1. Working group name:

*Cultivation Working Group*

1. Individual sponsor(s):

*Amanda Connor-Connor & Connor*

*Tessa Rognier-Nevada Department of Agriculture*

1. Describe the recommendation:

*The recommendation is to guide the Nevada Department of Taxation on the issuance of licensing for marijuana establishments during the 18 month period after the Department begins to receive applications. For the Medical Marijuana Establishment (MME) program there were 182 cultivation establishments initially approved. Of the 182, there are currently 87 facilities approved and currently operating, with 91 MME licenses in provisional status. Many of these operating facilities are not utilizing their entire facility footprint due to the high supply of marijuana currently available. We recommend approving retail marijuana cultivation establishment requests to existing Medical Marijuana Establishments at a ratio of 1 to 1, giving approved and provisional MME’s the first opportunity to expand into the new market. With these additional provisional licenses coupled with the potential for expansion by current MME facilities, we believe the supply needed to fulfill the increase in demand the retail program will create can be met for the 18 months, we do not see a need to approve any further cultivation licensees.*

*We recommend that the Department ~~can~~ annually evaluate marijuana market supply to assess new cultivation requests to assure market stability and supply. In the attached supply analysis for the Nevada Medical Marijuana Establishment Program, we calculated an estimated 0.1 pounds of marijuana can be grown indoors per square foot of grow room space. Using this type of calculation would help the Department determine facility growth needs to match growth in the medical and retail markets.*

1. Which guiding principle(s) does this recommendation support?

*Guiding Principal 2 - Be responsive to the needs and issues of consumers, non-consumers, local governments and the industry*

1. What provision(s) of Question 2 does this recommendation apply to?

*Section 10- Certification of marijuana establishments*

1. What issue(s) does the recommendation resolve?

*The issue of a balance between the supply of safe marijuana and marijuana products and consumer demand. Creating an oversupply can cause prices to drop thus creating an unsustainable industry for marijuana establishments.*

1. Was there dissent in the group regarding this recommendation? If yes, please provide a summary of the dissenting opinion regarding the recommendation.

*Not known.*

1. What action(s) will be necessary to adopt the recommendation? Will statute, policy, regulations, etc. need to be addressed?

*Department of Taxation policy for granting marijuana establishments should be addressed.*

1. Additional information (cost of implementation, priority according to the recommendations, etc).

*Not known.*

**Supply Analysis for Nevada Medical Marijuana Program**

**Cultivation Supply Data and Assumptions**

 Figure 1: Total cultivation square footage breakdown of 65 of 87 currently open establishments

*The average Square footage of Nevada Medical Marijuana Establishments was found to be 26,000 square feet, with data from 65 facilities, as shown in figure 1. There are three facilities with square footage over 100,000 square feet, five facilities between 50,000-99,999 square feet, and eight facilities with square footage ranging from 30,000-49,999. The majority of facilities are in the range of 29,999 square feet or less. With 30 facilities ranging from 10,000-29,000 and 19 facilities under 10,000 square feet. These figures are the total square footage for the building footprint, not the actual grow room space.*

*Figure 2, breaks out the total and predicted Nevada combined cultivation facility footprint, based on the average facility size of 26,000 square feet. Assuming that all the provisional licenses will fall within the same average facility square footage, the current 87 licenses and 91 provisional licenses will hold approximately 4,628,000 square feet when completely built out.*

*While these numbers depicts the total cultivations square footage, they lack a correlation to how much of the cultivation facility will be dedicated to actual cultivation of marijuana. Marijuana yield from a cultivation facility is commonly estimated based on the total square footage of the cultivation dedicated specifically to flowering (the part of the cycle that yields the marijuana flowers or buds).*

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*Figure 2: Breakdown of current and predicted total cultivation facility square footage based on average facility square footage of 26,000 ft2/facility*



*Table 1 shows two ranges for approximation of flowering space within a cultivation facility. The low end of 20% was a conservative estimate, however it was also projected that most cultivations would dedicate at least 65% of their facility to cultivating marijuana, with >85% of this allotment going solely to flowering rooms. This results in a normal estimate that a cultivation facility will dedicate 55% of their facility square footage to flowering. Table 1 also estimates annual yield based on square footage of flowering space, assuming a low yield and high yield potential. The yield, lb/square footage was based off of cultivators stated yields.*

