phase* and induced or allowed to flower. When unfertilized flowers reach the desired size, they are harvested for further processing. Growing can be hydroponic (in water with dissolved nutrients), in soil (usually outdoors), or in an irrigated artificial growing medium for mechanical support.

Light is provided by the sun outdoors or in a greenhouse, or with electric lighting indoors or sometimes in a greenhouse. Indoor growing requires ventilation, sometimes filtered to reduce odor, to remove heat and humidity. CO<sub>2</sub> may be provided to accelerate growth, usually by venting a propane or natural gas flame into the plants' enclosure

Weeds may be controlled with herbicides outdoors; pests including insects, disease, and fungus may be controlled with chemicals or mitigated with design and management of growing chambers. Cannabis can be grown organically, without chemical fertilizers or pesticides, but at higher cost and usually lower yield.

The high specific value of cannabis flowers, and the desire of illegal growers to minimize and hide the area used for cultivation, has nurtured a labor-intensive, space-concentrated practice for indoor production analogous in some ways to horticulture of orchids and other delicate and exotic plants. This practice may change significantly in a legal operating environment.

### Environmental consequences of cannabis production

#### **Energy**

The most significant environmental effect of cannabis production, and the one that varies most with different production practices, is energy consumption, especially fossil energy use with climate effects from release of greenhouse gas. Indoor-grown marijuana is an energy-intensive product by weight, using on the order of 2000 kWh per pound of product (for comparison, aluminum requires only about 7 kWh per pound). However, the high unit value of marijuana (approximately \$2,000/lb. at wholesale<sup>1</sup>) compared to aluminum (~\$0.90/lb)<sup>2</sup> means energy is a much smaller fraction of product cost: accounting for the value of the products, it takes 8,000 kWh to make \$1,000 worth of aluminum vs. 1,000 kWh for \$1,000 of marijuana. Glass is considered an energy-intensive product, but energy costs represent only about a sixth of glass-production costs, about half the energy-intensity of indoor-grown cannabis.

Total current marijuana consumption in Washington is estimated at about 160 metric tons per year; if this quantity were to be grown indoors with typical practices, marijuana cultivation would increase the state's electricity demand by about 0.8% (using 2010 as a baseline year). Mills estimates that California indoor cultivation currently uses 3% of all electricity in the state (note that California has higher electricity prices than Washington and lacks the electric-intensive industry cluster of the northwest) (Mills 2012). While precise estimates are impossible, ma-

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<sup>1</sup> The wholesale price of marijuana is highly uncertain and currently subject to significant market distortion from the illegal nature of the product. The price in a legal-market framework is likely to be lower.

<sup>2</sup> Based on Aluminum futures prices on the London Metals Exchange  
<http://www.lme.com/metals/non-ferrous/aluminium/>

marijuana cultivation will be a non-trivial though small component of Washington energy consumption: significant enough to be worth reducing where possible without offsetting losses on other dimensions of value.

### *Indoor growing*

Growing marijuana indoors requires careful and energy-intensive replication of ideal outdoor conditions, including provision of light, fresh air ventilation, cooling (required due to the energy density of lighting and ventilation) and control of pests and fungal agents. Indoor growing allows high profits from the typically high-grade product that is produced under controlled conditions and is also perceived by many growers as more secure and stealthy. Indoor cultivation can also achieve multiple harvests per year; growing marijuana with electricity divorces the process from the constraints of seasonal growing and typical harvest cycles.



**Figure 1: Indoor Cannabis culture**

An extensive peer-reviewed study details the energy consumption of present day indoor production facilities. Lighting levels are elevated 500 times greater than (for example) recommended for reading, while ventilation occurs at 60 times the

rate in a modern home. Power densities are about 2000 W/m<sup>2</sup> of growing area (Mills 2012)<sup>3</sup>.

A “grow house,” or residential building converted to support cannabis cultivation, can contain 50 – 100 kW of installed lighting. Mills estimates that lighting alone has a power density of approximately 400 W/m<sup>2</sup>. Lighting often contains a mixture of metal halide (MH) and high-pressure sodium (HPS) lamps, which must be replaced every 3-4 growing cycles.

CO<sub>2</sub> generators, fueled by natural gas or propane, are often used to raise indoor CO<sub>2</sub> levels and boost plant productivity. Concentrations of CO<sub>2</sub> are often raised to four times natural levels, or ~1600 ppm(v). Mills estimates that CO<sub>2</sub> generators are responsible for 2% of the overall carbon footprint of indoor cultivation. However, given the beneficial effect of heightened CO<sub>2</sub> concentration on plant yield, this practice may decrease overall environmental impact per unit of product.

Illegal indoor production often entails off-grid diesel or gasoline fuel generators. Per unit greenhouse gas (GHG) emissions from these generators are often 3-4 times greater than the relatively low-carbon electricity available in the Pacific Northwest or California. Spills of diesel fuel can pollute local water sources and harm aquatic life.(Gurnon 2005) We expect that legal production will avoid nearly all use of off-grid generation.

The energy costs of indoor cultivation can account for over 1/3 of total costs for representative production systems depending on a range of factors, including the yield of the growing operation and the cost of electricity (growers in private residences pay much higher prices for electricity than those with commercial or even industrial accounts that would be typical in a legal market framework)(Arnold 2013). Arnold also worked with several Northern California dispensaries with indoor production facilities to determine their energy and carbon intensity. She found that each of three dispensaries had an energy intensity of 2,000 kWh / lb. product, and carbon intensity of 1,000 lb. CO<sub>2</sub>/ lb. based on the average grid mix for the area. These figures are lower than Mills’s, and probably represent energy savings from economies of scale in larger production operations.

Other estimates of lighting intensity are in similar range: (Caulkins 2010) estimates lighting intensity of 430 W/ m<sup>2</sup>, while typical lighting systems <sup>4</sup> are sold at intensity of ~650 W/m<sup>2</sup>. As the layout and spacing of each production facility will differ, these figures will vary. Energy required for ventilation varies more widely; Arnold finds that 9-15% is used for ventilation in a large facility, while Mills estimates that 27% of indoor production energy is for ventilation.

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<sup>3</sup> While most of the calculations in Mills have strong face validity, some of its underlying assumption about total marijuana production in the country have been questioned (e.g., Kilmer et al., 2011; Caulkins et al., 2012). We have used this study mainly for per-unit estimation.

<sup>4</sup> A typical lighting system can use 1000W of lighting power for 16 ft<sup>2</sup> of production area.

## *Greenhouse*

Greenhouse cultivation demands significantly less energy than does indoor cultivation, though actual energy intensities vary widely. As sunlight is used for plant photosynthesis, most greenhouse energy consumption is due to heating, though a well-designed greenhouse with built-in thermal inertia can keep itself warm most of the time by sunlight alone. Lighting can be augmented with lamps and may be needed to match the yields from fully indoor growing, particularly in the winter months.

As a point of reference, Belgian greenhouses have an energy intensity for a growing cycle of approximately 1000 MJ/m<sup>2</sup>, which Mills notes is about 1% of his estimate for indoor production (De Cock and Van Lierde 1999). Winter heating in a double plastic greenhouse in Serbia requires 9-14 MJ / m<sup>2</sup> (Djevic and Dimitrijevic 2009). The greenhouse was held between 53-59 °F, while daily temperatures in the region average ~30-40 °F in winter months (Unsigned). This is similar to the climate in much of Washington State.

Several factors affect energy consumption in greenhouses, including greenhouse shape, construction material, as well as heating, shading, and lighting practices. It is unclear whether cannabis growers will choose to heat greenhouses during winter months to increase production, but the high value of cannabis will make it more attractive to do so for that crop than it is for other agricultural products.

A greenhouse for horticulture can include a wide range of design and operational features at correspondingly varying capital and operating costs. The enclosure itself can be plastic film, in one or two layers, over a frame, or glass (single or double pane) in a metal or wood construction. Ventilation is usually by gravity where panes in the roof can be opened, and mechanical shades, automated or manual, can provide photoperiod control and limit heat gain. Growing media include soil, media, or hydroponic tanks. Greenhouse operation has benefited from years of experience growing high-value crops like flowers and out-of-season vegetables and the technology should be easily adopted for cannabis.

## *Outdoor*

Field production of psychoactive cannabis is environmentally similar to growing hemp (non-psychoactive cultivars of cannabis) or other nitrogen-hungry field or row crops. Environmental climate effects include small fossil energy inputs per unit of product, mostly diesel fuel for cultivation, indirect energy use for fertilizer production, and fertilizer N<sub>2</sub>O release. We have not estimated the full energy implications of field production in the current draft except to note that they are (i) *very* small compared to greenhouse or indoor production (ii) variable in response to agronomic practices like crop rotation and no-till cultivation that have been developed for other crops. In any case, the small acreage required for Washington MJ production would probably otherwise be used for other row or specialty crops with similar energy requirements.



## Greenhouse gas and climate

The energy required for indoor growing (and the smaller amounts used for other methods) almost always leads to greenhouse gas (GHG) pollution that increases global warming. We discuss GHG intensity (climate effect) separately from total energy for two reasons: first, because optimizing indoor production can greatly affect the GHG intensity of cannabis cultivation independently of total energy intensity (see below); second, because climate effects are the major unregulated and unpriced environmental consequences of this industry (and many other industries). Growers pay for electricity and all other fuels, and hence see a built-in incentive to reduce their use to an *efficient* level, but using a more- rather than less-GHG-intensive form of energy does not cost the grower any more, and this distortion of efficient incentives—what economists call a *market failure*—is a standard justification for government action. Charging an additional fee for the GHG from electricity consumption for indoor growers (for example) would fix the market failure and provide the correct incentives for innovation. While the climate impact of cannabis production in Washington will be modest, choices made in Washington now will help shape the development of production technology nationwide and perhaps worldwide, if the movement toward allowing legal production and sale continues.

The Washington electric grid is unusually “low-carbon”, mostly hydroelectric and nuclear with only about 17% fossil-fueled, mostly natural gas <http://www.eia.gov/environment/emissions/state/analysis/pdf/stateanalysis.pdf> (table 4). The average GHG intensity of electricity produced in the state is 135 kg CO<sub>2</sub>/MWh. However, the state is inter-tied with the Western USA Grid however, which has a higher carbon intensity, and additional loads anywhere on the Western Grid have an impact “on the margin” that is different from the average of the whole grid. The average marginal climate effect of additional electricity demand in the Western Electricity Coordination Council (WECC) region is 486 kg CO<sub>2</sub> / MWh (Siler-Evans, Azevedo et al. 2012), three times the average for the State. The real impact of additional electricity use from cannabis will be close to the marginal factor for WECC, and there is good reason to use marginal costs as indicators of value in cases like this because the consumer’s decision to use more electricity rather than less is intrinsically marginal.

Overall, Mills estimates that carbon dioxide emissions are approximately 4600 kg CO<sub>2</sub> / kg indoor cannabis produced but this is based on average national electric GHG-intensity; the figure for Washington production will be much less for the average grid mix (but similar if one takes the marginal WECC emissions factor as discussed above). Using figures derived from (Mills 2012), the Okanogan Cannabis Association estimates that the indoor production of 186 thousand pounds of cannabis, one estimate of state production, would release about 0.4 million metric tons of CO<sub>2</sub> (Moberg and Mazzetti 2013), just under one-half of one percent of the total for the state as of 2008.

Indoor production variations could lead to a significant amount of GHG reduction from these average estimates, in particular by concentrating the light periods during the nighttime when demand is low and almost entirely supplied by the low-GHG Northwest baseload plants. This timing also reduces cooling costs from lower outdoor temperatures and the ability to use fresh outside air for cooling.

One set of estimates for the relative contribution of each process to greenhouse gas emissions of indoor cultivation, as well as other process assumptions, is shown in Appendix 1.

### *Comparison*

Using values cited above, we are able to compare high and low estimated values for the energy and GHG intensity of indoor, greenhouse, and outdoor cultivation.

	Energy kWh/kg		GHG kgCO <sub>2</sub> eq/kg	
	Low	High	Low	High
Outdoor	(minimal)	(minimal)	(minimal)	(minimal)
Greenhouse	6	580	1	282
Indoor	4400	6100	590	3000

**Table 1 - On-site energy and climate intensity of different cultivation methods per kilogram of product (marijuana).**

At \$30/tonne CO<sub>2</sub>e, a common assumed social cost of GHG emissions, these estimates imply climate damage worth between about 1c and 9c per gram of product for indoor growing, less than 1c for other methods. Even the highest figure represents a modest share (no more than a few percent) of the total cost of production: an issue worth thinking about, but not one large enough to require substantial sacrifices of other goals.

### **Other Environmental Considerations**

#### *Outdoor*

Field production of cannabis is environmentally similar to growing hemp or other nitrogen-hungry field or row crops. Environmental effects include small fossil ener-

gy inputs per unit of product, mostly diesel fuel for cultivation; fertilizer runoff and N<sub>2</sub>O release, water contamination, soil carbon sequestration, and release of toxic chemicals (herbicides, fungicides, and pesticides) are the other important environmental considerations and only fertilizer manufacturing energy, N<sub>2</sub>O and soil carbon have important climate implications. We have not estimated the climate effects of field production except to note that they are (i) very small compared to greenhouse or indoor production (ii) variable in response to agronomic practices like crop rotation and no-till cultivation that have been developed for other crops.

## Fertilizer

Cannabis requires a nitrogen-rich soil environment. Specific application rates, however, are described only in grey literature. Cervantes lists the following application schedule for hydroponic and soil growth, provided by General Hydroponics (Cervantes 2006). Figures are given in ml. fertilizer / l. water.

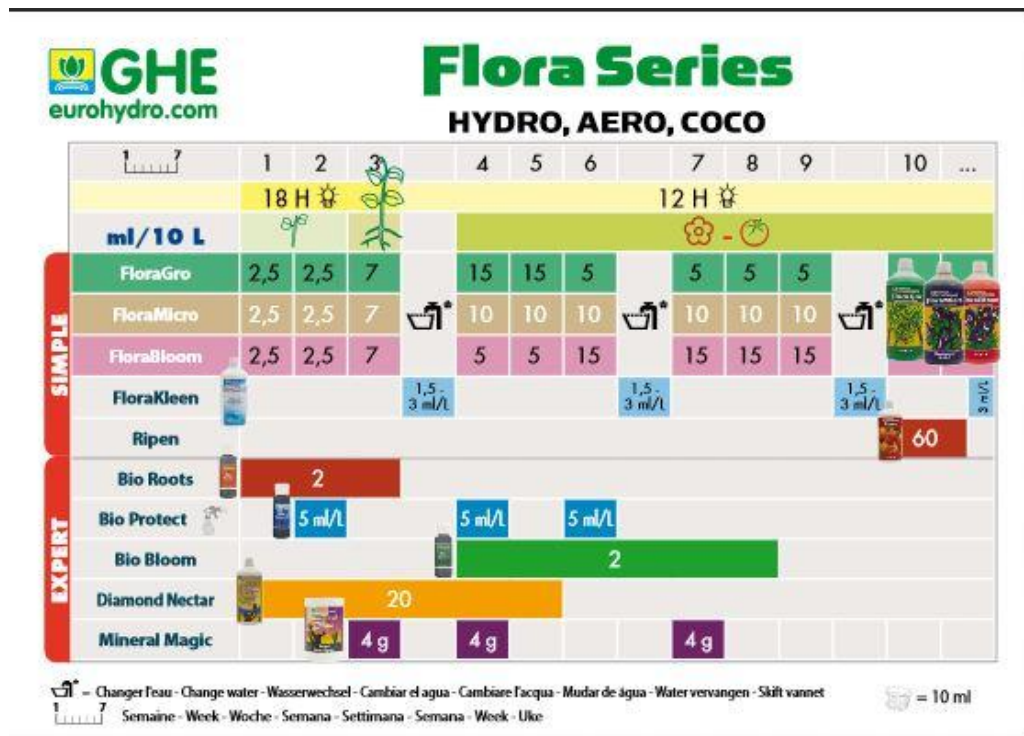


Figure 2: Fertilization recommendations (current version of GHE chart reproduced in (Cervantes 2006), at <http://www.eurohydro.com/publications/publications/APPLICATION%20CHARTS/GB/CHART-FLORA-SERIES-GB.pdf>)

Soil-grown cannabis requires fewer fertilizer inputs than hydroponic cannabis. Notably, General Hydroponics recommends lower hydroponic fertilizer application rates for soil-grown cannabis.

## *Hemp*

Much more information about fertilizer application is available for hemp, an industrial form of *cannabis sativa* used for industrial and foodstuff products. Hemp has similar nutrient requirements to corn, and requires nitrogen in particular. The British Columbia Ministry of Agriculture and Food (BCMAF) recommends the following maximum application amounts:

<b>Nutrient</b>	<b>Application Amount (kg/ha)</b>
Nitrogen (N)	120
Phosphorous (P)	100
Potassium (K)	160

**Table 2: Fertilizer recommendations for hemp (from BCMAF)**

Much of this nutrient draw returns to the soil. Consensus among agriculture researchers is that hemp requires a high level of nutrients compared to other crops.

Oregon State University has undertaken an extensive study of the feasibility of industrial hemp production in the Pacific Northwest, including Washington. They note that most research maintains that only soils in high state of fertility produced good crops of hemp. In particular, they recommend adequate application of nitrogen and phosphorus (practices that put streams and groundwater at risk of pollution). They provide the following summary of existing literature (Ehrensing 1998):

Country	Year	N (kg/ha)	P <sub>2</sub> O <sub>5</sub> (kg/ha)	K <sub>2</sub> O (kg/ha)
United States	1952	60	30	40
Spain	1955	60	100	70
Italy	1956	40-60	100	70
Netherlands	1957	100-200		
Rumania	1961	50-70	30-60	
Bulgaria	1964	120	90	60
Netherlands	1964	120	80	160-180
USSR	1965	150	90	120
Netherlands	1966	120	100	100
USSR	1966	120	90	90
Rumania	1966	50	100	
USSR	1968	120	90	90
South Korea	1968	100	60	80
USSR	1969	120	90	90
Italy	1975	75-150		
Denmark	1976	140		
France	1982	100-140	80-120	160-200
Poland	1995	90-120	70-100	150-180
United Kingdom	1995	120	100	160

**Table 3: Hemp Fertilization Reports from (Ehrensing 1998)**

In estimating the cost of hemp production in the Pacific Northwest, OSU applies a fertilization rate of 600 lb. / acre of 16-16-16 (16% each elemental N, phosphate (P<sub>2</sub>O<sub>5</sub>), and potash (K<sub>2</sub>O)) fertilizer.

The Reason Foundation similarly reports application rates in Canada of 55-80 lb. / acre and 30-40 lb. / acre phosphate (Smith-Heister 2008).

## **Water**

### *Indoor*

Indoor cultivation of cannabis is water-intensive, particularly when it is hydroponic. Mills estimates that one cultivation room (22 m<sup>2</sup>) requires 151 L / day (Mills 2012). This is equivalent to 2.5 m of water per year (98 in. / yr.) of application. This level of water application is much higher (per unit of growing area, not per volume of crop) than traditional soil-grown water application and higher than reported for other crop hydroponic culture (Bradley et al 2001, Wheeler et al 1999).

