



# Designing for Hedonism: Design Issues Related to Breweries and Marijuana Greenhouses

by Jeffrey Clay Ruebel, Esquire

he·don·ism - noun

the pursuit of pleasure; sensual self-indulgence.

the ethical theory that pleasure (in the sense of the satisfaction of desires) is the highest good and proper aim of human life.

## Introduction

While the production and retail sale of alcohol has had a long history in the United States, allowing those providing services to assess the risks and benefits from engaging in the alcohol industry—the same cannot be said for the marijuana industry. Not only is this new, burgeoning industry struggling with the growing pains faced by any new business opportunity, it is handicapped by conflicting approaches by different states and the federal government and uncertainty on the part of regulatory and safety bodies as to what standards should be applied to the industry. This paper:

- provides a summary of both the distillery and marijuana industries;
- highlights code provisions for marijuana facilities that are or will likely be adopted by municipalities where such activities take place; and
- discusses current and potential legal theories and causes of action that might be faced by a design professional that may arise from working with those industries.

## Federalism

Any discussion of the marijuana industry has to start with the perplexing question of federalism. The continued illegality of marijuana at the federal level and in some states, while others have wholeheartedly embraced marijuana decriminalization, has created an uneven legal landscape. The U.S. Department of Justice has stated its policy on drug enforcement priorities, and it includes preventing revenue from the sale of marijuana from going to criminal enterprises and preventing the diversion of marijuana from states where it is legal under state law to other states. As a result, marijuana companies face difficulties in their efforts to obtain legal advice, banking services, and insurance coverage for certain types of claims.

While the courts have yet to establish the precise contours of federal preemption doctrine, the preemptive reach of the federal Controlled Substances Act is relatively modest.<sup>1</sup> Recognition of this legal reality likely played a significant role in the Department of Justice (DOJ) decision not to challenge the Colorado and Washington State ballot initiatives legalizing and regulating marijuana for adult use, as well as subsequent efforts in other states.<sup>2</sup> Notwithstanding the DOJ “hands off” approach, there remains a less than tolerant attitude on the part of the federal government towards marijuana usage, be it medicinal or recreational. Yet, even if the federal government continues to adhere to its commitment to not enforce federal drug laws against those complying with state regulatory regimes, the consequences flowing from the continuing federal prohibition remain significant. Banks, attorneys, insurance companies,

---

**Jeffrey Clay Ruebel** has been licensed to practice law in Colorado since October of 1983; in Wyoming since 2012; and in the Tribal Court for the East Shoshone and Northern Arapahoe since 2015. He graduated from Lawrence University in Appleton, Wisconsin with a Bachelor of Arts degree and from the University of Colorado with a Juris Doctor in 1983. He joined Wood, Ris and Hames where he was a shareholder at the time he left that firm in 1995 to form Campbell, Latiolais and Ruebel, P.C. In 2010, he formed Ruebel & Quillen, LLC. His current practice is concentrated in the representation of architects, engineers, surveyors, and others in the construction industry. He is a member of DRI and the Association of Defense Trial Attorneys [ADTA]. He is also a member of the American Board of Trial Advocates. He has conducted numerous seminars for various companies, insurance trade associations, the Colorado Bar Association, and others. He is also the current president of the Colorado Soccer Association.

and others are concerned about violating federal law and careful in providing capital, legal advice, or other basic professional services necessary for marijuana businesses to function.

This schizophrenic approach to marijuana decriminalization is well-illustrated in the Colorado case of *Coats v. Dish Network*.<sup>3</sup> Under Colorado state law, it is considered discriminatory “for an employer to terminate the employment of any employee due to that employee’s engaging in any lawful activity off the premises of the employer during nonworking hours.”<sup>4</sup> Coats argued that his employer, Dish Network, violated this statute by firing him for using medical marijuana after work even though he was acting in accordance with Colorado law. Coats had obtained a medical marijuana license in 2009. When he tested positive for tetrahydrocannabinol (or THC, the active mind-altering ingredient in marijuana) during a random drug test, he was fired for violating the company’s drug policy. His suit was dismissed by the trial court and that decision was affirmed by the court of appeals. The Colorado Supreme Court agreed with the lower courts, determining that despite the state law, Coats’ marijuana use couldn’t be considered lawful because it violated federal law.

Not only is the scope of federal preemption still an open issue, there is also an attack on legalization from another source. Nebraska and Oklahoma are seeking a declaration from the United States Supreme Court that Colorado’s marijuana scheme violates the Constitution. This state-versus-state lawsuit, brought as an original action in the United States Supreme Court, tests whether individual states can effectively nullify federal law.

Notwithstanding the legal issues, it is difficult to believe that an industry generating multiple billions of revenues will be dismantled by federal fiat. This leads to the conclusion that the marijuana industry will survive in some form. Presumably, a compromise solution will be reached that will involve a regulatory scheme combining both federal and state regulation.

Even if heavily regulated, however, we can expect that tort liability will survive as a component of the marijuana business. It is rational to think that the liquor industry will provide a template for courts as they consider issues of first impression arising out of the marijuana industry. Our experience in Colorado indicates that those involved in the industry are a litigious group, and those involved, even in the periphery, need to be prepared for claims of all types.

## Special Issues of the Industries

### Breweries and Distilleries

Since breweries and distilleries have been built in the United States since its founding as a colony, there are clear standards and code provisions for such businesses. However, the applicability of various code requirements can vary, depending on if there is brewing on-site; the physical layout of the brewery; and how materials are stored.