*Using these assumptions, Table 2 details a range of harvest potential assuming both low and high end cultivation flowering space, and low and high yield assumptions. This creates a range of harvest yield for an average cultivation facility to be within approx. 520 – 2500 lbs per facility depending on the scenario chosen.*



*The yield results in Table 2 were applied to the total operating and provisional licenses to project total marijuana yield as shown in Figure 3. Based on the current and pending cultivation capacity, it is estimated that the total state production of marijuana flower will yield 45,000 – approx. 450,000 pounds per year.*

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*Figure 3: The projected annual marijuana harvest in Nevada based on assumptions made in table 1 and table 2 and assuming average facility footprint of 26,000 space (total building space)*

*Nevada Consumer Market Analysis*

*It is extremely complicated to assess the market demand for recreational marijuana in Nevada. There are multiple factors to assess, and this short analysis does not intend undertake this arduous task. Colorado has been selling recreational and retail marijuana since 2014. This program is has been strictly monitored by the Colorado Marijuana Enforcement Division (MED). The data taken to form this assessment, and which the following assumptions have been based on, has been sourced primarily from the MED 2015 annual report.*

 *Colorado’s Market and demand is broken down below:*

* *In 2015, Colorado sold 251,472 lbs of marijuana to patients, residents and tourists1.*
* *In 2015, Colorado had approximately 113,000 medical patients2 and approximately 77,100,000 tourism visitors3, and was measured of having 5,457,000 residents4*
* *Medical Marijuana sales in Colorado in 2015 accounted for 144,540 lbs or 57.48% of the total marijuana market1*
* *Retail and recreational marijuana market accounted for 106,932 lbs or 42.52% of the total marijuana market1*
* *Based on the Colorado population (non-medical patients) and tourisms numbers, every person who traveled to or lived in Colorado in 2015 consumed 0.59 grams of marijuana. This number includes people under the age of 21 and people who abstained from marijuana*
* *Colorado medical patients consumed approximately 1.28 lbs per patient in 2015*

*Nevada Market Numbers are presented below to correlate to the above stated Colorado and market demand:*

* *In 2015 Nevada had approximately 4,700,000 visitors to the Reno/Tahoe area5, 42,312,216 visitors to Las Vegas6, and 2,891,000 permanent residents7.*
* *The most current patient population report in Nevada, February 2017, listed 26,519 patients*
* *Based on the above, the total visitors, and non-medical residents is 49,903,216 people*

*Assuming Nevada follows a similar market demand based on medical marijuana patients, tourism visitors and residents, the following is a projection of the Market. The projection is based on the following scenarios:*

*Scenario 1: Medical will follow the same as Colorado, 1.28 lbs per patient annually, and each visitor and non-medical resident will purchase and consume 0.59 grams.* ***This results in a market demand of 98,646.6 lbs per year***

*Scenario 2: Medical will follow the same as Colorado, 1.28 lbs per patient annually, and each visitor and non-medical resident will purchase and consume 1.18 grams, two times consumed in Colorado in 2015.* ***This results in a market demand of 163,372.4 lbs per year***

*Scenario 3: Medical will follow the maximum allotment of 2.5 oz/two week period or approximately 4.06 lbs per patient annually, and each visitor and non-medical resident will purchase and consume 0.59 grams.* ***This results in a market demand of 172,459.2 lbs per year***

*Scenario 4: Medical will follow the maximum allotment of 2.5 oz/two week period or approximately 4.06 lbs per patient annually, and each visitor and non-medical resident will purchase and consume 1.18 grams, two times consumed in Colorado in 2015.* ***This results in a market demand of 237,185 lbs per year***

*Scenario 5: Medical will follow the maximum allotment of 2.5 oz/two week period or approximately 4.06 lbs per patient annually, and each visitor and non-medical resident will purchase and consume 1.18 grams, two times consumed in Colorado in 2015* ***This results in a market demand of 431,994.4 lbs per year***

*It is estimated that the total marked demand in NV will fall similar to Colorado projects and possible meet the projections in Scenario 2 and Scenario 3. Based on these numbers, even with the highest projections, Scenario 5, the total open and provisional licenses will be able to meet the demand. Figure 4 details the 5 scenarios based on the Nevada annual projected harvest.*



*Figure 4: The projected annual marijuana harvest and demand scenarios*