Growing water is not only lost through evapotranspiration in a warm growing room, but also becomes contaminated with algae and otherwise and needs occasional replacement. It is high in nitrogen and phosphorus and if disposed in storm drains when it contributes to water body eutrophication; in sewers it imposes an additional treatment load. This issue is recognized in the grey literature as a concern for growers, for example at <http://boards.cannabis.com/hydroponics/156247-hydroponic-wastewater-disposal.html>.

Water use and fertilizer runoff to streams or groundwater is also a concern for outdoor cultivation as for any crop (nitrogen runoff from the corn belt, for example, has caused the famous “dead zone” in the Gulf of Mexico). Illegal growing has had damaging effects as when water is illegally diverted through PVC pipes to nearby grow operations, with negative effect on pH, stream flow, water temperature, and nutrient content (Shafer 2012). This is another environmental cost that a legal regime may avoid.

### *Hop cultivation*

To understand the water consumption of outdoor cannabis cultivation, we will infer from two other crops: hops and hemp. Hemp is taxonomically the same species as psychoactive cannabis; hops is a different species of the family *Cannabaceae*.

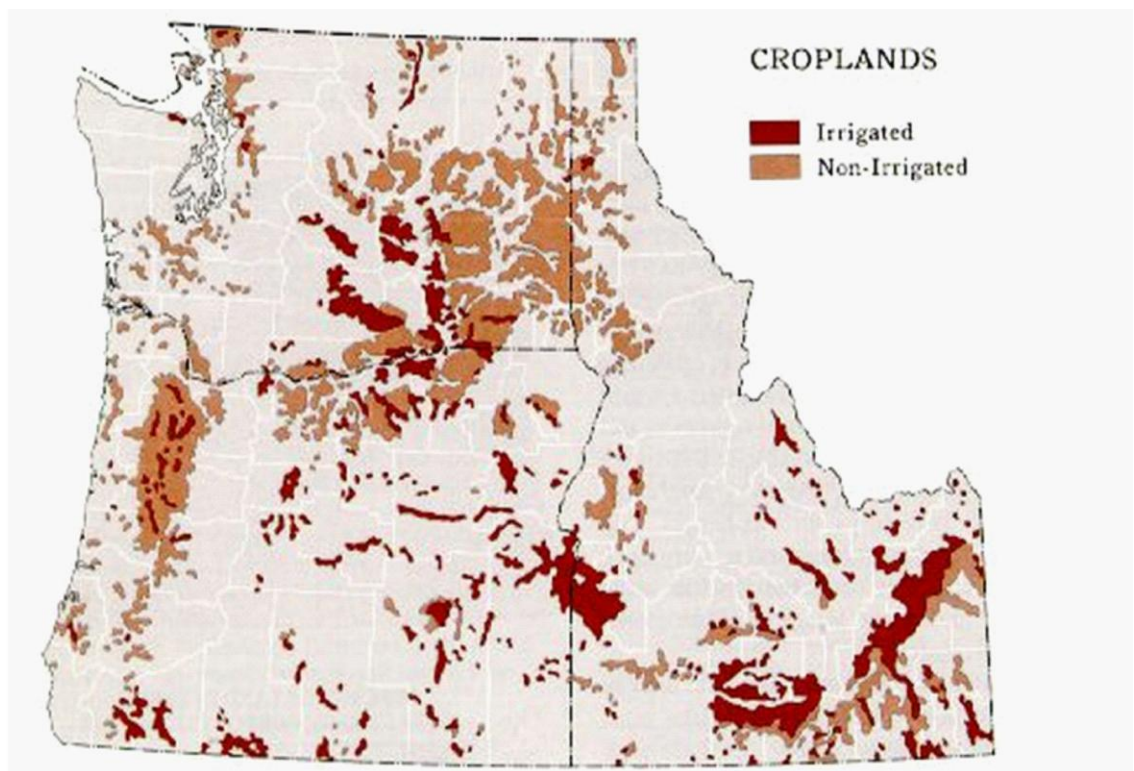
Research at Washington State University indicates that 300-450 gallons of water are needed to produce a pound of hops in the Yakima Valley of Washington. In 1992, all hop acreage in Washington was irrigated (Zepp and Smith 1995). Hops in the Yakima Valley generally consume about 28 inches of water per year, though annual application can exceed 50-60 inches (Extension). 75-80% of total annual water use occurs after mid-June, particularly in late July and early August, with maximum daily water uses of about .5 in / day. These numbers should only serve as guidance: soil type contributes to water holding capacity, while irrigation methods determine frequency and volume.

### *Hemp cultivation*

BCMAF estimates that hemp grown in British Columbia requires 12-15 in. (30-40 cm) of water per growing season or rainfall equivalent (Food 1999). Hemp cultivation in the UK requires 20cm of precipitation per growing season (Cherrett, Barrett et al. 2005).

OSU discusses the water and irrigation requirements of hemp at length, finding that “hemp will almost certainly require irrigation to reliably maximize productivity in the region. The requirement for supplemental irrigation will place hemp in direct competition with the highest value crops in the PNW [Pacific Northwest], limiting available acreage.” The OSU report also notes that hemp yield is strongly dependent on the amount of rainfall during June and July (Ehrensing 1998).

As large-scale hemp production has generally been centered in areas with significant rainfall, very little information is available about hemp irrigation. While 33% of cropland in the PNW is irrigated, only 20.5% of cropland in Washington was irrigated in 1992. The PNW faces water deficits, and new irrigation is unlikely.



**Figure 3: Distribution of irrigated and non-irrigated cropland in the PNW from (Jackson and Kimmerling, 1993)**

**Table 4.** Cropland area in the Pacific Northwest in acres (1992 Census of Agriculture).

	Irrigated	Non-Irrigated	Total	% Irrigated
Idaho	3,260,006	3,041,856	6,301,862	51.7
Oregon	1,622,235	3,415,529	5,037,764	32.2
Washington	1,641,437	6,357,982	7,999,419	20.5
Total PNW	6,523,678	12,815,367	19,339,045	33.7

OSU believes that hemp cultivation will probably occur west of the Cascades because of water availability:

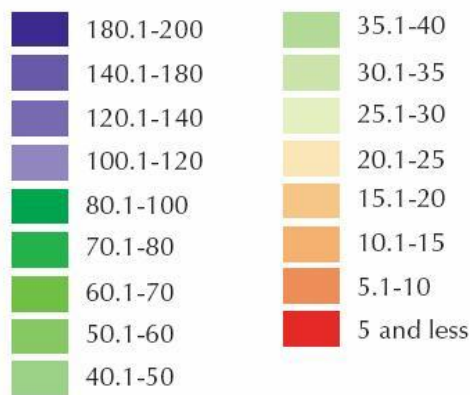
With early spring planting, it may be possible to grow hemp using available soil moisture and rainfall in some areas west of the Cascades, much like spring cereal grains. Risks associated with such production will be high and yields may be quite variable from season to season ... Reliable irrigation can, however, reduce weather risks associated with rain-fed production. Irrigation is not only an additional economic cost of production, but is also an environmental concern, especially considering recent controversies surrounding agricultural water use and increasing demand for in-stream water rights in the PNW (Ehrensing 1998).

Precipitation in Washington is very limited east of the Cascade Mountains. However, the state's extensive infrastructure of dams and irrigation in that region probably affords ample water for the small acreage that may be devoted to marijuana, and the climate is more suitable during the summer.





Average Annual Precipitation (in inches)  
1961-1990



**Figure 4: Rainfall in Washington**

### **Pesticides/herbicides/fungicides**

Under draft LCB regulation, all usable marijuana for sale in the State of Washington must carry a warning that discloses all pesticides, herbicides, and fungicides or other compounds used for pest control or plant disease in production or processing (2013). *Current indoor cultivation practices* in the illegal framework often employ pesticides and herbicides (Cervantes 2006). Control of chemical residues in cannabis products is considered in another report in this project; the environmental issues are only application drift and water (runoff and groundwater) pollution by agricultural chemicals (but see below regarding illegal vs. legal production general environmental issues).

### *Wildlife*

Endangered species candidates like the fisher, which populate the Pacific Northwest, can be harmed by rodenticides used for marijuana cultivation. Research has linked rat poisons used for illegal marijuana cultivation to fisher death near illegal cannabis cultivation. Rodenticides such as brodifacoum

may also affect owls, martens, and foxes (Gabriel et al 2012) We expect that legal culture and WDoE or LCB regulation addressing pesticide use would lessen this environmental impact.

### *Hemp cultivation*

No pesticides or herbicides are registered for hemp or cannabis. BCMAF notes that hemp is less burdened by pests than are other crops, while weeds can be reduced to virtually zero under a dense hemp canopy (Food 1999). The OSU researchers concur: they find that herbicides and pesticides are not commonly used in hemp production, and significant crop losses from pests are not common. Because of these qualities, OSU believes that hemp can be used for weed suppression, noting “Weed suppression with minimal pesticide use is potentially one of the greatest agronomic and environmental benefits of growing hemp in rotation with other crops.” Birds, however, feed voraciously on cannabis seeds and their feeding can lead to substantial crop losses (Ehrensing 1998).

**OSU cautions** that the introduction of new crops such as hemp to the PNW region can result in unforeseen pest problems: “High-density planting, increased fertilizer use, and irrigation have often increased incidence of pest problems in other crops, and such problems should be anticipated with intensive hemp production.”

The following pests are commonly associated with hemp:

*Pseudomonas syringae* pv. *cannabina* (bacteriosis of hemp)

*Xanthomonas campestris* pv. *cannabis* (leaf spot of hemp)

*Fusarium oxysporum* f.sp. *cannabis*

*Pseudoperonospora cannabina* (downy mildew of hemp)

*Orobanche* spp. (broomrape) (Cherrett, Barrett et al. 2005)

### **Other Toxics**

#### *Heavy metal and toxins from lighting*

Lighting materials used in indoor cannabis cultivation have environmental risks if not properly managed for disposal. High-intensity discharge (HID) bulbs cost about \$5 each to recycle, so they present an incentive for improper (illegal) disposal. Each bulb contains approximately 30 mg of mercury and other toxins. Mercury is a neurotoxin, and is recognized as extremely toxic, particularly in gaseous form. The Okanogan Cannabis Association estimates that indoor cultivation of cannabis could produce 46,000 HID bulbs each year in Washington (Moberg and Mazzetti 2013).

Using productivity assumptions in Mills, we estimate that there is the potential for 30 mg of mercury pollution per kg of cannabis product if proper disposal is not practiced. However, many other industrial and municipal lighting applications generate used lamps that need management outside the standard municipal waste

stream and the existing recycling/disposal system could serve as well for cannabis lighting waste.

### **Legal vs. illegal cultivation**

Rapid expansion of illegal outdoor marijuana cultivation in northern California, including cultivation on public land, has become recognized as a source of serious environmental damage, from wildlife poisoned by pesticides to over-drafted and polluted rivers to deforestation and erosion (Shafer 2012; Barringer 2013). As mentioned previously, spills of diesel fuel often pollute local water sources. The *North Coast Journal* describes the diesel generators often employed for off-grid electricity production in Humboldt County:

*The diesel generators supplying power for the 1,000-watt grow lights can be as big as a small pickup truck. They are sometimes buried underground, which can be a fire hazard, or rigged with plastic water tubing instead of proper fuel lines. They are often placed in dubious locations, such as right beside creek beds -- greatly increasing the potential for contaminated water -- because the depth and the surrounding trees help to muffle the machines' drone. Some growers even use water tanks to store the diesel fuel, officials said. (Gurnon 2005)*

An important environmental advantage of legal, licensed, cannabis production will be its displacement of environmentally damaging practices by criminal and unregulated parties. We are not able to quantify these benefits but believe them to be significant.

### Options for Environmental Protection

This section highlights management practices that can reduce the environmental footprint of cannabis production.

#### **Energy-Efficiency Measures**

Outdoor cultivation of cannabis does not raise important energy issues different from other crops. Conventional good agronomic practice such as low-till/no-till, erosion and runoff control, careful control of nitrogen application and timing, integrated pest management, and the like all apply and expertise in these practices is available from county agents and extension services. It is unlikely that the LCB will want to develop this kind of expertise or micromanage outdoor growing for environmental effects.

Excellent guides exist for energy efficiency measures in greenhouses, for example (Bartok 2005). In particular, greenhouse design should consider the effects of glazing materials on heat loss and light transmission, ways to reduce infiltration

and nighttime heating losses, greenhouse heating units, the effect of heat distribution on heating costs, ways to maximize space utilization, using efficient circulation and ventilation fans, and how supplemental lighting can reduce energy requirements (Sanford 2010). Energy consumption involves tradeoffs with plant yield and other agronomic needs. Given the high value of cannabis, growers face a strong incentive to use more energy to increase yields than growers of other products.

Efficient greenhouse design is strongly dependent on location and climate, but several themes for good design emerge. Sanford 2010 recommends high efficiency condensing heaters, effective space utilization, basket fans for air circulation, control systems, and energy audits to reduce consumption. In particular, curtain systems can dramatically reduce energy costs. Curtain systems also allow growers to tightly control the amount of light their plants receive, enabling photo-deprivation and other advanced growing techniques. (Sanford 2010a; Sanford 2010)

Indoor operations occur in buildings covered by existing Washington building regulations and conventional energy conservation practices such as insulation. The most important opportunities for environmental benefit lie in more efficient lighting equipment and timing to avoid peak use periods.

#### *LEDs for indoor cultivation*

Light-emitting diodes (LEDs) have several advantages over high intensity discharge (HID) or high pressure sodium (HPS) lighting: lifetimes in excess of 100,000h, small size, specific wavelength, adjustable light intensity and quality, and high conversion efficiency (with low thermal losses) (Yeh and Chung 2009).

Plant growth depends specifically on the amount of photosynthetically active radiation (PAR) it receives. Plant varieties have specific PAR spectra, which differ from the sensitivity of the human eye. Chlorophyll molecules absorb red and blue wavelengths most efficiently. Green light, a major constituent of white light and the peak of the solar spectrum and human vision, is not as useful for plant growth. Because plants have different spectral preferences than people, the general lighting that is optimized for lumen output may not be ideal for plant growth. Agricultural lighting is a sub-field of the lighting industry and uses specially tuned light sources to match the PAR spectrum.

In general, the more energy that can be directed into wavelengths plants can use, the more product per kWh will be produced (and the lower the resulting GHG intensity of the product), and LEDs offer not only high overall light output-per-watt efficiency (horticultural LED arrays can provide three times more light output per watt of input power on an area-equivalent basis than HID lamps (Morrow 2008)) but also the potential to “tune” the emitted spectrum to plant needs.

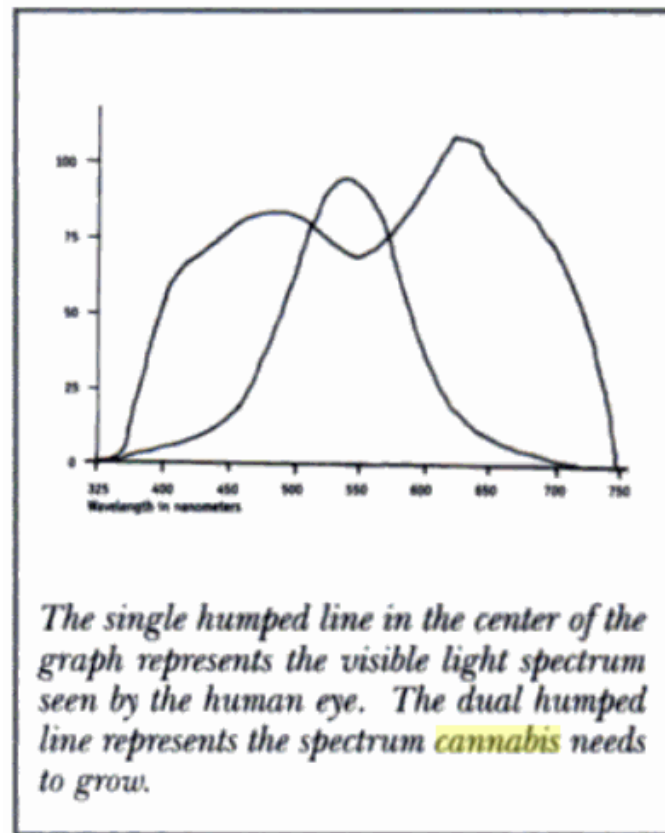
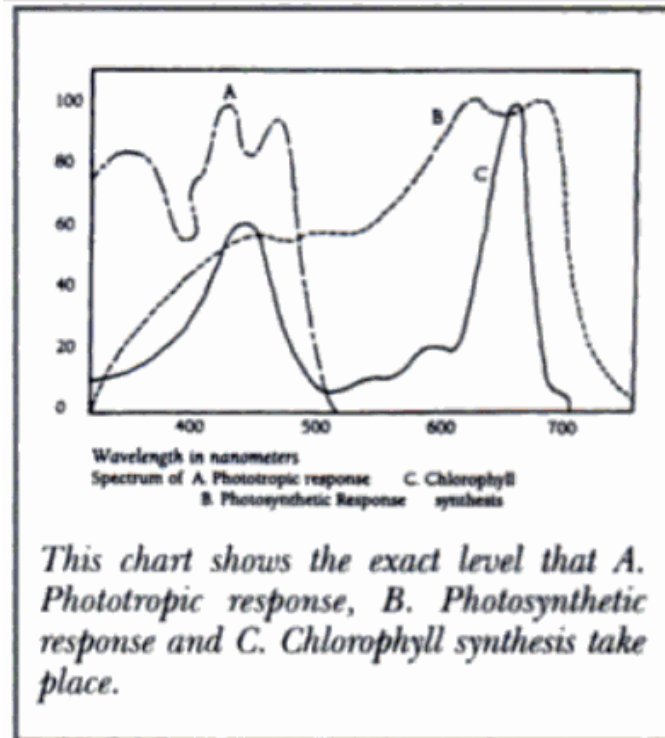


Fig. 5: The PAR for cannabis from (Cervantes 2006)

Unfortunately, commercially available LEDs are not yet optimized for plant growth. Yeh, however, argues that LEDs are the first light source to provide true spectral control, allowing wavelengths to match to plant photoreceptors to optimize production as well as to influence plant morphology and composition. In addition, LEDs are easily integrated into digital control systems and can be dimmed (Yeh and Chung 2009). This adaptability, along with lower waste heat production, means that LEDs have the potential for very large energy savings in comparison with existing lighting technologies.

While luminous efficacy is an imperfect measure of a lamp’s ability to deliver PAR due to spectral mismatch, the following values are representative of overall efficiency of light production:

<b>Lighting Type</b>	<b>Overall luminous efficacy (lm / W)</b>
100 W tungsten incandescent (120V)	17.5
LED, theoretical limit	~400
Available 8.7 W LED (120V)	69-93
Metal halide lamp	65-115
High pressure sodium	85-150

**Table 5: Lighting source comparison from (Luminous efficacy: Retrieved May 29, 2013, from [http://en.wikipedia.org/wiki/Luminous\\_efficacy#Lighting\\_efficiency](http://en.wikipedia.org/wiki/Luminous_efficacy#Lighting_efficiency).)**

### **Substitution and Complementarity**

Cannabis consumption also has indirect impacts on consumption of other goods; it is presumably a substitute for such synthetic cannabinoids as Spice and K2, and a complement to Doritos and unbaked chocolate-chip cookie dough. Whether it complements or substitutes for the consumption of various other psychoactives remains unknown, and the answer need not be the same for all drugs or all user types. (See Boyum *et al.* 2011 and references there.) If it were to turn out that cannabis substituted directly for alcohol (a point on which the research literature is divided and inconclusive) that substitution would create some offsetting environmental benefits because beer brewing also has energy demands (the energy requirements for one marijuana “joint” are approximately equal to those for 18 pints of beer (Mills 2012)). In that case, any environmental impacts from increased marijuana consumption in a legal market framework could be partially mitigated from substitution away from alcohol. The benefits of substituting cannabis for methamphetamine would be even greater. But since even the signs of the relevant cross-price elasticities are unknown, this analysis does not include this effect.