#### *Premises Layout*

An efficient and safe design of the brewery space is crucial. First, the biggest ingredient in beer can be the biggest problem in making the beer. Not only is water quality crucial, but the design must ensure that adequate water pressure and flow for rinses and mashing can be achieved. A filtration treatment system is typically designed into the overall system to address this potential problem.

Properly handling the discharge from your brewing operation can be as much of an art as a science. The municipality should be consulted to achieve the required acceptable quality and volume of the discharge. The municipality might also require the brewery to treat this water.

Anchoring of platform posts and tank legs is another commonly overlooked design requirement. Municipal inspectors will frequently insist on additional, enhanced anchoring of brewing equipment and those needs are best addressed early in the design process.

To ensure efficient operation, the layout of the brewing facility requires the necessary dimensions to account for height as much as width, angles as well as straight-on shots. The pathway to a clean set-up also has to account for all pieces of equipment AND the equipment to move them, which in many cases exceeds the size of tanks being put in place.

Another area to check is the floorway. Floors that are not sloped properly or contain the necessary number and placement of drains will quickly result in a slipping zone for your employees and brewery tour guests. Drains themselves need to be addressed. They need to be constructed of a material that will hold up to the high temperatures associated with the brewing and cleaning liquids.

Cleanliness is also an area that must be accounted for in designing a brewery. Contamination during the brewing process is one of the most prevalent issues for a brewery. Generally, design professionals specify high quality stainless steel because it makes cleaning easier.

Temperature consistency must also be integrated into the brewery design. When brewing beer, temperature is a vital component of the process. The components must be heated to exact temperatures and those temperatures must be maintained for set timeframes.

### *Other Concerns*

Other concerns that must be addressed in designing a brewery are the risks of fire and explosion. One must remember that the fermentation process uses grains, and the dust from that product is highly combustible. Controlling combustible dust and proper ventilation are key to avoiding what is often a spectacular disaster. Ventilation and spark repression are crucial in the design of a brewery.

Finally, one must remember that the end-product is frequently a flammable liquid. For example, whiskey is classified as a flammable liquid. When storing the harder liquors, the design professional has to meet fire codes and NFPA standards for flammable liquids.

## Marijuana

The typical business model for retail marijuana has three components: a dispensary where the marijuana is sold; a grow facility where plants are seeded, grown, and harvested; and infusion facilities where THC is extracted from plants for use in hash oil, edibles, and other products. Each has its own set of unique risks.

Because marijuana as an industry is relatively new, building, fire, and zoning regulators have struggled to identify risks and develop code provisions to ensure public safety. Violations that have been identified include overloaded electrical systems, noncompliant construction (e.g., unpermitted construction, noncompliant locks), using unapproved marijuana extraction equipment, unapproved CO2 enrichment systems, and occupying a space without a certificate of occupancy.

### *Dispensary*

Because the sale of marijuana is not legal under federal law, operators have difficulty obtaining banking services and thus operate as all cash businesses. Between marijuana inventory and cash on hand, security is a big concern for retail centers. As a consequence, security measures frequently result in noncompliant means of egress. Dead-bolted doors or electronically secured doors must comply with fire code requirements to allow free egress for occupants at all times.

### *Grow Facilities*

Plant cultivation locations, or “grows” as they are called in slang, have many safety concerns that are increasingly heavily regulated. Greenhouses are traditionally regulated as U occupancies in the International Building Code (IBC). However, the hazards are different in a marijuana grow than in a standard vegetable greenhouse. Thus, Denver classifies grows as FI occupancies. The F1 occupancy classification was determined based on high electric demand for grow lamps, fumigation operations, carbon dioxide (CO2) enrichment, maze-like room layouts, and the fact that most grows in Denver are located in former storage occupancies (warehouses) and can have neighboring tenants potentially affected by these operations.

Growing marijuana is labor intensive. The occupant load of workers is higher than one would expect in a typical U occupancy greenhouse. Larger grow operations can have more than 100 employees, and they operate around the clock.

Electrical demands to serve the numerous grow lamps typically operating at 1,000 watts each are very high. Fires have occurred as a result of the melting of the overhead electrical service. There have been reported instances where the inside electrical system was sized correctly and inspected, but the electric utility service from the transformer was never upgraded.

The demand for space to grow plants is increasing. With most growing performed in former warehouse buildings, vertical building height already exists in their space. This has resulted in a new issue as growers have vertical plant growing on tiers of storage racks up to 30 feet in height. Municipalities are assessing whether to regulate these operations as high-pile storage or something different.

CO2 enrichment systems found in marijuana grow rooms are different in that they intentionally flood the grow rooms with CO2. These systems present potential asphyxiation hazards and are regulated by operational and system installation permits. These systems are required to have a local CO2 detection system in each enriched room set to alarm at 5,000 ppm and a master control valve to shut off the flow of CO2 at the source. Warning signs are also required.

Typical CO2 enrichment can be in the form of compressed/liquefied CO2 systems or a CO2 generator supplied by natural gas. Compressed/liquefied CO2 systems can be as small as a few cylinders located inside each grow room or as large as a bulk tank located outdoors. CO2 generators operate from a fuel-fired source that, as a part of the combustion process, off-gases CO2 and carbon monoxide (CO). Because of the CO hazard, this appliance is regulated by the mechanical code as a non-vented, fuel-fired appliance and requires a CO detector interlocked to an exhaust fan that operates on high levels of CO. Most jurisdictions in Colorado do not permit the use of portable propane tanks and cylinders to supply these generators. If used, they are required to be supplied from the building natural gas system.