## Recommendations

The following recommendations describe regulations, enforcement mechanisms, collaborations, and tax schemes that promote environmentally responsible cultivation of cannabis. LCB should consider feasibility, enforceability, and potential for market transformation when adopting a portfolio of environmental policies.

LCB's tools are primarily regulatory. Regulatory practice can be categorized into four distinctive approaches: process-specifying, product-specifying, outcome-specifying, and incentive-based. *Product* regulation allows and forbids products on an all-or-nothing basis; an example is the prohibition of wooden cutting boards in restaurants. *Process* regulation requires specific protocols, for example that restaurants wash dishes in a dishwasher using water above a certain temperature. *Outcome* regulation specifies properties of a product or process without requiring that they be achieved in any particular way; an outcome-based regulation for food could be a maximum allowed bacteria count for cutting boards, that the operator can meet by disinfectants, careful sanitation and management of contamination sources, or any other way. Finally, *incentive-based* regulation gives the producer consequential encouragement to provide more of a desired outcome but without (in principle) a minimum level of achievement. An example of this is the A,B,C hygiene ratings health departments award to restaurants in the expectation that an A rating will increase sales enough to make it worth it for most restaurants to achieve it, even though some restaurants' clientele may prefer the combination of price and risk resulting represented by a C score.

The advantages of the later-listed approaches is that they preserve incentives for innovation while focusing on the specific types of benefit the regulatory program is intended to obtain.

Despite the regulatory orientation of the LCB's marijuana program as currently conceived, we also include recommendations for non-coercive policies (advice, consulting, and research) that can improve the industry's environmental practice. Some of these may benefit from collaboration with other state agencies and non-profits.

### **Legal, licensed outdoor growing has the lowest environmental impact.**

\ Outdoor growing promises significant environmental advantages and potentially lower production costs than indoor cultivation. Process regulations for security might lead to better overall results than outlawing field growing altogether.

### **Greenhouse cultivation promotes significant environmental protection relative to indoor growing**

Greenhouse cultivation of cannabis entails lower energy consumption, GHG production, water consumption, wastewater production, fertilizer application, and toxic

risks than indoor cultivation. LCB should promote greenhouse cultivation of cannabis, including cultivation in eastern Washington where the climate (hours of sunshine) is more favorable. Allowing production in standard greenhouses, rather than requiring new construction of high-security greenhouses, would encourage substitution away from environmentally problematic indoor growing.

### **Recognize the high GHG intensity of indoor growing with a differential tax**

Energy efficiency and GHG reduction for indoor growing, where it matters most, can be pursued by outcome regulations such as (for example) licensing only operations meeting maximum electric consumption per growing area standards. Growers already have economic incentives for efficient use of electricity, but a main ‘missing piece’ of this framework regards GHG emissions, which as we have seen can vary significantly across production practices, are especially high for indoor operations, and are not reflected in electricity prices. A simple recognition of the distinctive climate effects of indoor growing would be to increase the producer tax on indoor marijuana by an amount that reflected (approximately) its respective carbon footprint. At \$30/tonne of CO<sub>2</sub>—a typical value in carbon markets—and assuming average Washington electricity GHG intensity and our “high” value for electric use per unit of product, this would be about 9c per gram of marijuana based on the marginal emission factor of Washington electricity. This amount would not ruin the competitiveness of indoor production but would provide a gentle incentive and have considerable symbolic value. The current cost of commercial electricity for cannabis production is about \$400 per kilogram of finished product. This additional climate fee would amount to approximately a 20% surcharge on electricity use, about \$90/kg. The status quo for indoor growing is on residential electricity accounts, with average rates that are 9% higher than the average commercial rate in Washington. Climate fees would essentially preserve (or slightly increase) the status quo incentives for energy efficiency.

### **Collaborate with the Washington State Energy Office, Utilities and Transportation Commission, and Washington State University, in the development and diffusion of lower-energy production practices.**

Two technology areas for energy reduction and climate protection are especially promising: LED lighting for horticultural application, and energy efficiency measures for greenhouse heating. The Washington State Energy Office, located in the Department of Commerce, runs the State Energy Program that provides funding for energy technologies.

### **Develop LEDs for cannabis applications**

LED developed for horticultural applications have the potential to significantly reduce lighting energy for both indoor and greenhouse applications. However, com-



mercial development to date has focused on producing white light, rather than red/blue (“pink”) LED arrays optimized for horticulture. LCB, the state universities’ engineering and agriculture departments, and the Washington Department of Commerce could collaborate to advance commercialization of these technologies, serving as a critical link among LED consumers, academic researchers, and manufacturers.

### **Develop region-specific best practices for greenhouse energy efficiency**

Cost-effective energy efficiency measures are driven in large part by regional climate. While University extension programs in Wisconsin and Connecticut have developed best practices for greenhouse efficiency, to our knowledge no similar effort has been performed in the Pacific Northwest. LCB should work with the State Energy Office or Washington State University to develop best practices suited to greenhouse cultivation of cannabis including building material, glazing, orientation, layout, heating systems, and shading on energy consumption in targeted cultivation areas. Case studies in the region on commercial greenhouse operations would also be a valuable input to the analysis and could provide important ground-truth. Attention should also be given to calculating a benefit-cost (B/C) ratio for efficiency measures. LCB should also seek industry input in developing these best practices.

### **Encourage time-of-use pricing with lower rates for night-time electric use**

Off-peak electric usage in a system like Washington’s, where baseload power is very low-carbon, has many benefits including reduced GHG emissions relative to daytime use. Time of use pricing and education on nighttime lighting in indoor growing facilities can encourage growers to move a significant amount of the electric usage to this environmentally favorable period.

### **Collaborate with Washington State University and other stakeholders to continue research on environmental impacts**

Quantification of environmental impact in this report has relied on grey literature, craft-skill descriptions, and a small but growing set of academic and consulting reports. As the cannabis industry matures in Washington, academic and industry agricultural researchers should continue to measure the environmental impact of cannabis production methods. This research can be used to refine future regulation and drive environmentally friendly production methods. Researchers will need support to effectively transform the market including access to data on the environmental performance of facilities though federal law classifying marijuana as a Schedule 1 drug remains a serious potential obstacle to this research.

### **Consider labeling of “climate smart” or “environmentally friendly” cannabis for public sale in Washington**

Draft LCB regulations entail labeling regulations for cannabis sold publicly. LCB should consider adding branding to cannabis that excels on environmental grounds, similar to the ENERGY STAR program administered for the U.S. Environmental Protection Agency for household appliances (2013). Such labeling programs, which affix a readily identifiable label among the most efficient products, can drive environmentally responsible purchasing and encourage a “race to the top” among producers. LCB could allow labeling for on energy/GHG consumption (“climate smart”), pesticide application (“environmentally friendly”), or a hybrid indicator.

### **Production enforcement mechanisms can promote environmental protection**

Many of the most environmentally harmful practices in cannabis cultivation arise from a lack of information among regulators and the secret nature of cultivation. These include water diversion, water disposal, pesticide application, and electricity generation from on-site diesel generation. LCB should take advantage of the permitting process and information collection procedures to mitigate environmental damage.

Inspections of permitted facilities can ensure compliance with environmental regulation. In particular, LCB or other agencies should ensure that no illegal water diversion takes place, that only permitted pesticides, herbicides, or fungicides are being used for cultivation, and that diesel generation is properly permitted or installed. Inspections are supplemental to other environmental process regulation, and may overlap with other State agency jurisdiction.

While we cannot review the extensive literature on regulatory practice here, it’s worth noting that “enforcement” regimes can vary widely in the underlying philosophy of their implementation, from strict defect-finding and punishment to a more complex regime in which inspectors see their job as not only police officers but ‘production engineering consultants’ providing information on best practices and opportunities to improve performance within the legal range.

### **Process Regulations can promote environmental protection**

In addition to or in place of the tax differentials described above, a mechanism widely regarded as the most efficient generic approach to environmental regulation, LCB can use its permitting authority to enforce process regulations for cannabis cultivation. In particular, LCB should consider banning practices that promote toxic environmental releases, such as diesel generation, improper lighting disposal, and improper water disposal. Such regulations may overlap with or be redundant to other State or Federal regulations.

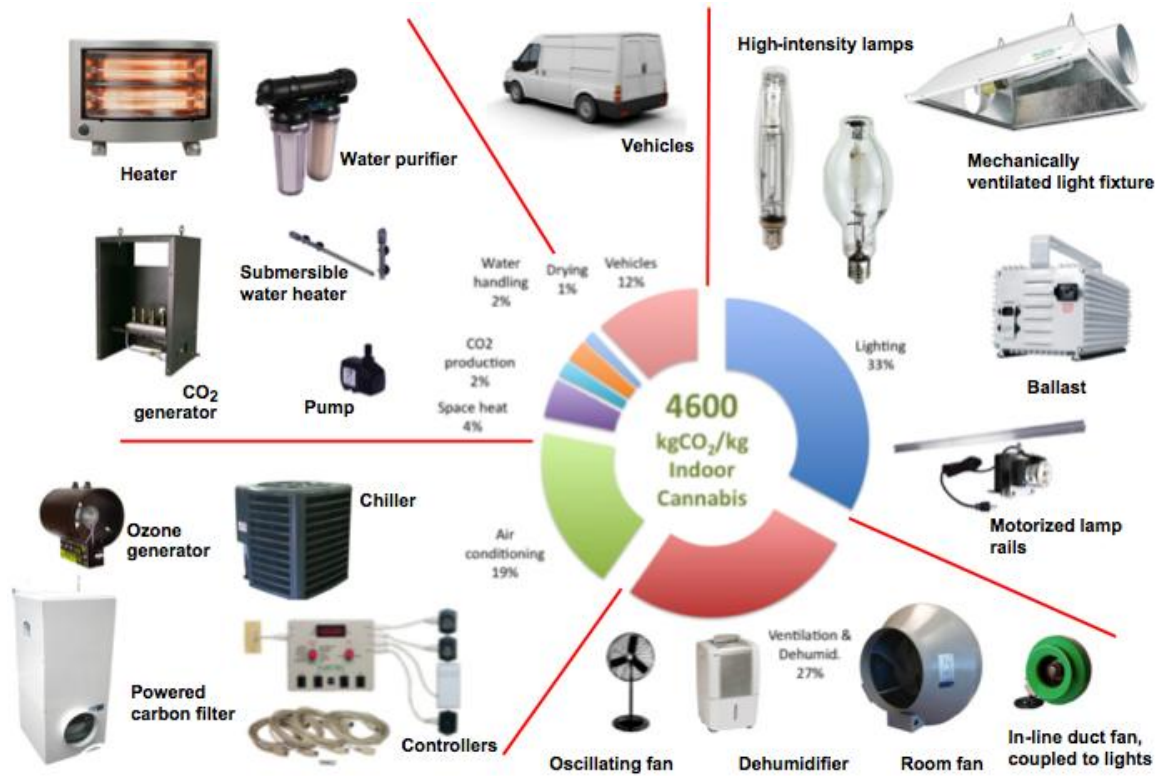
### **LCB should require all electricity be grid-connected**

As diesel spills relating to on-site electricity generation can pollute waterways, LCB can require that all production facilities draw their electricity from the grid (with perhaps an exception for off-the-grid solar and other small-scale renewable sources). This would remove the incentive for producers to employ on-site fossil-fuel generation. It would also subject producers to Washington's increasing block rate structure electricity tariff, which increased the economic incentive to employ energy efficiency technology.

### **LCB can emphasize proper disposal of lamps**

Given the high potential for mercury release from HID bulbs, LCB should ensure proper disposal of lamps used for cannabis production..

Appendix 1: Figures from Mills 2012



**Fig. A1 - Relative contribution of energy-consuming appliances to overall CO<sub>2</sub> emissions for indoor production of cannabis.**

**Table A1**  
Configuration, environmental conditions, set-points.

<b>Production parameters</b>		
Growing module	1.5	m <sup>2</sup> (excl. walking area)
Number of modules in a room	10	
Area of room	22	m <sup>2</sup>
Cycle duration	78	days
Production continuous throughout the year	4.7	cycles
<b>Illumination</b>		
	Leaf phase	Flowering phase
Illuminance	25 klux	100 klux
Lamp type	Metal halide	High-pressure sodium
Watts/lamp	600	1000
Ballast losses (mix of magnetic & digital)	13%	0.13
Lamps per growing module	1	1
Hours/day	18	12
Days/cycle	18	60
Daylighting	None	none
<b>Ventilation</b>		
Ducted luminaires with "sealed" lighting compartment	150	CFM/1000 W of light (free flow)
Room ventilation (supply and exhaust fans)	30	ACH
Filtration	Charcoal filters on exhaust; HEPA on supply	
Oscilating fans: per module, while lights on	1	
<b>Water</b>		
Application	151	liters/room-day
Heating	Electric submersible heaters	
<b>Space conditioning</b>		
Indoor setpoint — day	28	C
Indoor setpoint — night	20	C
AC efficiency	10	SEER
Dehumidification	7x24	hours
CO <sub>2</sub> production — target concentration (mostly natural gas combustion in space)	1500	ppm
Electric space heating	When lights off to maintain indoor setpoint	
Target indoor humidity conditions	40–50%	
Fraction of lighting system heat production removed by luminaire ventilation	30%	
Ballast location	Inside conditioned space	
<b>Drying</b>		
Space conditioning, oscillating fans, maintaining 50% RH, 70–80F	7	Days
<b>Electricity supply</b>		
grid	85%	
grid-independent generation (mix of diesel, propane, and gasoline)	15%	

**Fig. A2 - Assumptions and inputs for process analysis of indoor cultivation.**

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# Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

## Businesses Involving the Growing, Processing, Selling, or Delivery of Marijuana

October 22, 2014

The growing, processing, selling or delivery of marijuana is subject to state, federal, and city regulations. This document is intended to explain how City of Seattle regulations, effective as of November 16, 2013, are likely to apply to marijuana-related businesses. The City does not provide any guidance on state and federal regulations so it is highly encouraged that businesses proposing to engage in these activities consult a lawyer before they proceed on any permits.

This Tip may be most helpful in combination with Tip 102—“Small Business: Getting Your Use and Building Permit from DPD,” which provides general information on getting permits.

### What Do You Need to Know?

Before you start this process, it will be helpful to determine the following:

- **What is the zoning for the proposed location?** Go to DPD’s parcel data application at <http://web1.seattle.gov/dpd/parceldata/>. Type in the address of your proposed business to find zoning information. Note the base zone and whether it is located in a historic district or an urban village overlay. If you want to see the zoning for a larger area, you can use the DPD GIS tool at [web1.seattle.gov/dpd/maps/dpdgis.aspx](http://web1.seattle.gov/dpd/maps/dpdgis.aspx).
- **What changes will be necessary to improve the property?** Common changes that may require a permit include: change of use (for example, putting a retail sales business where a restaurant used to be), additions, modification of walls or structural

elements in existing buildings, or changes to electrical wiring, plumbing, or mechanical systems.

### What Permits are Necessary?

A permit is likely to be required if you are planning to do any of the following:

- change or add a use on your property such as converting an office to a retail space
- change the building’s interior, like moving or adding non-structural walls
- change wiring or electrical plugs
- change the mechanical systems
- change the plumbing system
- use flammable or compressed liquids or gases or store significant amounts of fertilizer
- install, alter or repair any permanent sign that is visible from the public right-of-way

Information on the types of permits that may be required is available in Tip 102 and on the permit website at [www.seattle.gov/dpd/permits/](http://www.seattle.gov/dpd/permits/). Large projects involving multiple systems and new uses are typically handled through a single construction permit while smaller projects involving only electrical, mechanical, or plumbing work can often be done through separate electrical, mechanical, or plumbing permits.

### What Restrictions Exist on the Location of These Businesses?

In addition to state and federal restrictions, individuals proposing a marijuana-related business must meet both the marijuana-specific regulations in Seattle Municipal Code 23.42.058 and any general requirements for the use category. To understand whether a specific business may be allowed in a location, you should know the **type of use** that is proposed, the **base zoning** of the location, and if the location is in an **overlay district**, such as a historic district or the Stadium Transition Overlay District.

[www.seattle.gov/dpd](http://www.seattle.gov/dpd)



Major marijuana activity means that you are growing, processing, selling and/or delivering large amounts of marijuana or marijuana-infused products. Major activity involves more than 45 plants, 72 ounces of useable marijuana, or an amount of marijuana-infused product that could reasonably be produced with 72 ounces of useable marijuana. Marijuana activity is allowed on any lot or in association with any house or apartment if it is not "major marijuana activity"; provided the City's Home Occupation Rules and Washington State's collective garden regulations are met.

### Types of Uses

All business activities are regulated in part based on the uses (such as retail sales and service or food processing) they contain. Since "marijuana-related" is not a separate use category, these businesses must follow the rules for the use or uses that most closely describe their activities. Many businesses will have multiple uses on site. Certain uses may be prohibited in different zones of the city or may be subject to size limits or other restrictions. Below is a summary of the common uses that marijuana-related business may contain and how they may be limited in Seattle.

**Growing of marijuana** would generally occur within an "urban farm" use, which is defined as follows:

"Urban farm" means a use in which plants are grown for sale of the plants or their products, and in which the plants or their products are sold at the lot where they are grown or off site, or both, and in which no other items are sold. Examples may include flower and vegetable raising, orchards and vineyards.

In designated Manufacturing and Industrial Centers, which include portions of the Duwamish Valley, Ballard, and Interbay, urban farm uses are specifically limited to rooftop and "indoor agriculture operations."

"Indoor agricultural operation" means a business establishment with an agricultural use that is limited to plants grown in containers within an enclosed structure.

**Processing of marijuana** into other products for human consumption (baked goods, infusions, oils, etc.), would generally occur within a food processing or light manufacturing use, depending on the process used. However, drying of marijuana as part of a combined growing and processing operation would be considered incidental to the urban farm use and would not be considered a separate use.

If marijuana is processed without a mechanized assembly line, it would generally occur within a "food processing and craft work" use, which is categorized as a commercial (not a manufacturing) use. Food processing is defined as follows:

"Food processing" means a food processing and craft work use in which food for human consumption in its final form, such as candy, baked goods, seafood, sausage, tofu, pasta, etc., is produced, when the food is distributed to retailers or wholesalers for resale off the premises. Food or beverage processing using mechanized assembly line production of canned or bottled goods is not included in this definition, but shall be considered to be light manufacturing.