Fumigation is an operation that is now typically regulated and requires an operational permit to perform. Under this permit, hazard signage is posted at entrances, and the type of occupancy is reviewed for any potential threat to adjacent tenants. This has proven difficult to enforce as growers sometimes fumigate overnight without the appropriate permits. The methods of most concern are sulfur burners to control powdery mildew and CO2 fumigation to control pests. Sulfur burners heat elemental sulfur, creating sulfur dioxide. If inhaled, sulfur dioxide can create sulfuric acid in the presence of moisture and can burn the respiratory tract. CO2 can be used to fumigate at levels above OSHA's immediately dangerous to life or health level of 40,000 ppm to control pests. Both of these operations are of concern to workers entering the space, adjacent tenants unaware of this fumigation activity, and first responders entering after hours.

Finally, marijuana plants emit a very strong "skunk like" odor, and local authorities typically require ventilation systems to be installed such that any odors are prevented from leaving the premises. This is usually accomplished by installing a charcoal filter on the discharge of the exhaust duct. Other methods to reduce odors include ozone generators and ionizers.

### *Manufacture of Infused Product*

A more concentrated form of THC can be extracted in a highly-concentrated oil. Extraction using butane is the most cost effective, yet the most dangerous method used. For this reason, many fire codes prohibit open releases of butane to the atmosphere during extraction.

Several manufacturers produce equipment that cycles butane around a closed loop system passing through the plant material. The butane under pressure in liquid form acts as a solvent and breaks the THC from the plant. The butane is recollected and oil can then be retrieved. Currently, there are no listings (such as UL) for this equipment. Thus, Denver and other jurisdictions require an engineering analysis of the extraction process, signed and stamped by a professional engineer.

Businesses using this equipment are also required to have a hazardous exhaust system installed to capture any potential release of butane, and the Colorado state marijuana laws require that the operation be in a dedicated room. Additionally, a local hydrocarbon detector is required to alert the operator of butane leaks.

CO2 extraction is another method of producing marijuana oil. The equipment must follow the same approval and permitting process as the butane equipment. Although there is no explosion risk as there is with butane, the systems can run at pressures as high as 10,000 pounds per square inch (psi). Consequently, the equipment must be reviewed to ensure it is constructed appropriately. Businesses using this equipment are required to perform the extraction in a dedicated room, and a local CO2 alarm is required to alert of CO2 leaks.

Another extraction method is an alcohol distillation or heated evaporation process. Although alcohol is common, any flammable liquid can be used. Marijuana is soaked in alcohol and then the liquid is boiled off, leaving the oil behind. Larger operations recapture the

alcohol in a distillation process for reuse. This process can also be used as a refinement after a CO<sub>2</sub> or butane extraction. A number of methods and types of equipment can be used for this extraction process. When employing this process, a hazardous exhaust hood is required over the extraction process to capture any flammable vapors released, and equipment must be rated for heating flammable liquids. The one exception is a piece of equipment called a “solvent distillation unit” that is regulated in International Fire Code 3405 and has a UL listing specifically for distilling solvents.

## Code Provisions

Building code and municipal entity groups have recognized the unique qualities inherent in breweries, distilleries, and marijuana facilities. Thus, NFPA and code provisions have been developed and constantly updated to ensure the safety of the manufacturing process.

### Breweries and Distilleries

Standards that most commonly apply to distilleries and breweries:

- NFPA 10 – Portable Fire Extinguishers
- NFPA 13 – Standard for Installation of Sprinkler Systems
- NFPA 30 – Flammable and Combustible Liquids
- NFPA 61 – Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
- NFPA 69 – Standard on Explosion Prevention Systems
- NFPA 72 – National Fire Alarm and Signaling
- NFPA 497 – Recommended Practice for Classification of Flammable Liquids, Gases or Vapors and of Hazardous (Classified) Locations for Electrical Installation in Chemical Process Areas
- NFPA 499 – Recommended Practice for Classification of Combustible Dusts and of Hazardous Locations for Electrical Installation in Chemical Process Areas
- NFPA 780 – Standard for the Installation of Lightning Protection Systems

The most common occupancy classifications for distilleries are:

- Assembly – A-2 Food and/or Drink Consumption
- Factory – F-1 Moderate Hazard (although breweries are frequently designated F-2 Low Hazard)
- High-Hazard – H-2 Accelerated Burning, Combustible Dust exceeding qtys in open storage >15PSi; or H-3 Materials that readily support combustion or pose a physical hazard <15PSi
- Storage – S-2 Moderate Hazard Storage

### Marijuana Facilities

1) Permitted?

Sample code where facilities are not permitted:

No person shall establish, develop, construct, maintain, or operate a medical marijuana dispensary, and no application for a building permit, use permit, variance, or any other entitlement authorizing the establishment, development, construction, maintenance, or operation of any medical marijuana dispensary shall be approved by xxxxxx or any officer or employee thereof.

2) Examples of code requirements from various Colorado jurisdictions:

### *Security Plan*

- Design plan must show the locations of all proposed exterior lighting and light fixture information; and
- design plan must show location of cameras, motion detectors, security system computer; and the locations of safes.

### *Operation Plan (With Attached Narrative)*

A plan for ventilation of the medical marijuana business that describes the ventilation systems that will be used to prevent any odor of medical marijuana off the premises of the business. For cultivation facilities, such plan shall also include all ventilation systems used to control the environment for the plants and describe how such systems operate with the systems preventing any odor from leaving the premises.

### *Building Guidelines*

The building permit application must meet the general building permit submittal requirements. The plans must be prepared by a Colorado design professional and must address specific medical marijuana related requirements, including the following:

- Cultivation facilities must meet International Building Code (IBC) Chapter 3 requirements based on a Use and Occupancy Classification of Factory Industrial, F-1, Moderate-hazard Occupancy (IBC 306.2).
- Centers and dispensaries must meet IBC Chapter 3 requirements based on a Use and Occupancy Classification of a Mercantile Occupancy, M, or a Business Occupancy, B depending on the amount and level of treatment services provided (IBC 309.1).
- Applicable means of egress requirements based on IBC Chapter 10.
- Applicable accessibility requirements based on IBC Chapter 11.
- Applicable fire suppression system requirements based on IBC Section 903 and local amendments.

### *Mechanical Guidelines*

A ventilation system will be required to filter the odor from a business so that it cannot be detected at the exterior of the business or at any adjoining property. The ventilation system for a medical marijuana business requires, at a minimum:

- Exhaust systems designed and constructed to capture sources of contaminants to prevent spreading of contaminants or odors to other occupied parts of the building reference "Contaminant sources," International Mechanical Code (IMC) 401.6.
- Cultivation facilities must have a ventilation rate of 60 cfm/person. Centers and dispensaries must have an outside ventilation rate of 15 cfm/person.
- Center facility exhaust outlets must be three (3) feet from property lines, operable openings into a building, and from mechanical air intakes.
- A ventilation system will be required to filter the odor from a business so that it cannot be detected at the exterior of the business or at any adjoining property.
- Cultivation facility exhaust outlets must be 10 feet from property lines, operable openings into a building, and from mechanical air intakes.

### *Energy Efficiency Guidelines*

Every medical marijuana business shall directly offset 100% of its electricity consumption through the purchase of renewable energy in the form of Colorado Wind Source, a verified subscription in a community solar garden, renewable energy generated on-site, or an equivalent that is subject to approval by the city.

### *Fire Protection*

Many jurisdictions utilize NFPA 58 as a basis for regulating extraction facilities, but it is generally acknowledged that this standard is insufficient. The NFPA convened a task group to craft a new chapter for NFPA1, fire code on marijuana grow and processing facilities. The committee accepted the draft of the new chapter and the new Chapter 39, "Marijuana Growing, Processing or Extraction Facilities," can be found in the *Second Draft Report* available online. A publication date of 2018 is expected.

In addition, Denver (and other jurisdictions) have adopted a code requirement that a state licensed design professional shall provide detailed plans and specifications on the process for extracting cannabinoids from marijuana plant products with flammable solvents, gasses, and solids.

### *Post-Construction Guidelines*

After receipt of the building permit and no more than 10 days after completion of construction and final inspection by the building department, the applicant shall submit the following:

Complete procedure for monitoring of alarm system, including: 1) names and emergency contact information of person responsible for notifying police department within 12 hours of criminal activity or attempts of criminal activity; and 2) name and contact information for landlord if applicant rents the business space.

## **Common Risk Problems**

A design professional providing services in the construction of a brewery, distillery, or grow facility must be aware of a wide variety of risks not necessarily seen in typical construction. These include the following:

### **Threat of Explosion and Fire**

Both distilleries and marijuana facilities face a significant risk of fire or explosion. In 2014, there were 32 reported butane hash-oil explosions in Colorado alone caused by using unapproved butane open-blast extraction. Breweries, too, face a surprising risk of explosion from grain dust.

Municipalities have imposed requirements on marijuana extraction facilities, grow facilities, and breweries to reduce the risk of explosion. The special design required in butane-based extraction is illustrative of the concern municipalities have regarding the unavailability of manufactured equipment that will safely perform the desired process.

Similarly, even with ventilation and NFPA protections, the risk of explosion is great enough that the National Brewer's Association recommends cleaning up immediately whenever a dust layer of 1/32-inch thickness (thickness of a paper clip) accumulates over a surface area of at least 5% of the floor area of the facility or any given room, not to exceed 1,000 sq ft. It also highlights that one should use only non-sparking equipment, such as a dustpan and broom or an explosion-proof vacuum, when performing cleaning operations.

### **Worker Safety**

According to a *Reuters* news article in 2013, state inspectors and OSHA found 547 violations of safety rules at craft breweries from 2003 through 2011.<sup>5</sup> Included in that number were 250 serious violations, according to analysis of the data. Violations ranged from failing

to enclose sprockets and chains to not ensuring machinery was disabled when an employee was inside. By comparison, large brewers, such as Anheuser-Busch and Coors, had 151 violations, including 69 serious ones, during the same period.

At marijuana grow facilities, workers are also subject to chemical exposure from fertilizers and pesticides, from sulfur dioxide as a result of fumigation, and carbon dioxide asphyxiation.

## Damage to Real Property

Because the business is illegal under federal law, but legal under state law, there is a concern that the federal government will intervene and prosecute owners of grow rooms. For this reason, the facilities that house these grow rooms are frequently leased in most cases. As leased spaces, they are not designed to be used for this purpose. The environment required for a grow room can wreak havoc on a structure built for other enterprises.