If a mechanized assembly line is used, processing of marijuana could occur within a light manufacturing use, which is defined in relevant part as follows:

"Light manufacturing" means a manufacturing use, typically having little or no potential of creating noise, smoke, dust, vibration or other environmental impacts or pollution, and including but not limited to...[c]anning or bottling of food or beverages for human consumption using a mechanized assembly line or food processing for animal consumption...

**Sale or delivery of marijuana and related products** would generally occur within a general retail sales and services use, which is defined as follows:

"Retail sales and services, general" means a general sales and service use that is not a multi-purpose retail sales use [grocery store]. General retail sales and services include general retail sales uses, general services uses, and customer service office uses. Examples of general retail sales include but are not limited to bookstores, florists, and clothing stores. Examples of general services include but are not limited to shoe repair, hair cutting salons, pet grooming, pet daycare centers and dry cleaning. Customer service offices are uses in which services are provided to individuals and households in an office setting in a manner that encourages walk-in clientele and in which generally an appointment is not needed to conduct business, including but not limited to uses such as branch banks, travel agencies, brokerage firms, real estate offices, and government agencies that provide direct services to clients.

It is possible that a delivery-only business with no walk-in customers could be considered a different use such as office; however, this would depend on the specifics of the business.

### Base Zone Restrictions

The following tables list where the above uses are allowed outright, allowed with conditions, or prohibited.

Base Zone	Retail sales and services	Urban farm	Food processing	Light Manufacturing
Commercial 1 and 2	P	P	P	P
Downtown Office Core 1 and 2; Downtown Retail Core;	P	P	P	P
Downtown Mixed Commercial				
Downtown Mixed Residential	25	P	P	X
Harborfront	No Major Marijuana Activity Allowed <sup>1</sup>			
Industrial Buffer;	P	See Footnote 2	P	P
Industrial Commercial;				
Industrial General 1 and 2				
International District Mixed	No Major Marijuana Activity Allowed <sup>1</sup>			
International District Residential	No Major Marijuana Activity Allowed <sup>1</sup>			
Multifamily (LR, MR, HR)	No Major Marijuana Activity Allowed <sup>1</sup>			
Neighborhood Commercial 1	No Major Marijuana Activity Allowed <sup>1</sup>			
Neighborhood Commercial 2	25	P	25	10
Neighborhood Commercial 3	P	P	25	25
Pike Place Mixed	No Major Marijuana Activity Allowed <sup>1</sup>			
Pioneer Square Mixed	No Major Marijuana Activity Allowed <sup>1</sup>			
Seattle Mixed	P	P	P	P
Single Family	No Major Marijuana Activity Allowed <sup>1</sup>			

**KEY:**

P = Permitted with no size limit  
 10 = Permitted, size limited to 10,000 square feet  
 25 = Permitted, size limited to 25,000 square feet  
 X = Prohibited

*Footnotes*

1. Except that existing businesses do not need to come into compliance until July 1, 2015. If the state legislature passes a law prior to this date that would allow for additional licenses for marijuana businesses, this deadline would be automatically extended to January 1, 2016.
2. Outside Manufacturing and Industrial Centers, urban farms are permitted without size limits. Within the Duwamish Manufacturing and Industrial Center and the Ballard-Interbay Manufacturing and Industrial Center urban farms are permitted with the following limits:

- a. the only type of urban farms that are permitted are rooftop and indoor agricultural operations
- b. No indoor agriculture operations are allowed in IG1 zones unless they were established prior to November 16, 2013 and are not more than 5,000 sq ft in size
- c. The maximum size limit for an indoor agricultural operation in IC and IB zones is 10,000 sq ft
- d. The maximum size limit for an indoor agricultural operation in IG2 zones is 20,000 sq ft

Size limits exclude areas used exclusively for office and food processing areas but include the entirety of any room containing agriculture.

## Overlay District Restrictions

In addition to the base zone limitations listed above, no major marijuana activity is allowed on any lot located in an historic district or the Stadium Transition Overlay District. Historic districts in Seattle are located at: Ballard Avenue, Columbia City, Fort Lawton, Harvard-Belmont, International Special Review District, Pike Place, Pioneer Square, and Sand Point. More information on Historic Districts can be found at [www.seattle.gov/neighborhoods/preservation/historic\\_districts.htm](http://www.seattle.gov/neighborhoods/preservation/historic_districts.htm).

## What Other Regulations May Apply?

All actions requiring a permit will be expected to meet applicable codes including Building, Electrical, Plumbing, and Fire codes. The primary purpose of requiring permits is to allow reviewers to compare your project to existing code requirements.

While it is not feasible to summarize all of these codes here, key things to consider include:

- Grow operations will need to provide information showing what measures will be taken to meet the odor requirements of SMC 23.42.051.C. Examples may include, but are not limited to, the location of vents, installation of filters, and/or installation of mechanical equipment.
- Substantial alterations to existing buildings, particularly very old or previously vacant buildings, may trigger a requirement to bring the building space at least partially into compliance with existing codes for earthquake safety, fire safety, or energy efficiency. It is recommended that applicants consult DPD early in the planning process to identify any issues that could substantially change the cost or timing of their project. Tip 314, Seattle Building Code Requirements for Existing Buildings that Undergo Substantial Alterations, describes when these larger upgrades may be triggered.
- Indoor lighting for horticulture is exempt from energy code per section 1512.2, item 4; however, the addition or modification of equipment to control the temperature or climate of indoor spaces will require review under the energy code. Energy-efficient equipment or additional insulation may be necessary to meet these requirements. Additionally, any wiring necessary to add electrical capacity will need to meet electrical code standards.
- Facilities planning to store or use liquids or gases that are flammable, combustible or compressed,

including but not limited to butane, propane, ethanol, acetone, or CO<sub>2</sub>, should check with the Fire Department to determine if they need a permit or need to take specific safety precautions. This also applies to facilities planning to store significant amounts of fertilizer. The processing of marijuana using flammable gases is prohibited by the fire code, unless performed with an approved, professional grade, closed loop extraction system that does not release any flammable gas to the atmosphere. For more information on the Fire code and permits, go to [www.seattle.gov/fire/FMO/permits/permits.htm](http://www.seattle.gov/fire/FMO/permits/permits.htm).

- While DPD does not review how chemicals such as pesticides or fertilizers will be disposed, it is expected that these materials will be disposed of properly. Additional information on existing rules and resources is available at [www.lhwmp.org](http://www.lhwmp.org).

## Home Occupation Regulations

As discussed above, major marijuana activity is not allowed in any residential zones; however, small-scale activities below these limits are allowed in these areas. Marijuana activities that occur in residential units must meet Seattle's Home Occupation Regulations, which limit advertising, business traffic, and other potential impacts in residential zones. Tip 236, Home Occupations, provides more information on these rules and is available at [web1.seattle.gov/dpd/cams/camdetail.aspx?cn=236](http://web1.seattle.gov/dpd/cams/camdetail.aspx?cn=236).

## Is a Business License Necessary?

With very few exceptions, individuals and businesses operating in the city of Seattle are required to get a business license (see Seattle Municipal Code 5.45.090 for a list of exempt businesses and business activities). Information on applying for a business license as well as paying taxes can be found at: [www.seattle.gov/html/business/taxes.htm](http://www.seattle.gov/html/business/taxes.htm). Applicants may also apply online at: [www.seattle.gov/self](http://www.seattle.gov/self).

## What are the State Regulations and is a State License Required?

New businesses, and businesses that started operation after November 16, 2013, that conduct major marijuana activity are required to have a license from the Washington State Liquor Control Board in order to operate in the city of Seattle. Business that were being conducted prior to November 16, 2013 will be required to have a license from the Washington State Liquor Control Board in order to operate in the city of Seattle starting July 1, 2015. If the state legislature passes a law prior to this date that would allow for additional licenses for marijuana businesses, this deadline would be automatically extended to January 1, 2016. These rules apply to medical and recreational businesses.

Information on state licenses is available at: <http://liq.wa.gov/>. The City of Seattle does not provide any guidance on meeting state regulations including the requirement not to locate within 1,000 feet of certain facilities such as parks, playgrounds, or schools.

Additionally, if you are planning to produce any edible marijuana-infused products, it is likely that you will need a license from the Washington State Department of Agriculture for food processing.

Grow operations may also need to get permits or meet specific regulations regarding:

- Wastewater ([www.kingcounty.gov/environment/wastewater/IndustrialWaste/DischargeApprovalOverview.aspx](http://www.kingcounty.gov/environment/wastewater/IndustrialWaste/DischargeApprovalOverview.aspx) )
- Chemigation and fertigation (<http://agr.wa.gov/PestFert/ChemFert/>)
- Air quality (<http://www.pscleanair.org/announce/permits/>)
- Mercury bulbs ([www.ecy.wa.gov/mercury/mercury\\_light\\_bulbs.html](http://www.ecy.wa.gov/mercury/mercury_light_bulbs.html))
- Disposal of pesticides (<http://agr.wa.gov/PestFert/Pesticides/WastePesticide.aspx>)

## Access to Information

Links to electronic versions of **DPD Tips**, **Director's Rules**, and **Forms** are available on the "Tools & Resources" page of our website at [www.seattle.gov/dpd](http://www.seattle.gov/dpd). Paper copies of these documents are available from our Public Resource Center, located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave. in downtown Seattle, (206) 684-8467.



# **State of Alaska's Ballot Measure 2**

*“An Act to tax and regulate the  
production, sale, and use of  
marijuana.”*

# **It's Official**

**November 26, 2014 – Election Certified**

- **Passed 53.23% to 46.77%**

**February 24, 2015 – Effective Date of Laws**

- **Date that starts the clock for deadlines**
- **Personal use laws become effective**

**February 24, 2016 –**

**Deadline for state  
to begin accepting  
applications**

**May 24, 2016 – Latest date  
to process and issue  
or deny application**





AS 17.38.020

17.38.030

17.38.040

17.38.060

# Personal Use

## Legalized for persons 21 years of age or older:

- Possess, use, display, purchase, transport:  
1 ounce or less
- Possess, grow, process, transport:  
6 plants, 3 or less may be mature/flowering
- Transfer to a person 21 years of age or older:  
1 ounce or less and up to 6 immature plants  
Without remuneration
- Manufacture, possess, purchase:  
Marijuana accessories

**BUT NO CONSUMING IN PUBLIC**

# Marijuana-Related Facilities

AS 17.38.070  
17.38.900

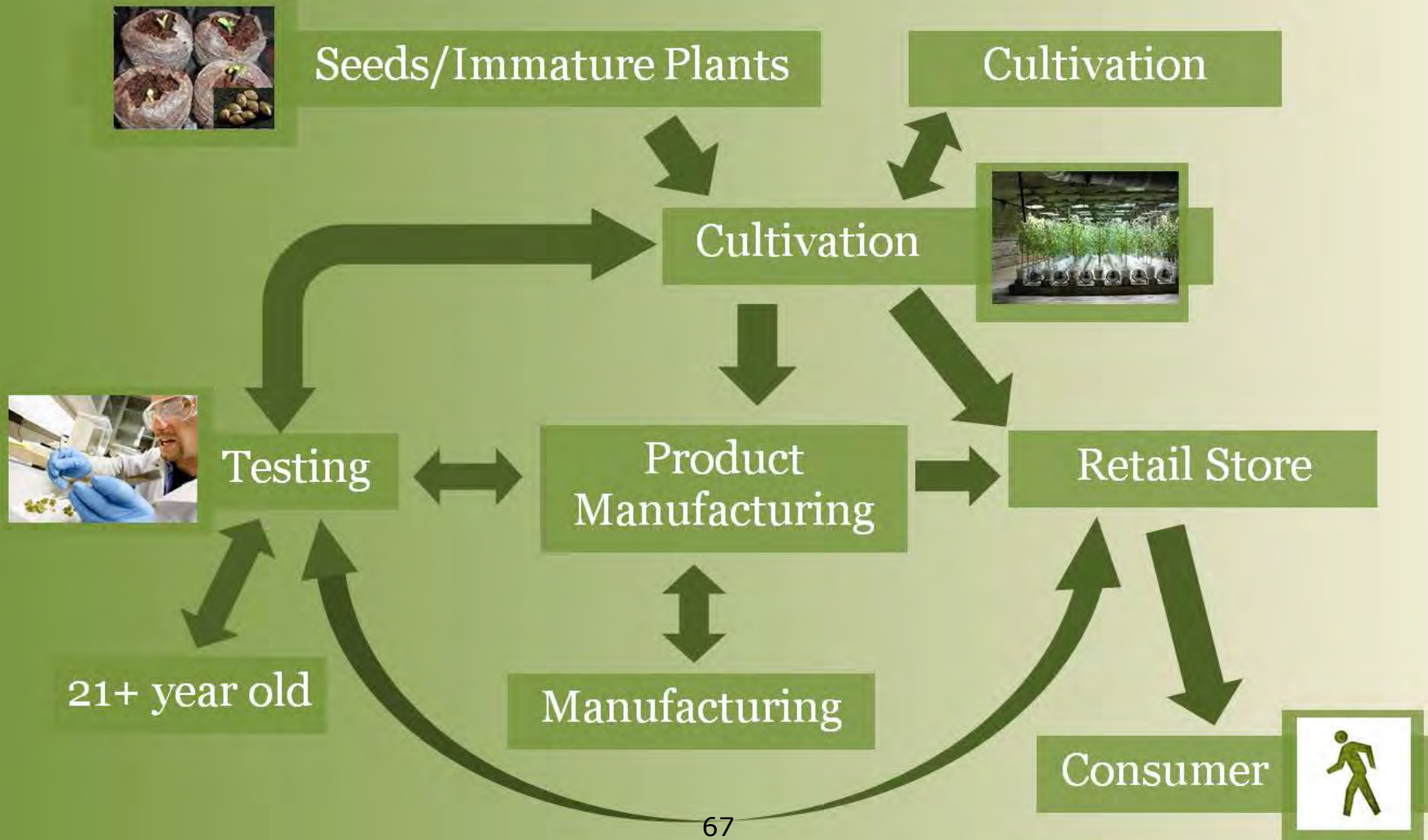
## **Marijuana Establishments:**

- Marijuana Cultivation Facility
- Marijuana Product Manufacturing Facility
- Marijuana Testing Facility
- Marijuana Retail Store

*All must have current, valid registration.*

# Movement of Marijuana Related to Establishments

AS 17.38.070



# State Rulemaking Deadlines

AS 17.38.080  
17.38.090  
17.38.100

- **9 months – regulations to implement chapter 38:**
  - Issue, renew, suspend, revoke a registration
  - Schedule of fees for application, registration, renewal
  - Qualifications for registration
  - Security requirements
  - Prevention of sale/diversion to those not 21 years of age
  - Labelling requirements
  - Health and safety regulations
  - Restrictions on advertising and display
  - Civil penalties for failure to comply
- **1 year:**
  - Board must begin accepting and processing applications for registration
- **45 to 90 days after receiving an application:**
  - Board must issue annual registration or notification of denial

# Local Participation and Control

AS 17.38.100  
17.38.110

Local government may:

- Prohibit establishments
- Enact ordinances regulating time, place, manner, and number of establishments
- Establish annual operating fees
- Establish civil penalties for ordinance violation
- Create “local regulatory authority”
  - Will receive half of state application fees
  - Provide input on applications to Board
  - Issue registrations if state fails to meet chapter 38 deadlines
    - Must notify Board
    - Locally-issued registration will not be subject to Board regulations for duration of registration

# Other Provisions

AS 17.38.010  
17.38.120  
17.38.130

- *Ravin* unaffected
- Medical marijuana laws unaffected
- Marijuana DUI laws unaffected
- Employers may still restrict marijuana use in workplace
- Private property owners/occupiers and schools, hospitals, corrections facilities, etc. may prohibit or regulate marijuana on their property



AS 43.61.010

43.61.020

43.61.030

43.99.950

# State Taxation

## Department of Revenue will:

- **Collect an excise tax of \$50 per ounce**
  - When sold or transferred from cultivation facility to retail store or product manufacturing facility
  - Certain parts of the marijuana plant may be exempted or taxed at a lower rate as determined by the Department of Revenue
- **Be sent records from cultivation facilities monthly**
  - Total number of ounces sold the previous month
  - Breakdown of the weight sold to each buyer/transferee and their Alaska address
- **Be sent payment from cultivation facilities monthly**
- **Delinquent payments are subject to civil penalties**
- **Registration may be revoked for failure to pay taxes**

# What's Next at the State Level?

- **The initiative can be amended**
  - Legislature has broad power to amend
  - But cannot amend to the point of an effective repeal
- **Legislation to fill the gaps**
  - Set up the framework for regulation
- **Promulgate regulations**
  - Those required by the Act
  - Other such as testing, security, distance from schools, etc.



# What's Next at the Local Level?

- **Local governments CAN:**
  - Prohibit marijuana establishments entirely or regulate more strictly than the state
    - Regulate the time, place, manner and number of marijuana establishments
    - Regulation of display of marijuana in retail store
  - Establish a local regulatory authority
  - Establish annual operating fees
  - Establish civil penalties for violations of local ordinances regulating marijuana establishments
  - Establish registration application and revocation ordinances to apply if the state fails to meet its deadlines
- **Local governments CANNOT:**
  - Prohibit the personal use allowed by the Act
  - Prohibit marijuana accessories
  - Contradict the provisions of the Act
  - Restrict personal use within the home (*Ravin*)



# Commercial Marijuana Facilities and Locations

Town Hall Meeting  
May 27, 2015



**Department of Community Planning**

809 Pioneer Road, Fairbanks, AK 99701

[www.fnsb.us/communityplanning](http://www.fnsb.us/communityplanning) | (907) 459-1260

# Our Goal:

To implement Ballot Measure 2 through responsible regulation of commercial marijuana facilities in the FNSB

## How:

- Town Hall meetings
- Mayor's Working Group
- Draft Zoning Ordinance
- Local Licensing Ordinance



# Zoning Basics

- Tool used to guide land use in a way that protects public health, safety, and general welfare
- The State has conveyed zoning authority to the FNSB
- Land uses are assigned to a zone appropriate for that type and level of use
- The FNSB zoning code (Title 18) groups zones into 5 categories



# Local Zoning Code (FNSB Code Title 18)

## Zoning District Groupings

### Agricultural

Rural Farmstead

Rural &  
Agricultural

### Residential

Rural Estates

Rural Residential

Single Family

Two-Family

Multi-Family

Multi-Family / Prof.  
Office

### Commercial

General  
Commercial

Light  
Commercial

Central Business  
District

### Industrial

Light Industrial

Heavy Industrial

### General Use

General Use



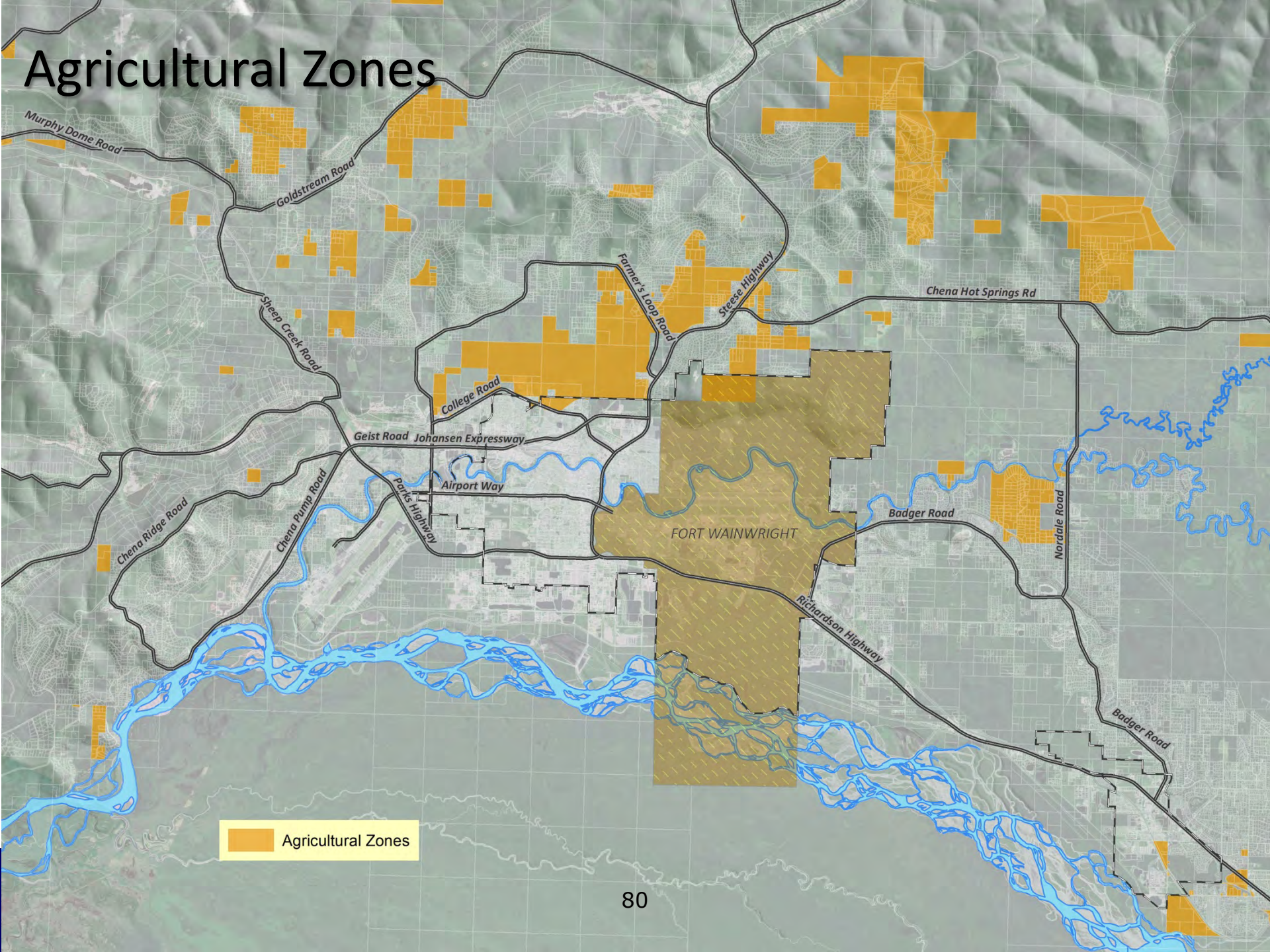
# Local Zoning Code (FNSB Code Title 18)


## Approval Processes:

- Permitted Use – Allowed with a zoning permit for uses that have minimal impacts on neighboring uses
- Conditional Use – May be allowed with conditions after a public hearing for uses that have greater or higher impacts on neighboring uses



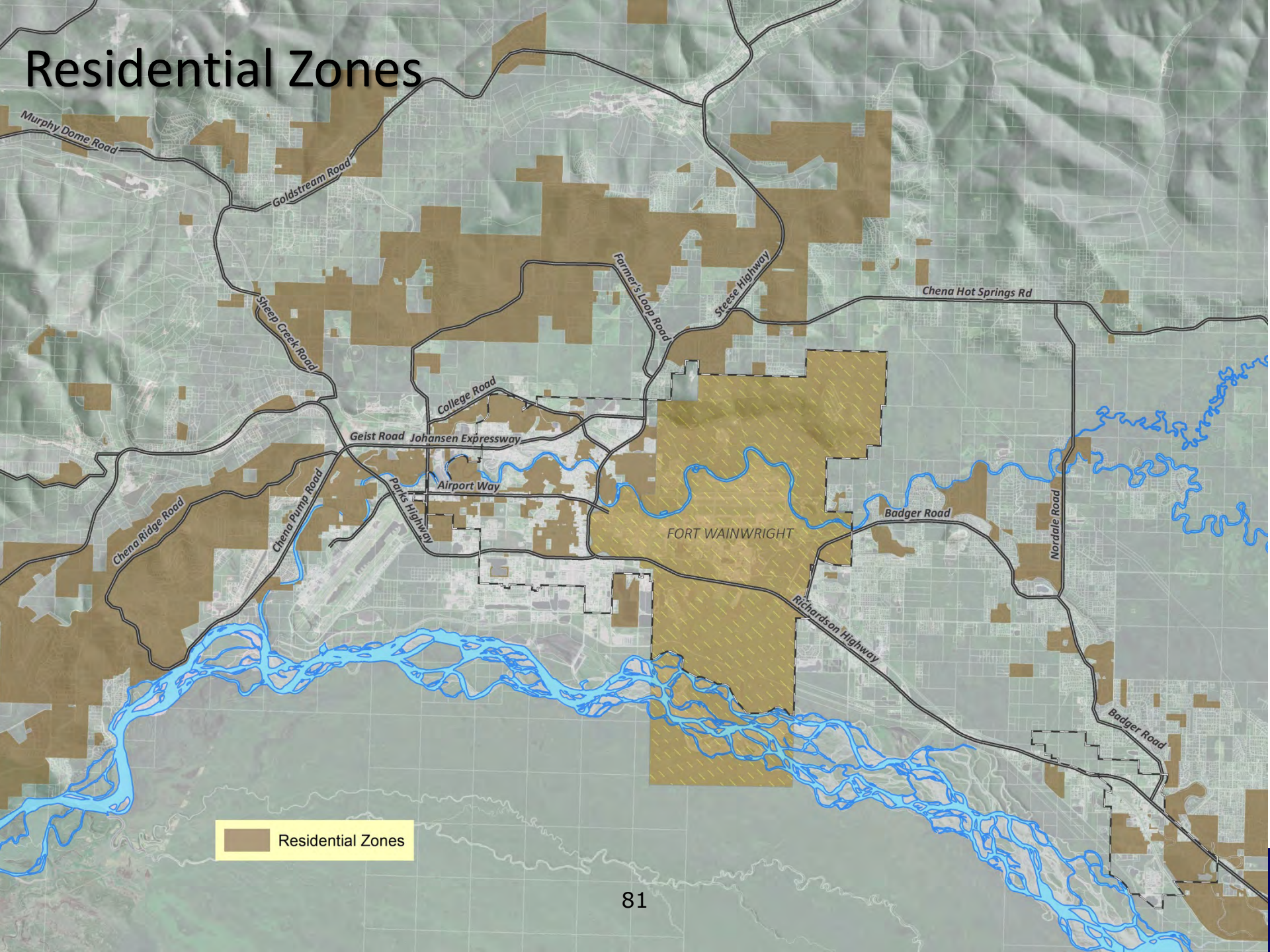
# Agricultural Zones



 Agricultural Zones

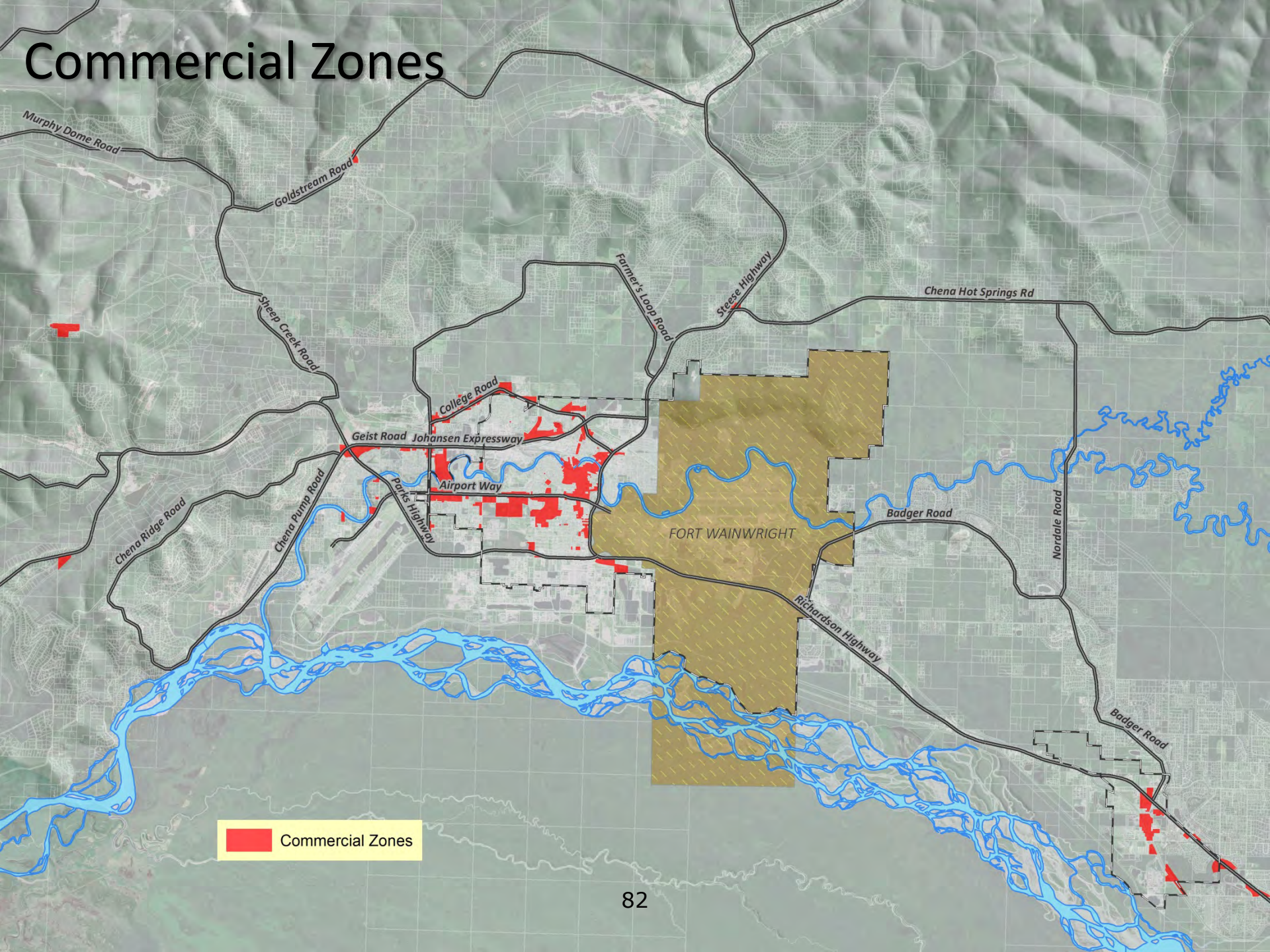



# Residential Zones



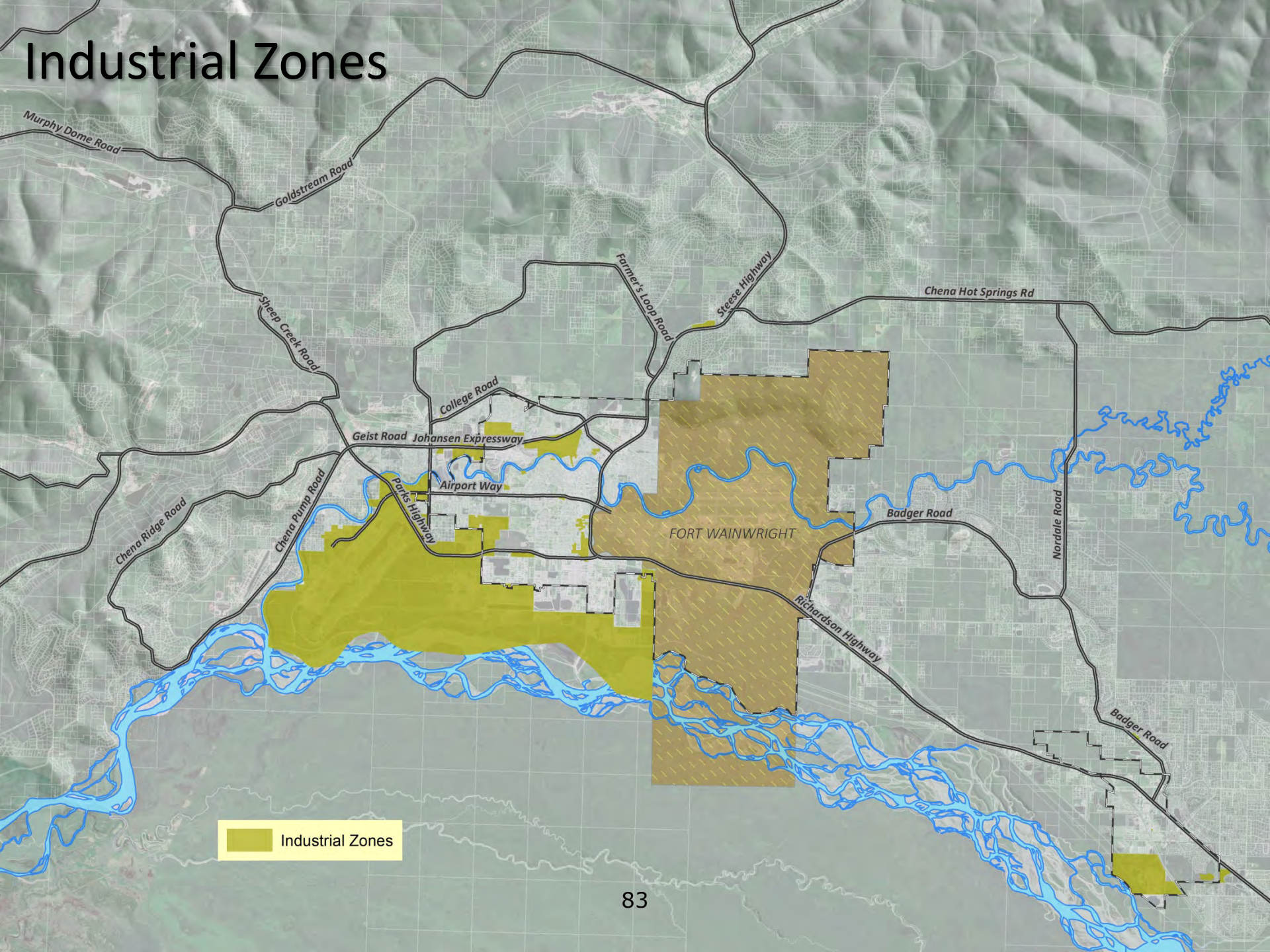
Residential Zones

# Commercial Zones



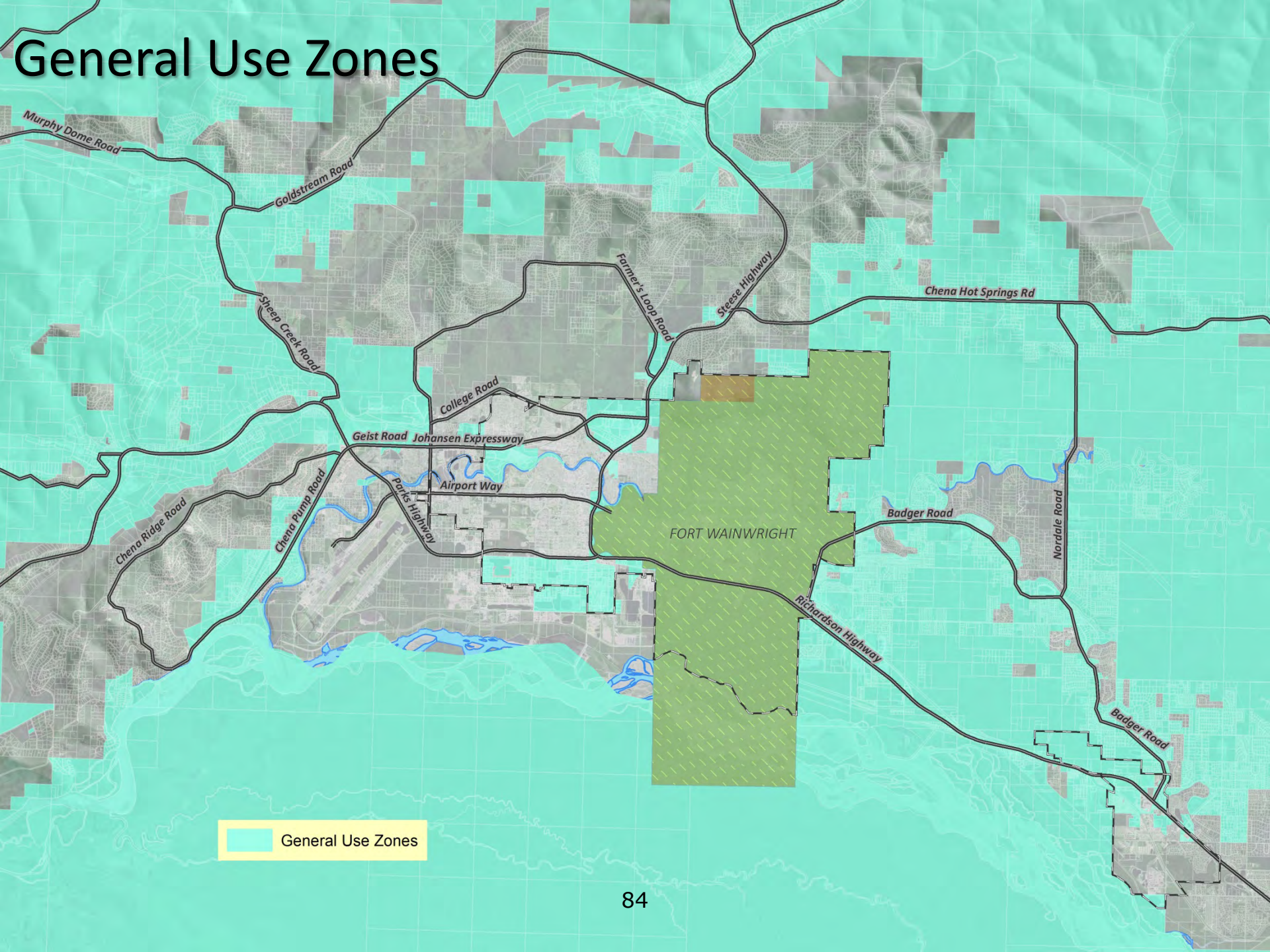
 Commercial Zones

# Industrial Zones



Industrial Zones

# General Use Zones



General Use Zones

# Marijuana Land Uses – Ballot Measure 2

- Finding compatible areas (zones) in the Borough for the four marijuana facilities
  - Cultivation – “...cultivate, prepare, and package marijuana...”
  - Manufacturing – “...purchase marijuana; manufacture, prepare, and package...”
  - Testing – “...analyze and certify the safety and potency...”
  - Retail Store – “...sell marijuana and marijuana products to consumers...”
- ***Other (consumption venues)***



(Photo Source: Marley Bordovsky  
Denver City Attorney’s Office)

# Finding Compatible Zones – Cultivation



**Agricultural**

**Residential**

**Commercial**

**Industrial**

**General Use**

↓  
Permitted or  
Conditional  
Use based on  
size and zone

↓  
Not allowed

↓  
Conditional  
Use based on  
size and zone

↓  
Permitted

↓  
Conditional  
Use

(Photo Source: Marley Bordovsky Denver City Attorney's Office)



**Department of Community Planning**

809 Pioneer Road, Fairbanks, AK 99701

[www.fnsb.us/communityplanning](http://www.fnsb.us/communityplanning) | (907) 459-1260

# Proposed Types of Cultivation Facilities

## **Marijuana Cultivation Facility, Small:**

- Legally licensed as commercial marijuana cultivation facility
- Growing, preparation and packaging activities conducted completely indoors.
- Total floor area not to exceed 5,000 square feet.