The conditions of these grow rooms are nearly identical to those of an indoor pool. Temperatures between 75° and 85°F and relative humidity (RH) values range between 60% and 65%. This elevated level of humidity comes from the natural transpiration of the plants themselves. The high levels of relative humidity can lead to condensation on building components. Many “big box” buildings have not been designed to handle the resulting temperature gradient, moisture migration via air movement, and vapor diffusion from interior to exterior space. Elevated temperatures, together with the higher RH, are even more detrimental in cold climates where winter temperatures are cooler for longer periods of time. This causes the vapor drive to be directed from inside to outside, where it can be trapped within the wall/roof, or the wall/roof components can be exposed to this condition for a longer period of time before it can naturally dry out.<sup>6</sup>

Elevated temperatures and RH can also produce an ideal environment for the propagation of biological growth and an increased likelihood of building material deterioration. This can range from moldy drywall and insulation to deteriorated structural components. This can not only cause health issues from poor indoor air quality, but it can also make the structure susceptible to further damage from the elements.

Finally, with increased moisture also comes an accelerated rate of building material deterioration, including gypsum roofs, wood walls, and insulation.

## Electrical

Computerized control systems monitor the environment and operate the equipment to maintain optimum conditions to maximize the crop yield. Failure of the computer system or electrical system can result in compromise of the plants.

## Miscellaneous

Means of egress as required in IBC, Chapter 10, is an important consideration for the facility. Marijuana growers typically do not grow in a building with one large open room. They need to isolate the plants that are at different stages of growth. Large converted warehouses can be maze-like with multiple rooms. Care must be taken to ensure that egress paths are clear and do not become blocked by equipment or storage containers.

# Design Professional Liability Issues

## Inadequate Design

An improperly designed, constructed, and operated facility can cause damage to the property or the product. Basic design elements are crucial.

- **Vapor barrier:** The walls and ceiling construction of the room should include vapor barriers and corrosion resistant materials. The walls should have sufficient insulation behind the vapor barrier to minimize the chances of moisture in the air condensing and forming water droplets on the wall.

- **Fire wall:** IBC also requires fire walls with a one-hour separation between the facilities and adjacent occupancy as well as wall and ceiling finishes with a flame spread index within the limits specified in the code. This provision is particularly important in breweries where the brewing facility occupies the same space as the retail space.
- **Plumbing:** Grow rooms should be provided with floor drains to remove spilled water and nutrient solutions. The drains should be trapped and equipped with screens to catch any plant material or other debris. The International Plumbing Code requires that water supply lines used for irrigation purposes be provided with back-flow preventers to protect the domestic water supply from contamination. Environmental contamination is a common problem for these types of facilities.
- **Electrical:** Grow facilities have a very high electrical demand due to the grow lights, air conditioning units, and other equipment. The electrical system must be sized and installed in accordance with the National Electric Code. Overloaded electrical wiring has caused fires in some marijuana grow facilities. In addition to ensuring that the electrical system inside the building is designed and installed properly, the electric service entrance equipment and conductors for the building need to be evaluated. If the facility was created as a remodel to an existing building, it may be necessary for the electric utility company to upgrade the conductors or transformer serving the building.

A simple power outage, if prolonged, can cause the loss of a roomful of plants during sensitive phases of the growth cycle.

### Product Liability

Plants that pass a state-mandated lab test may contain trace amounts of pesticides or mold, potentially exposing the entire chain of distribution—grower, test lab, and retailer—to product liability suits.

#### *Edibles*

Edibles, which utilize the oil created during extraction, are not well-regulated. Any user of such a product must realize that it takes at least 1-2 hours to experience the “high,” or euphoria, compared with smoking. The quality and quantity of THC in an edible is not standardized. Consuming multiple servings, especially at one sitting, has an additive effect for potential psychological effects. Ingesting multiple servings in a short amount of time can also lead to paradoxical or unusual reactions that can trigger intense anxiety, paranoia, or even frank psychosis (seen more frequently among first time users (marijuana-naïve)).

Another issue is quality control of the product. At present, marijuana products are not tested for contaminants or potency and standards are still not established. The safety of edibles could be compromised by potential adulteration with other illicit substances or drugs of abuse.

#### *Contamination*

Robust humidity can lead to property and product damage from mold on the walls and the structure and to the growth of pathogenic organisms on the product. Fumigation is performed on plants in the grow facility, but the risk nevertheless remains. Contamination of the marijuana product is a valid concern. Similarly, contamination of a batch of beer is one of the more significant risks of any craft beer facility.

For example, we need look no further than the class action lawsuit that was brought against makers of low-price-point California wines that have been found to contain high levels of arsenic. Similarly, researchers in Germany reported that they've found arsenic in hundreds of samples of beer, some at levels more than twice that allowed in drinking water. The problem, apparently, is the filtering agent. Diatomaceous earth is a mined natural product that contains iron and other metals. It's a beige powder made up of the skeletons of diatoms, tiny algae that lived in oceans long ago. Because the diatom fossils have lots of minute holes, they are useful for filtering liquids, but also contain high concentrations of extractable arsenic.