## **Marijuana Cultivation Facility, Large:**

- Legally licensed as commercial marijuana cultivation facility
- Growing, preparation and packaging activities conducted completely indoors.
- Total floor area not to exceed 10,000 square feet.

## **Marijuana Cultivation Facility, Unlimited:**

- Legally licensed as commercial marijuana cultivation facility
- Growing, preparation and packaging activities conducted completely indoors.
- Total floor area exceeds 10,000 square feet.

## **Marijuana Cultivation Facility, Outdoor:**

- Legally licensed as commercial marijuana cultivation facility
- Growing, preparation and packaging activities conducted outdoors or within cultivation facility that are not fully enclosed or which utilize odor-permeable materials
- Total area of the cultivation facility not to exceed 5% of the total parcel area or 5 acres maximum, whichever is less



# Finding Compatible Zones – Manufacturing



**Agricultural**

**Residential**

**Commercial**

**Industrial**

**General Use**

↓  
Permitted or  
Conditional Use  
based on intensity  
level and zone

↓  
Not allowed

↓  
Permitted or  
Conditional Use  
based on intensity  
level and zone

↓  
Permitted

↓  
Conditional Use

Photo credits: vice.com; Marley Bordovsky Denver City Attorney's Office



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www.fnsb.us/communityplanning | (907) 459-1260



# Proposed Types of Manufacturing Facilities

## Marijuana Product Manufacturing Facility, Low Intensity:

- Legally licensed as commercial marijuana product manufacturing facility
- Combines, mixes, incorporates, or otherwise processes a tested and approved marijuana product into another product, but excluding extraction processes.
- Total floor area not to exceed 5,000 square feet
- Facility exceeding 5,000 square feet shall be a mid- or high intensity marijuana manufacturing facility, depending on size.

## Marijuana Product Manufacturing Facility, Mid Intensity:

- Legally licensed as commercial marijuana product manufacturing facility
- Prepares or processes raw marijuana into another value-added form or product subject to testing for potency and safety, but excluding extraction processes utilizing hazardous materials, volatile chemicals, or potentially flammable or explosive materials or processes
- Total floor area not to exceed 10,000 square feet
- Facility exceeding 10,000 square feet shall be a high intensity marijuana manufacturing facility

## Marijuana Product Manufacturing Facility, High Intensity:

- Legally licensed as commercial marijuana product manufacturing facility
- Processes marijuana into a product via any means that utilizes hazardous materials, volatile chemicals, or potentially flammable or explosive materials;
- **OR** total floor area of the facility exceeds 10,000 square feet.



# Finding Compatible Zones – Testing



**Agricultural**

**Residential**

**Commercial**

**Industrial**

**General Use**

Not  
allowed

Not  
allowed

Permitted

Permitted

Permitted

Photo credits: Marley Bordovsky, Denver City Attorney's Office, denverpost.com



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# Finding Compatible Zones – Retail



**Agricultural**

**Residential**

**Commercial**

**Industrial**

**General Use**

Conditional  
Use as  
Accessory to  
Cultivation

Not allowed

Permitted

Permitted

Conditional  
Use

(Photo Source: FNSB Community Planning, Marley Bordovsky Denver City Attorney's Office)



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[www.fnsb.us/communityplanning](http://www.fnsb.us/communityplanning) | (907) 459-1260

# Proposed Types of Retail Facilities

## Marijuana Retail Facility:

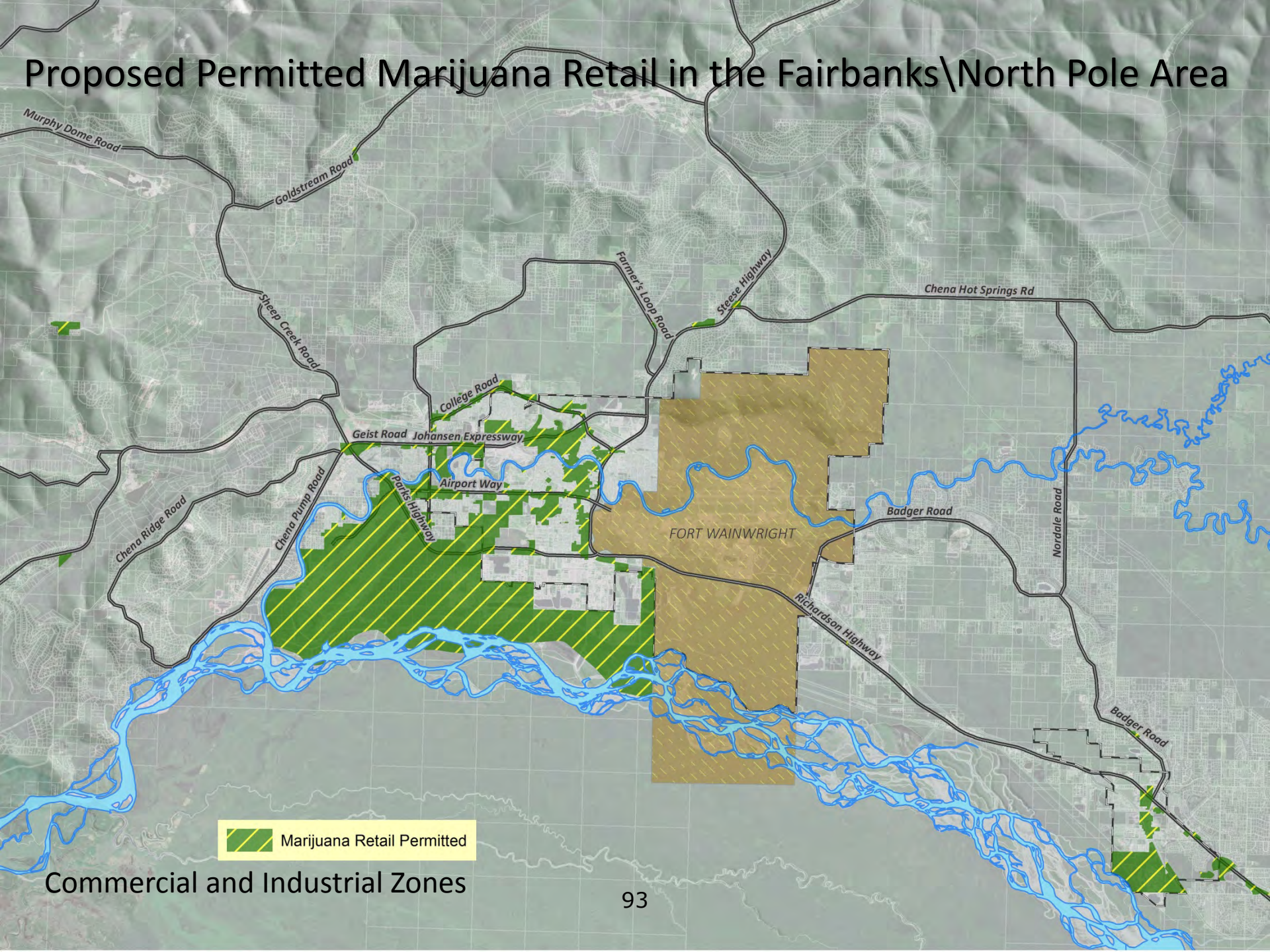
- Legally licensed as commercial marijuana product retail facility
- Sells tested and approved marijuana products, marijuana plants and seeds, and marijuana accessories to retail consumers

## Marijuana Agricultural Accessory Retail Facility:


- Legally licensed as commercial marijuana agricultural retail facility
- Sells only marijuana plants, seeds and packaged raw marijuana grown at the legally licensed commercial marijuana cultivation facility located on the same site
- Clearly incidental and accessory to the marijuana cultivation facility
- Not to exceed a maximum of 1,000 square feet in total floor area.



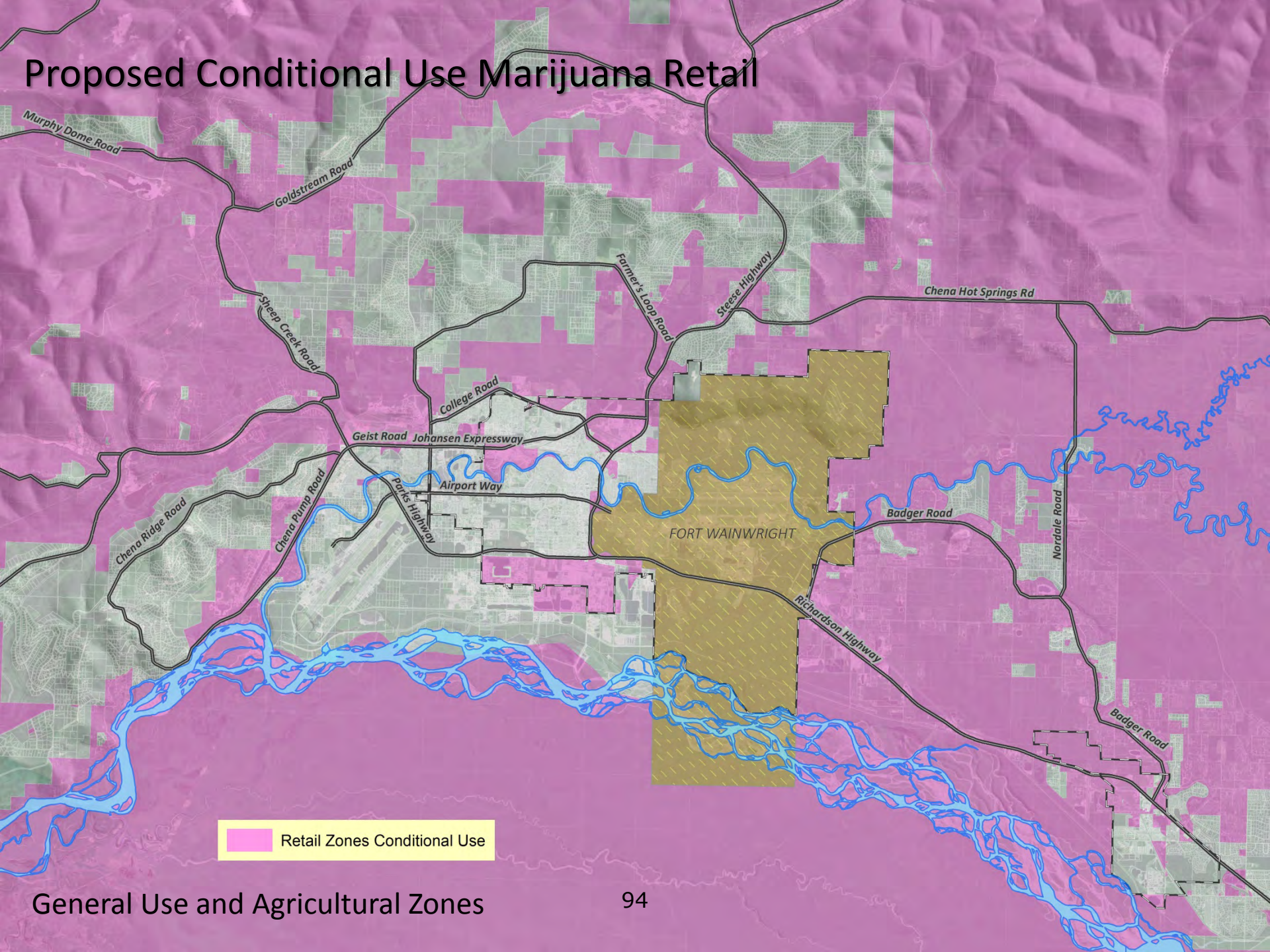
# Proposed Permitted Marijuana Retail in the Fairbanks\North Pole Area




 Marijuana Retail Permitted

 Commercial and Industrial Zones

# Proposed Conditional Use Marijuana Retail



 Retail Zones Conditional Use

General Use and Agricultural Zones

# Sensitive Uses/ Receptors Zoning Approach

- Sensitive Uses– Areas where the occupants are more susceptible to the adverse effects of a use
- An additional land-use tool
- Example – The State of Alaska regulates the distance of alcoholic beverage dispensaries from sensitive uses (AS 04.11.410)



# “Cole Memo” Federal Governments Position on States with Legalized Marijuana

- Federal Government will focus enforcement of marijuana crimes on 8 factors:
  1. **Protection of Minors**
  2. Gangs
  3. Crossing State Lines
  4. Other Drugs
  5. Violence and Firearms
  6. Driving under the influence
  7. Growing on Public lands
  8. Preventing marijuana possession/use on federal property
  
- ***“Outside of these enforcement priorities, the federal government has traditionally relied on states and local law enforcement agencies ...”***



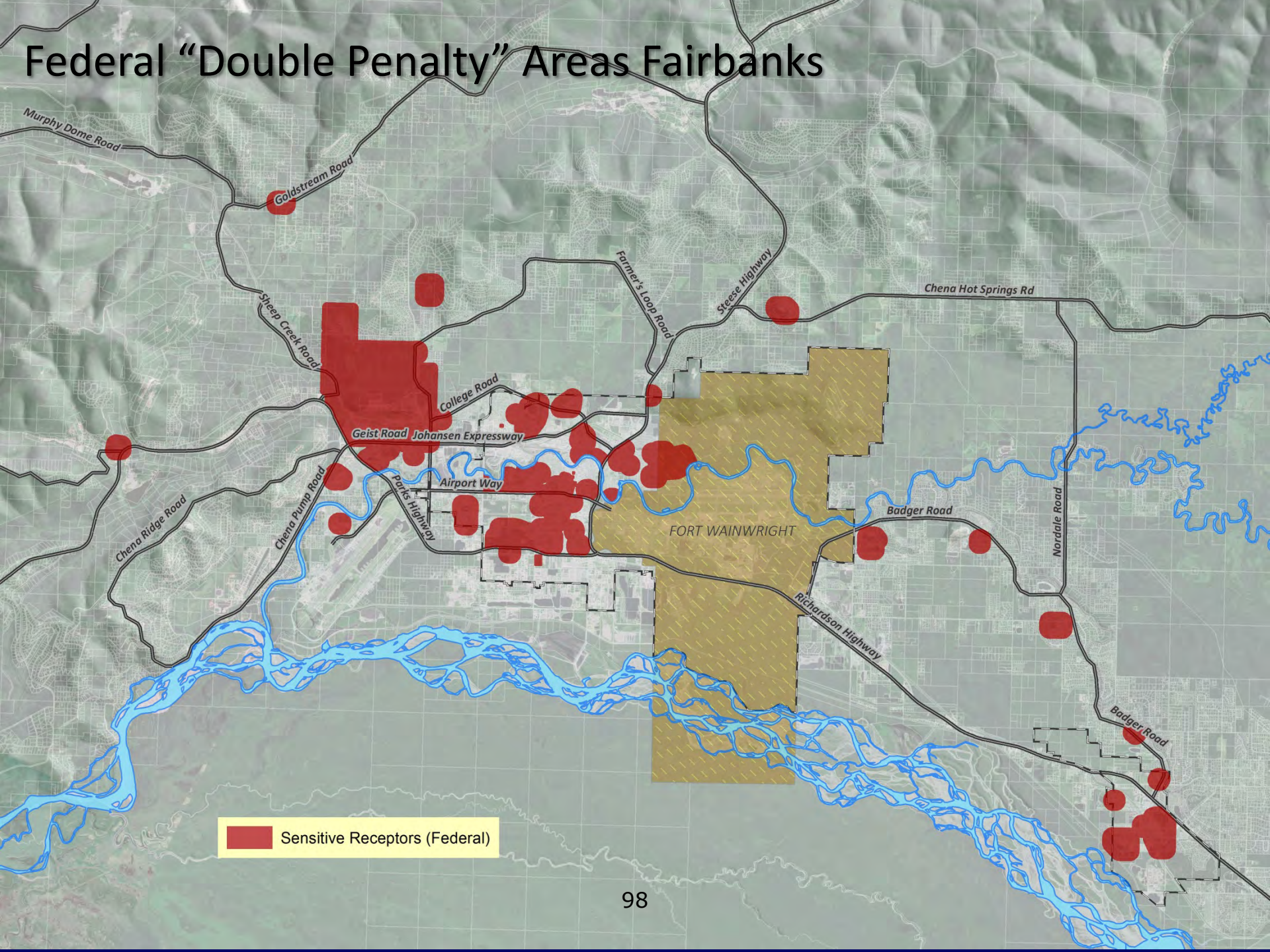


# Federal “Double Penalty” Areas

- 1,000 feet Distance Separation
  - ❖ Schools
    - ✓ K – 12
    - ✓ Vocational
    - ✓ Colleges and universities
  - ❖ Playgrounds
  - ❖ Public housing authority’s housing facility
  
- 100 Feet Distance Separation
  - ❖ Youth Center
  - ❖ Public Swimming Pool
  - ❖ Arcade



# Federal "Double Penalty" Areas Fairbanks



■ Sensitive Receptors (Federal)