Besides the standard claim for negligence, cases involving breweries and marijuana facilities seem susceptible to the more expansive claims of duty that have gradually been imposed on design professionals. For example, in *Beacon Residential Community Ass'n v. Skidmore, Owings & Merrill LLP*,<sup>7</sup> a homeowners' association sued the architects and others for various defects, including “solar heat gain.” The architects challenged the complaint on the grounds that they owed no duty of care to the association or its members. Using the following factors, the court found a duty owed to the third party association:

1. the architects' work was intended to benefit the homeowners living in the units;
2. the homeowners were among the class of persons who would foreseeably be harmed by negligently designed units;
3. the homeowners suffered injury due to the design defects;
4. given the nature of the architects' role as the only architects on the project, there was a close connection between their conduct and the injury suffered;
5. there was significant moral blame attached to the architects' conduct; and
6. the policy of preventing future harm supported a finding of duty of care.

Applying the *Beacon* decision, one can easily envision cases where liability is sought to be imposed against the design professional under either a direct cause of action or a claim for contribution. Indeed, in recent years, the heightened concern for providing an innocent plaintiff with adequate compensation has contributed to denying design professionals the traditional shields in negligence actions. Moreover, under the influence of product liability litigation, courts in some circumstances have recognized a right of action against design professionals predicated on the theory of implied warranty and strict liability.<sup>8</sup> Privity and "acceptance rule" defenses have, in some instances, been slowly eroded.<sup>9</sup>

We must not forget the scary minority legal theory. In *Tamarac Development Company, Inc. v. Delamater, Freund & Associates, P.A.*,<sup>10</sup> the Kansas Supreme Court noted that "...professionals may bind themselves to contracts which warrant the success of treatment, or to otherwise obligate themselves above and beyond their ordinary duties and that such contracts may form the basis for breach of contract actions."<sup>11</sup> From this, the court went on to hold that, "The work performed by architects and engineers is an exact science; that performed by doctors and lawyers is not. A person who contracts with an architect or engineer for a building of a certain size and elevation has a right to expect an exact result."<sup>12</sup> This, however, appears to be a minority position. See, e.g., *City of Mounds View v. Walijarvi*,<sup>13</sup> where the court noted that while it was fair to impose strict liability on manufacturers who have ample opportunity to test their products for defects before marketing them, the same cannot be said of architects. The North Dakota Supreme Court reached the same conclusion in *Sime v. Tvenge Associates*,<sup>14</sup> in which it held that the claimants had not brought forth any evidence in opposition to the defendants' motions for summary judgment which suggested that the architectural design or ventilation system were in any way standardized or mass marketed. Somewhere in the middle is the Colorado case of *Mazurek v Nielsen*.<sup>15</sup> In that case, the Colorado Court of Appeals arguably held that where services provided by an entity (such as a design professional) have become inextricably intertwined with a product, the professional is subject to an implied warranty action, which can be asserted by third parties.

## Nuisance

The common law of nuisance may pose liability concerns for the design professional. While the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) has been deemed to preempt the federal common law of nuisance as an environmental remedy, the common law of nuisance is still available to private plaintiffs.<sup>16</sup> Private nuisance is the unreasonable interference with the landowner's use and enjoyment of his property. As such, nuisance rests on tort liability. A person interfering with the landowner's use and enjoyment of his property may be liable in nuisance if his actions were intentional, reckless, or negligent.

Environmental contamination of real property can give rise to liability in nuisance.<sup>17</sup> To the extent that the design professional's conduct contributes to the environmental contamination, there could be liability in nuisance.<sup>18</sup>

A *private nuisance* is an interference with the use or enjoyment of land that causes injury in relation to an ownership right in that land. A *public nuisance* may be defined as an unlawful act or omission that is so widespread in range and indiscriminate in its effect that it obstructs, damages, or inconveniences the rights of the community. Generally, public nuisance covers a wide variety of minor crimes (such as carrying on an offensive tirade, obstructing the highway, etc.) for which criminal prosecution may be pursued or, in some circumstances, an injunction sought to restrain the offending activity. A defendant may create a nuisance by negligence as where a manufacturing operation may cause unnecessary and unreasonable amount of smoke or fumes, *Fisk v. Town of Redding*.<sup>19</sup> Besides liability for a private nuisance, a design professional may face liability for environmental clean-up under CERCLA, which provides for contribution claims.<sup>20</sup>

A minority of courts have allowed public nuisance claims to proceed in cases traditionally governed by product liability principles. See, e.g., *Independence County v. Pfizer*, 534 F. Supp. 2d 882 (E.D. Ark. 2008), *aff'd sub nom Ashley Cnty. v. Pfizer, Inc.*, 552 F.3d 659 (8th Cir. 2009), denying nuisance cause of action for production and marketing of pseudoephedrine; *Kentucky v. Purdue Pharma L.P.*, Civ. Act. No. 07-CI-01303, First Am. Complaint ¶¶ 95–102 (Ky. Cir. Ct. 2007), case settled before any legal ruling on the issue. We have seen such suits brought in Colorado where neighboring retail properties seek to preclude a marijuana facility from opening in proximity to their businesses. While common law varies from state to state, there is no single overriding legal defense that would preclude such design professionals from being sued for damages that may be proven, either by the claimant or by the client who is unable to commence its business due to a successful claim against it.

## Coverage

In recent years, insurance brokers have publicized the availability of policy forms tailored specifically to businesses involved in the manufacture and sale of medical marijuana. However, as the scope of coverage for standard policies and the scope of their coverage (and even their enforceability) have not yet been tested in court, there is a question of whether there is a need for specialized policies. This doesn't mean that such policies shouldn't be purchased, but it does mean that a prospective policyholder should engage competent coverage counsel to advise it as to risks, coverage, exclusions, and other coverage issues associated with this type of work.