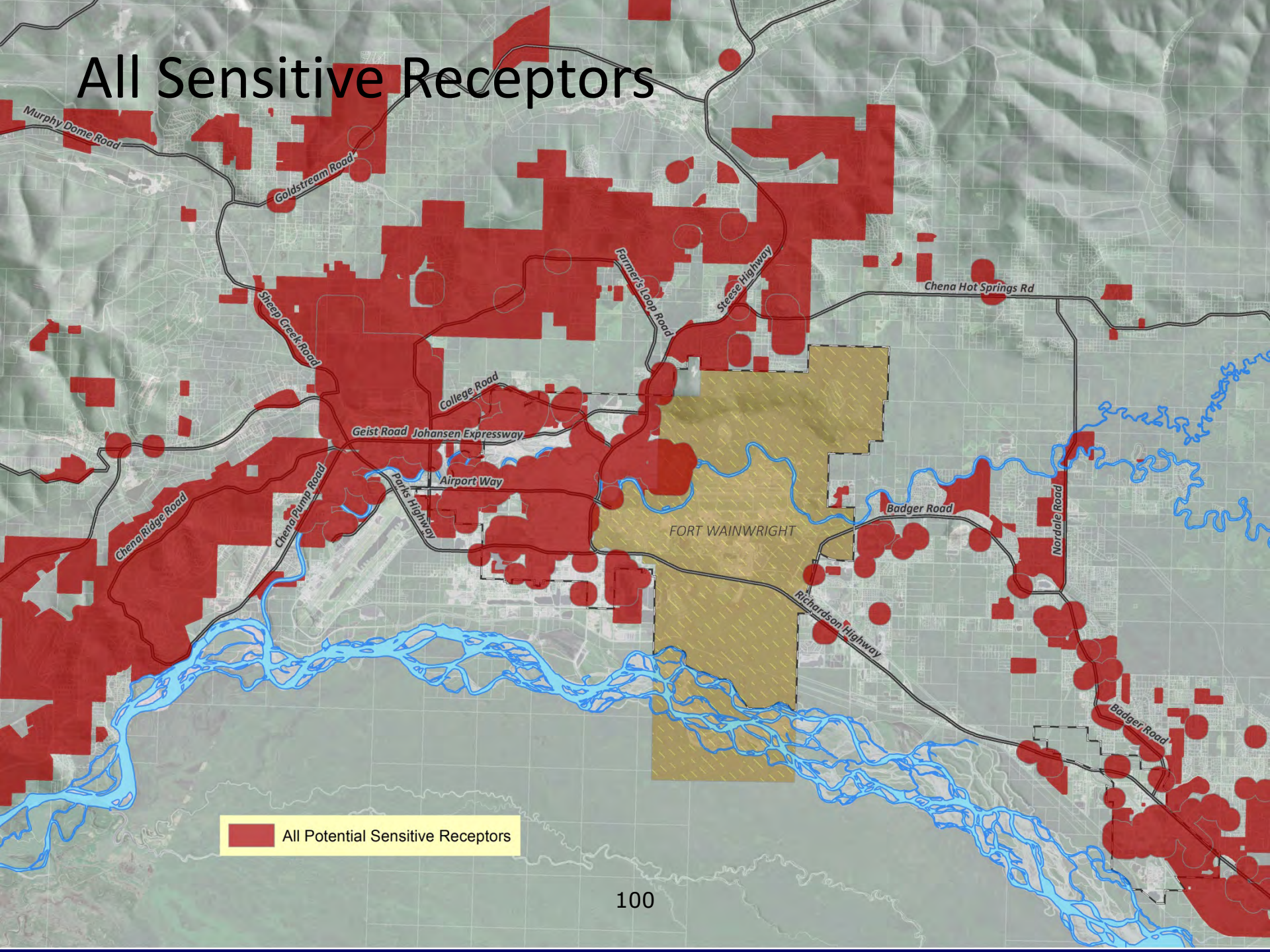
## Other communities with legalized marijuana have chosen to also buffer:

- Day Care Facilities
- Drug and Alcohol Rehabilitation Facilities
- Other Marijuana Businesses
- Public Transit Centers
- Public Parks
- Residential Zones
- Churches
- Libraries

***If all potential sensitive receptors are buffered, developable land is significantly limited***



# All Sensitive Receptors



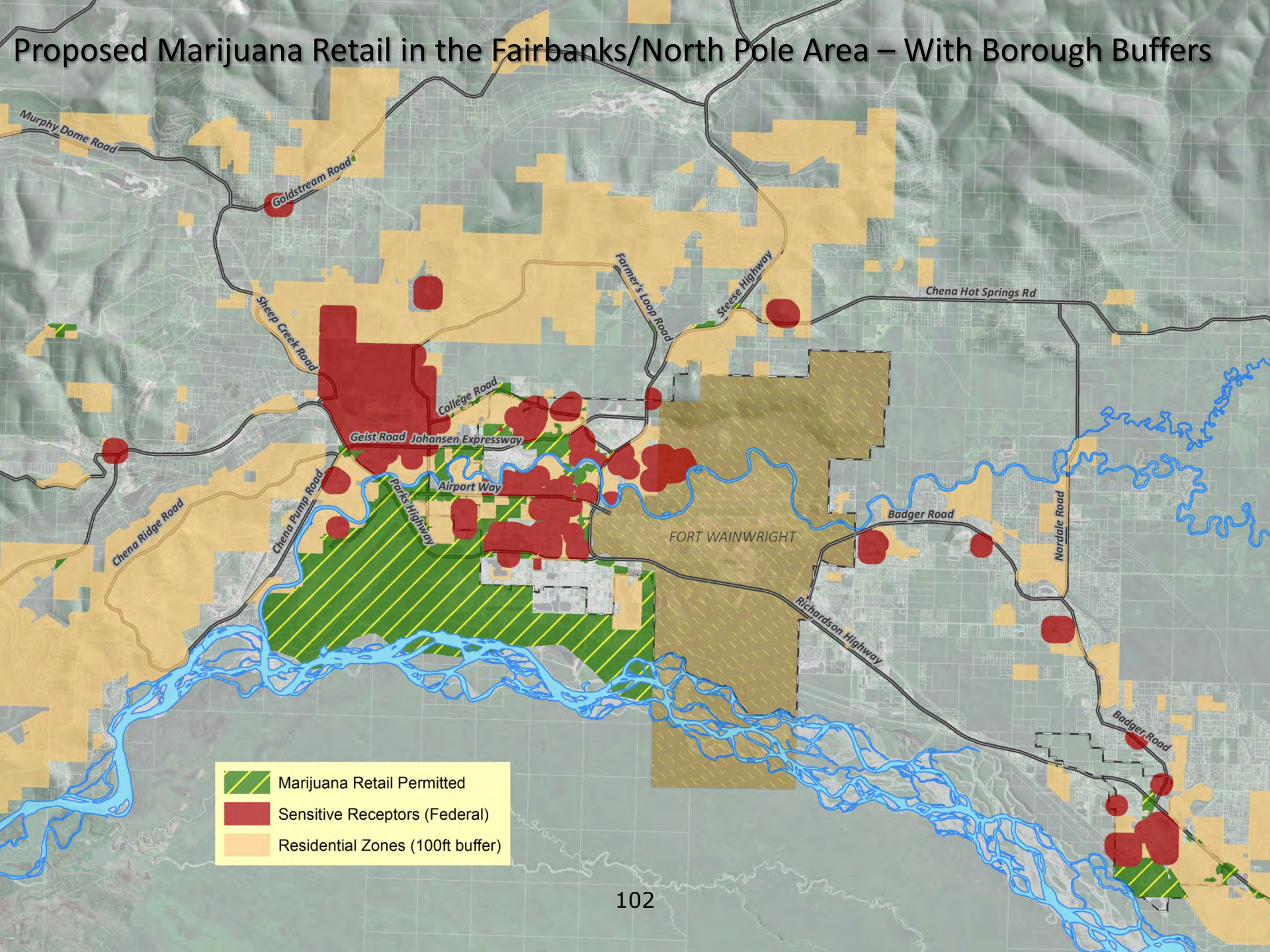
All Potential Sensitive Receptors

# What FNSB is Proposing for Buffers:

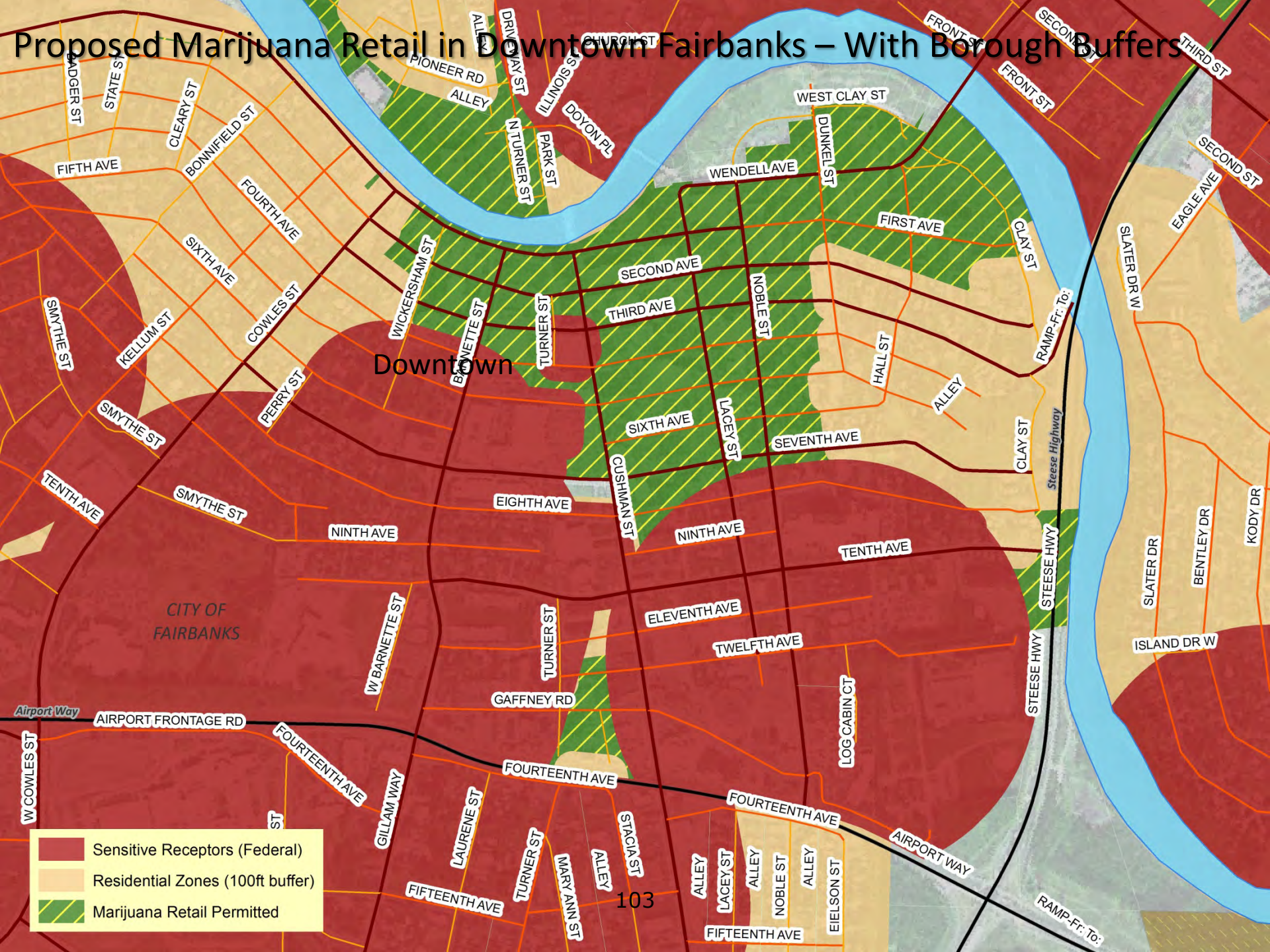
- 1,000 Foot Separation
  - Schools (K-12, including vocational)
  - Playgrounds
  - Public housing authority's housing facility with children as residents
    - Excludes senior only housing facilities
- 500 Foot Separation
  - Post-secondary education facilities (vocational, colleges, and universities)
- 100 Foot Separation
  - Youth Center
  - Public Swimming Pool
  - Arcades
  - Residential zones
- No Separation for day care and pre-schools, churches, libraries, public parks without playgrounds, or any other optional sensitive receptors
- No buffers for test labs
- Buffers stop at nearest Ordinary High Water (OHW) of lakes and rivers and/or nearest edge of public right-of-way (ROW) of controlled-access highway



# Proposed Marijuana Retail in the Fairbanks/North Pole Area – With Borough Buffers






# Proposed Marijuana Retail in Downtown Fairbanks – With Borough Buffers

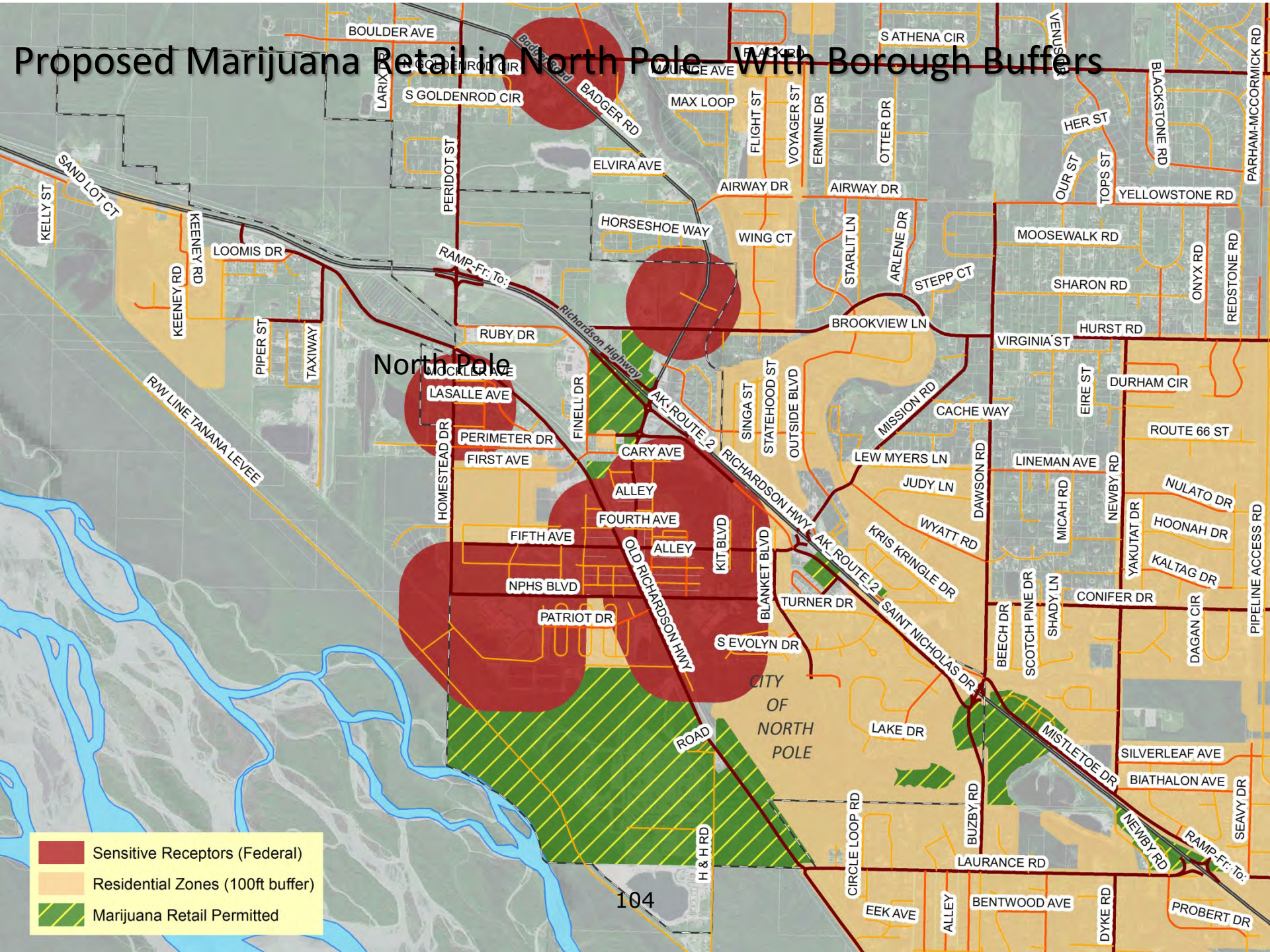


Downtown

CITY OF FAIRBANKS

-  Sensitive Receptors (Federal)
-  Residential Zones (100ft buffer)
-  Marijuana Retail Permitted

# Proposed Marijuana Retail in North Pole - With Borough Buffers



- Sensitive Receptors (Federal)
- Residential Zones (100ft buffer)
- Marijuana Retail Permitted



# Additional Requirements Needed

- **Security Plan**
  - ✓ Security cameras
  - ✓ Alarms
  - ✓ Exterior lighting
  - ✓ Fencing
  - ✓ Secured entrance (for retail)
- **Sprinklers and/or Other Fire Suppression Systems**
- **Ventilation/Odor Control Systems**
- **Fire Department Service**
- **Hazardous Materials Mitigation Measures**
- **Hours of Operation (retail and conditional uses)**
- **Proof of Minimum Insurance Coverage**
- **Annual Inspections (electrical, fire, hazmat, etc.)**



# Schedule Going Forward

- **June/July:** Draft Zoning Ordinance
- **August:** Planning Commission Public Hearing
- **September:** Assembly Public Hearing & Adoption
- **November:** Deadline for state board to adopt regulations
- **February 24, 2016:** State Marijuana Control Board must start accepting applications
- **March 26, 2016:** Tentative effective date of state regulations
- **May 24, 2016:** Initial commercial marijuana facilities licenses expected to be awarded



# Public Comment & Questions

*What do you think?*





# Legend

## Allowed by Area

Parcels

## Zoning

Central Business District

Town Center

General Commercial 1

General Commercial 2

East End Mixed Use

Federal Double Penalty Areas

Residential Zones + 100 ft

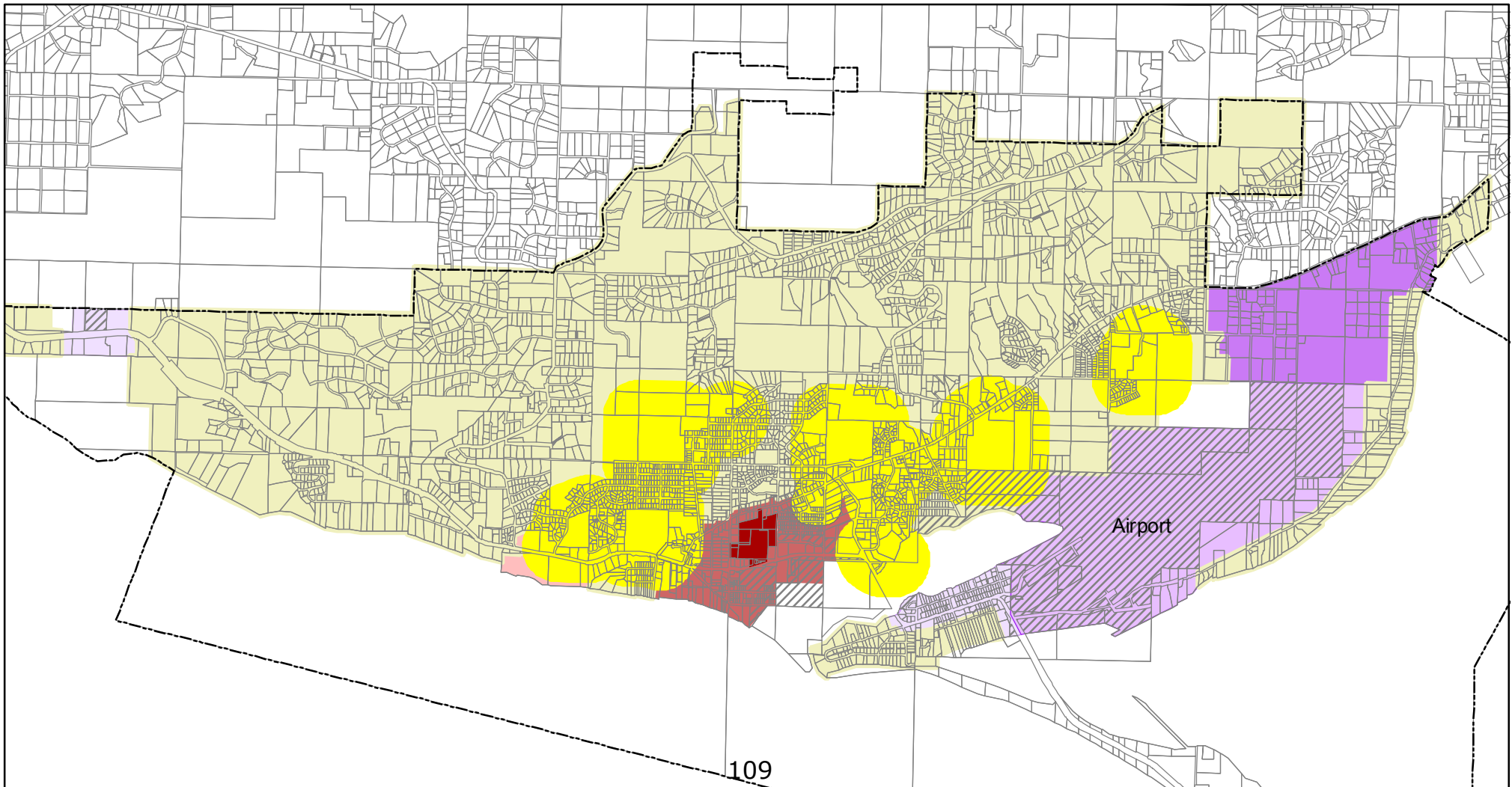
City/State Fed Lands - not available for use