"Traditional" types of insurance policies, such as those providing general liability or first-party property damage and business interruption coverage, potentially cover marijuana-related risks. That has not stopped insurers, however, from invoking the illegality of the business and public policy-based coverage defenses, even when the policyholder was operating legally in its home state. While some courts, such as a federal district court in Colorado, have rejected such arguments (and rightly so, especially when an insurer knowingly issued a policy to a marijuana business), other courts have been persuaded that marijuana's illegality at the federal level makes it uninsurable. The provision most commonly cited in the GL policy is the "contraband" provision. That provision excludes coverage for "[c]ontraband, or property in the course of illegal transportation or trade." The standard GL policy does not define "contraband," but a dictionary definition is: "goods or merchandise whose importation, exportation, or possession is forbidden."

## Coverage-Related Legal Decisions

### *Green Earth*

In its February 2016 decision in *Green Earth Wellness Center LLC v. Atain Specialty Insurance Co.*,<sup>21</sup> the U.S. District Court for the District of Colorado found that there was potentially partial coverage for damage to a medical marijuana grower and retailer's marijuana plants. Although the court ruled in favor of the policyholder on certain coverage issues, the particular facts of this case could easily have dictated the result. The insured, Colorado Springs-based Green Earth, claimed that smoke and ash from a wildfire intruded into its growing operation, causing over \$200,000 in damage to its mother plants and clones (plants cultivated to eventually produce useable marijuana) and \$40,000 in damage to buds and flowers to be sold to end-users. In a separate incident, Green Earth's roof and ventilation system were damaged when thieves broke in and stole some of Green Earth's marijuana plants. Green Earth sought coverage for these losses under a property and general liability insurance policy issued by Atain. After the carrier denied coverage, Green Earth sued. In a summary judgment motion, Atain argued that Green Earth's mother plants and clones were subject to an exclusion barring coverage of "growing crops." The insurer also took the position that, notwithstanding marijuana's legal status in Colorado, on account of its illegality at the federal level, all of the plants were subject to an exclusion for "contraband or property in the course of illegal transportation or trade" and, in any event, any coverage of marijuana plants should be void as against public policy. Finally, Atain argued that Green Earth's theft-related claim was barred by an exclusion for "loss or damage caused by or resulting from theft."

Applying Colorado law to the interpretation of the Atain policy, the court held that Green Earth's mother plants and clones were not "stock" (i.e., saleable inventory covered under the policy's "business personal property" coverage grant), but rather "crops" and therefore excluded from coverage. Significantly, the court rejected Green Earth's argument that, as a medical marijuana business, it had *reasonably* expected that its insurance would cover damages relating to all of its marijuana plants, and not just to certain "stock" plants; the court reasoned that because the policy covered many other categories of damage to non-plant business property (e.g., lighting systems, irrigation systems, computers, etc.), the policy limitations on plant-related coverage did not render the coverage illusory.

Thus, finding that the policy only covered Green Earth's harvested buds and flowers, the court went on to consider Atain's illegality arguments. The court sided with Green Earth on this issue. The court held that the policy's "contraband" exclusion was rendered ambiguous "by the difference between the federal government's *de jure* and *de facto* public policies regarding state-regulated marijuana" and that Atain, which had affirmatively chosen to insure Green Earth, had put forth no evidence of the likelihood of federal or state criminal enforcement against Green Earth's operations. The court also rejected Atain's argument that the policy was unenforceable as against public policy. Finally, with respect to the theft-related claim, the court held that the damages to the roof and ventilation system fell into a carveout in the theft exclusion for "building damage caused by the breaking in or exiting of burglars" and were therefore potentially covered.

### Tracy

In *Tracy v. USAA Casualty Insurance Co.*,<sup>22</sup> the U.S. District Court for the District of Hawaii dealt with an individual medical marijuana grower's losses relating to marijuana plants that were stolen from her property. The insured asserted a claim under her homeowner's policy, for, among other things, loss caused by theft of trees, shrubs, and other plants. She sued the insurer when coverage was denied. In its motion for summary judgment, the insurer argued that the stolen plants were not an "insurable interest" under Hawaii law, citing statutes that purportedly merely "provide an affirmative defense to marijuana-related state law crimes for the medical use of marijuana." The insurer also argued that, in any event, marijuana's illegality at the federal level rendered insurance coverage contrary to federal law and public policy.

The court ultimately sided with the insurer. The court predicted that the Hawaii Supreme Court would hold that a patient who is in compliance with the state's medical marijuana laws would have a lawful and insurable interest in her marijuana plants from the state's perspective; further, there was nothing in Hawaii law that precluded insurers from agreeing to cover medical marijuana claims. Nevertheless, the court held that coverage for marijuana-related claims would undercut federal law and public policy. The court noted the rule under Hawaii law that a court may decline to enforce a contract where the enforcement of the contract would violate federal law. In turn, the court noted that under the U.S. Supreme Court's 2005 decision in *Gonzales v. Raich*,<sup>23</sup> possession and cultivation of marijuana for medical use is illegal under federal law, even when it is permitted under state law. The court accordingly concluded that even though the policyholder's possession of marijuana plants was legal under Hawaii law, under federal law she could not legally use insurance proceeds to purchase replacement marijuana plants; therefore, the policy was unenforceable as against public policy with respect to the insured's claim.

While *Green Earth* and *Tracy* were both unpublished opinions, and both dealt with insurance claims that involved the direct loss of marijuana plants, one can imagine business-related claims that would arguably only indirectly implicate federal legal and public policy concerns about marijuana. It is unclear how courts in many jurisdictions would treat such cases.