City Limits

# City Wide Draft Commercial Marijuana Areas 6/15/2015



0 0.25 0.5 1 1.5 Miles





# Legend

## Allowed by Area

Parcels

## Zoning

Federal Double Penalty Areas

Central Business District

Residential Zones + 100 ft

Town Center

City/State Fed Lands - not available for use

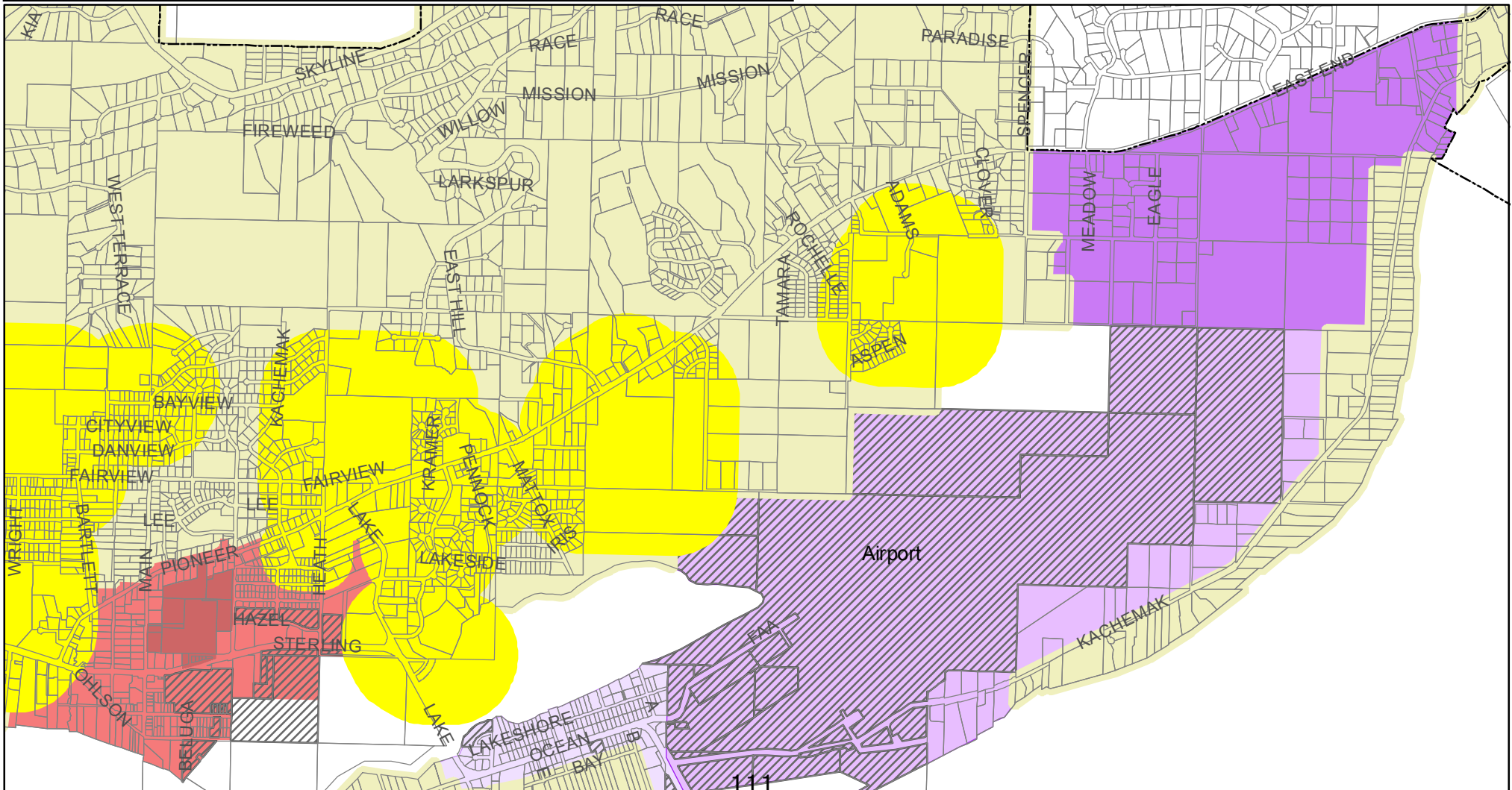
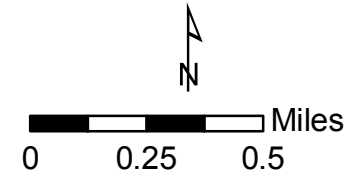
General Commercial 1

City Limits

General Commercial 2

East End Mixed Use

# Draft Commercial Marijuana Areas 6/15/2015







1 **CANNABIS ADVISORY COMMISSION BYLAWS**

2  
3 The Cannabis Advisory Commission is established with those powers and duties as set forth in Chapter 2,  
4 Section 78, of the Homer Municipal Code.

5 The Commission is established to act in an advisory capacity to the City Manager and the City Council and  
6 shall serve as the local regulatory authority for purposes of AS 17.38 within the City.

7 The Commission’s jurisdiction is limited to the area within the city boundaries except for those extra  
8 territorial interests, such as trails and city properties, subject to city jurisdiction.

9  
10 The Cannabis Advisory Commission membership will consist of nine members; five members of the  
11 public, two members may be residents from outside the city limits, preference shall be given to City  
12 resident applicants; Two Council members, one member of the Homer Advisory Planning Commission,  
13 who shall be nominated by the Mayor and confirmed by the Council, and the Chief of Police.

14 Members will be appointed by the Mayor for three-year terms (except to complete terms) subject to  
15 confirmation by the City Council.

16 There will be regular monthly meetings of the Commission and permanent records or minutes shall be  
17 kept of the proceedings. The minutes will record the vote of each member upon every question. Every  
18 decision shall be filed in the office of the City Clerk and shall be public record open to inspection.

19  
20 **HISTORY**

21 The By-laws were approved by the Cannabis Advisory Commission on July 23, 2015 and by the Homer  
22 City Council on August 10, 2015, and shall be in effect and govern the procedures of the Commission. The  
23 duties and responsibilities of the Commission are:

24 A. Act in advisory capacity to the City Manager and the City Council on regulatory issues in the city.  
25 Consideration may include existing facilities, possible future developments and recommendations on land  
26 use.

27 B. Consider any specific proposal, problem or project as directed by the City Council.

28  
29 **BY-LAWS**

30  
31 A. To abide by existing Alaska State Law, Borough Code of Ordinance, where applicable, and Homer  
32 Municipal Code;

33  
34 B. To abide by Robert’s Rules of Order, current edition, in so far as this treatise is consistent with  
35 Homer Municipal Code.

36  
37 **C. REGULAR MEETINGS:**

38 1. The commission will meet on the fourth Thursday of the month at 5:30 p.m. with the  
39 exception of November the commission will meet on the last Monday and December the  
40 commission will meet on the third Thursday of the month due to the holidays.

41  
42 2. Items will be added to the agenda upon request of staff, the Commission or a  
43 Commissioner. Agenda deadline is the Wednesday of the week preceding the meeting  
44 date at 12:00 p.m.

45  
46 3. Removing items from the published agenda will be by consensus of the Commission. No  
47 items may be added.

48  
49 4. Commissioners will give the Clerk’s Office or Chair a minimum of a two week notice  
50 or as soon as possible regarding their potential absence from a meeting.

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**D. COMMITTEES**

1. The commission shall submit a request for approval to City Council to form special committees. Committee membership shall include at least two Commissioners. The commission will submit in memorandum form to council the reason for establishing a committee, the task(s) assigned to the committee and the expected term for the committee plus a list of persons to be appointed to the committee such as Council members, department personnel, or number of public in specific sectors or with special experience preferred.
2. One committee member shall be appointed as Chair and work with the City Clerk's Office to create the agenda and schedule of meetings so they may be advertised in accordance with Alaska State Law and Homer City Code.
3. One committee member shall be appointed and responsible for furnishing summary notes of all Committee meetings to the City Clerk.
4. Committees shall meet in accordance with Commission bylaws and Robert's Rules.
5. Committees will make a progress report at all commission meetings.
6. No committee shall have other than advisory powers.
7. Per Robert's Rules and the resolution creating the committee as established by City Council upon giving final report the committee is disbanded.
8. All meetings are to be conducted in City Hall where they may be recorded.

**E. COMMISSION MEETING PUBLIC COMMENT/TESTIMONY AND AUDIENCE COMMENT TIME LIMITS**

1. The Chair shall note for the audience's benefit that there is a three minute time limit each time there is a place in the agenda for public comment/testimony or audience comments.
2. Any individual wishing to address the Commission shall adhere to a three minute time limit. It is the responsibility of the Chair to announce under Public Comments, Public testimony on public hearing items and Audience Comments that there is a 3 minute time limit.
3. Time limits may be adjusted by the 2 minutes up or down with the concurrence of the body in special circumstances only such as agenda content and public attendance.

**F. SPECIAL MEETINGS:**

1. Called by Chair or majority of the Commission only when required to complete time sensitive business of the commission, at the request of City Administration or City Council.

**G. DUTIES AND POWERS OF THE OFFICERS:**

1. A Chair and Vice-Chair shall be selected annually (November meeting) by the appointive members.
2. The Chair shall preside at all meetings of the Commission, call special meetings in accordance with the by-laws, sign documents of the Commission, see that all actions and notices are properly taken, and summarize the findings of the Commission for the official record.
3. The Vice-Chair shall perform all duties and be subject to all responsibilities of the Chair in his/her absence, disability or disqualification of office. The Vice-Chair will succeed the Chair if he/she vacates the office before the term is completed, to complete the unexpired term. A new Vice-Chair shall be elected at the next regular meeting.

**H. MOTIONS TO RECONSIDER:**

1. Notice of reconsideration shall be given to the Chair or Vice-Chair, if the Chair is unavailable, within forty-eight hours from the time the original action was taken.
2. A member of Commission who voted on the prevailing side on any issue may move to reconsider the Commission's action at the same meeting or at the next regular meeting of the body provided the above 48-hour notice has been given.
3. Consideration is only for the original motion to which it applies.

**I. CONFLICT OF INTEREST:**

1. A member or the Commission shall disqualify himself/herself from participating in any official action in which he/she has a substantial financial interest.
2. Should the Commission member not move to disqualify himself/herself after it has been

113 established that he/she has a substantial financial interest, the Commission may  
114 move to disqualify that member by a majority vote of the body.  
115

116 **J. QUORUM; VOTING:**

- 117 1. Four Commission members shall constitute a quorum.
- 118 2. Four affirmative votes are required for the passage of a resolution or motion.
- 119 3. Voting will be by verbal vote, the order to be rotated. The final vote on each resolution  
120 or motion is a recorded roll call vote.
- 121 4. The City Manager, Mayor and High School student shall serve as consulting members of  
122 the Commission but shall have no vote  
123

124 **K. CONSENSUS:**

- 125 1. The Commission may, from time to time, express its opinion or preference concerning a  
126 subject brought before it for consideration. Said statement, representing the will of the  
127 body and meeting of the minds of the members, may be given by the presiding officer  
128 as the consensus of the body as to that subject without taking a motion and roll call vote.

129 **L. ABSTENTIONS:**

- 130 1. All Commission members present shall vote unless the Commission, for special reasons,  
131 permits a member to abstain.
- 132 2. A motion to excuse a member from voting shall be made prior to the call for the question  
133 to be voted upon.
- 134 3. A member of the Commission requesting to be excused from voting may make a brief,  
135 oral statement of the reasons for the request and the question of granting permission to  
136 abstain shall be taken without further debate.
- 137 4. A member may not be permitted to abstain except upon the unanimous consensus of  
138 members present.
- 139 5. A member may not explain a vote, may not discuss the question while the roll call vote is  
140 being taken and may not change his/her vote thereafter.  
141

142 **M. VACANCIES:**

- 143 1. A Commission appointment is vacated under the following conditions and upon the  
144 declaration of vacancy by the Commission.
- 145 2. The Commission shall declare a vacancy when the person appointed:
  - 146 A. fails to qualify to take office within 30 days after his/her appointment;
  - 147 B. resigns and the resignation is accepted;
  - 148 C. is physically or mentally unable to perform the duties of his/her office;
  - 149 D. misses three consecutive regular meetings unless excused; or
  - 150 E. is convicted of a felony or of an offense involving a violation of his/her  
151 oath of office.  
152

153 **N. GENERAL ORDER OF BUSINESS:**

154	NAME OF BODY	DATE OF MEETING
155	PHYSICAL LOCATION OF MEETING	DAY OF WEEK AND TIME OF MEETING
156	HOMER, ALASKA	MEETING ROOM

157  
158 NOTICE OF MEETING  
159 REGULAR MEETING AGENDA

- 160 1. CALL TO ORDER
- 161 2. APPROVAL OF AGENDA
- 162 3. PUBLIC COMMENTS REGARDING ITEMS ON THE AGENDA. (3 MINUTE TIME LIMIT)
- 163 4. RECONSIDERATION
- 164 5. APPROVAL OF MINUTES or CONSENT AGENDA.
- 165 6. VISITORS (Chair set time limit not to exceed 20 minutes) (Public may not comment on the  
166 visitor or the visitor's topic until audience comments.) No action may be taken at this time.
- 167 7. STAFF & COUNCIL REPORT/COMMITTEE REPORTS/BOROUGH REPORTS (Chair set time limit  
168 not to exceed 5 minutes.)
- 169 8. PUBLIC HEARING (3 MINUTE TIME LIMIT)
- 170 9. PLAT CONSIDERATION (Planning Commission only)
- 171 10. PENDING BUSINESS or OLD BUSINESS
- 172 11. NEW BUSINESS or COMMISSION BUSINESS
- 173 12. INFORMATIONAL MATERIALS (NO ACTION MAY BE TAKEN ON THESE MATTERS, THEY MAY

- 174 BE DISCUSSED ONLY).
- 175 13. COMMENTS OF THE AUDIENCE (3 MINUTE TIME LIMIT)
- 176 14. COMMENTS OF THE CITY STAFF (not required) (Staff report may be at this time in the
- 177 agenda.)
- 178 15. COMMENTS OF THE COUNCILMEMBER (If one is assigned)
- 179 16. COMMENTS OF THE CHAIR (May be combined with COMMENTS OF THE
- 180 COMMISSION/BOARD since the Chair is a member of the Commission/Board.)
- 181 17. COMMENTS OF THE COMMISSION
- 182 18. ADJOURNMENT/NEXT REGULAR MEETING IS SCHEDULED FOR \_\_\_\_\_
- 183 note any worksessions, special meetings, committee meetings etc. All meetings scheduled to be
- 184 held in the Homer City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer,
- 185 Alaska.
- 186

187 **O. PROCEDURE FOR CONSIDERATION OF AGENDA ITEMS:**

188 The following procedure will normally be observed pursuant to Robert's Rules:

- 189 1. A motion is made to discuss the item OR to approve the staff recommendation. The
- 190 item may then be discussed, amended or voted on.
- 191 2. If there are questions of staff or an appropriate audience member, a Commissioner
- 192 may request permission from the Chair to ask the question. The Chair, upon
- 193 consensus approval, may grant the request.
- 194

195 **P. BYLAWS AMENDED:**

196 The bylaws may be amended at any meeting of the Commission by a majority plus one vote of

197 the members, provided that notice of said proposed amendment is given to each member in

198 writing. The proposed amendment shall be introduced at one meeting and action shall be taken

199 at the next commission meeting.

200

201

202 **Q. TELECONFERENCE:**

203 Teleconference meetings.

204

205 1. The preferred procedure for Commission meeting is that all members be physically

206 present at the designated time and location within the City for the meeting. However, physical

207 presence may be waived by the Chair or Commission and a member may participate in a meeting

208 by Teleconference when it is not essential to the effective participation or the conduct of business

209 at the meeting.

210 A. A Commission member participating by teleconference shall be deemed to be

211 present at the meeting for all purposes. In the event the Chair participates telephonically,

212 the Vice-Chair shall run the meeting.

213

214 2. Teleconference procedures.

215 A. A Commission member who cannot be physically present for a regularly scheduled

216 meeting shall notify the recording clerk at least five days prior to the scheduled time for the

217 meeting of his/her intent to appear by telephonic means of communication.

218 B. The recording clerk shall notify the Commission members three days prior to the

219 scheduled time for the Commission meeting of Commission members intending to appear by

220 teleconference.

221 C. The means used to facilitate a teleconference meeting of the Commission must enable

222 each Commission member appearing telephonically to clearly hear all other Commission members

223 and members of the public attending the meeting as well as be clearly heard by all other

224 Commission members and members of the public.

225 D. The recording clerk shall note in the attendance record all Commission members

226 appearing telephonically.

227

228 **LEGISLATIVE HISTORY**

229 Cannabis Advisory Commission established by Ordinance 15-07(A)(S)(A)

**2015 HOMER CITY COUNCIL MEETINGS**  
**CANNABIS ADVISORY COMMISSION ATTENDANCE**

It is the goals of the Commission to have a member speak regularly to the City Council at council meetings. There is a special place on the council's agenda specifically for this. After Council approves the consent agenda and any scheduled visitors it is then time for staff reports, commission reports and borough reports. That is when you would stand and be recognized by the Mayor to approach and give a brief report on what the Commission is currently addressing, projects, events, etc. **A commissioner is scheduled to speak and has a choice at which council meeting they will attend. It is only required to attend one meeting during the month that you are assigned.** However, if your schedule permits please feel free to attend both meetings. Remember you cannot be heard if you do not speak.

The following Meeting Dates for City Council for 2015 is as follows:

June 15 & 29, 2015	<u>Commissioner Jones</u>
July 27, 2015	_____
August 10, 2015	<u>Commissioner Robl</u>
September 14, 2015	<u>Commissioner Stead</u>
October 12, 2015	<u>Commissioner Monroe</u>
November 23, 2015	_____
December 14, 2015	_____

Please review and if you will be unable to make the meeting you are tentatively scheduled for please notify the Chair who may contact another commissioner or attend the meeting.