## Illegality and Public Policy

Under common law, there is a defense that has existed long enough that it has a Latin translation: *ex turpi causa non oritur actio* ("from a dishonorable cause an action does not arise"). Under the defense of illegality and violation of public policy, the courts can refuse to enforce certain types of contracts that seek to protect the public welfare and the integrity of the judicial system. The effect of these defenses is that contracts to engage in illegal or immoral conduct need not be enforced by the courts. A search for the applicability of this defense in the context of marijuana facilities did not turn up any relevant case law.

However, the opinion of the California Court of Appeals in *Bovard v. American Horse Enterprises*,<sup>24</sup> would seem instructive. In that case, Bovard sold his business, which made drug and jewelry paraphernalia, to the defendant Ralph. When promissory notes issued as consideration for the sale were not paid, Bovard sued. The trial court concluded that as marijuana was illegal, there was a public policy against the manufacture of paraphernalia and jewelry as well. It declared the contract illegal and void as to public policy and refused to enforce it. The court clearly was hesitant to overly rely on this doctrine, fearing that it could improperly interfere with valid agreements between parties. Accordingly, it cited the RESTATEMENT OF CONTRACTS for factors to be considered in determining whether to void a contract as against public policy. These were:

1. A promise or other term of an agreement is unenforceable on grounds of public policy if legislation provides that it is unenforceable or the interest in its enforcement is clearly outweighed in the circumstances by a public policy against the enforcement of such terms.

2. In weighing the interest in the enforcement of a term, account is taken of
  - (a) the parties' justified expectations,
  - (b) any forfeiture that would result if enforcement were denied, and
  - (c) any special public interest in the enforcement of the particular term.
3. In weighing a public policy against enforcement of a term, account is taken of
  - (a) the strength of that policy as manifested by legislation or judicial decisions,
  - (b) the likelihood that a refusal to enforce the term will further that policy,
  - (c) the seriousness of any misconduct involved and the extent to which it was deliberate, and
  - (d) the directness of the connection between that misconduct and the term.<sup>25</sup>

Using these factors, it would seem unlikely that a marijuana company would be able to raise the illegality of its operations to defend itself against a claim of employee discrimination claims; negligence and other tort claims; and all manner of other claims traditionally covered by general liability policies. However, such a prohibition may be more acceptable to courts when raised against a business whose primary purpose is to grow marijuana that seeks to recover damages it has sustained from third parties. However, the factors do not clearly and unequivocally bar such a claim, particularly where such activities are valid under state law, with the illegality being found in federal law. In this context, it may be that a transaction that crosses state lines may result in a different conclusion than one that is performed wholly within state lines.

## Legal Obligation of Attorneys

Attorneys should be aware of Rule 1.2 of the *ABA Model Rules of Professional Conduct*, in which attorneys are instructed that they should not counsel, engage, or assist a client in conduct that the attorney knows is criminal or fraudulent. After a couple of aborted efforts, Colorado has issued an ethics opinion that states that a lawyer does not violate Colo.RPC 1.2(d) by representing or advising clients regarding the creation of rules and regulations implementing the state marijuana statutes or standards; or by advising clients regarding the consequences of marijuana use or commerce under Colorado or federal law. The committee further concluded that under the plain language of Colo. RPC 1.2(d), it was unethical for a lawyer to counsel, engage, or assist a client in conduct that violates federal law. Then, in a vast understatement, the ethics committee stated that between these two points lies a range of conduct in which the application of Colo. RPC 1.2(d) is unclear.

## Conclusion

Unfortunately, the conclusion of the Colorado Ethics Committee is perhaps the truest statement in this paper. Any time a new industry is developed, there will be a need for government entities and those charged with developing safety policies and protocols to review the nascent industry and develop recommendations for the public safety. Legal solutions to the problems inherent in the new industry follow from there. While there existed guidelines and a sound body of law to draw upon concerning the issues with craft breweries, the problems that arise with the marijuana industry are not so easily addressed, in part due to the conflict between the approach of the federal government and the approach of states permitting the industry to develop. While there have been significant strides made in the technical aspects of marijuana facility safety, issues regarding legal and business questions appear to be in limbo and will continue to receive only tenuous resolution until the federalism issue is resolved.

## Endnotes

<sup>1</sup> Erwin Chemerinsky, Jolene Forman, Allen Hopper & Sam Kamin, “Cooperative Federalism and Marijuana Regulation,” 62 *UCLA L. Rev.* 74 (2015).

<sup>2</sup> *Id.*

<sup>3</sup> 2015 CO44 (Colo. 2015).

<sup>4</sup> § 24-34-402.5 C.R.S.

<sup>5</sup> *Reuters*, “Insight: Fast-growing U.S. craft brewers struggle with worker safety,” July 12, 2013.

<sup>6</sup> Smoot, “Humidity ‘gets high’ on Medicinal Marijuana,” *Interface*, October 2012.

<sup>7</sup> 59 Cal.4 568 (2014).

<sup>8</sup> Flatt, “The Expanding Liability of Design Professionals,” 20 *Mem. St. U. L. Rev.* 611 (1990).

<sup>9</sup> *Id.*; *See, also, Flagstaff Affordable Housing, L.P. v. Design Alliance, Inc.*, 223 Ariz. 320, 223 P.3d 664 (2010), holding privity of contract is not required for foreseeable injuries to foreseeable victims.

<sup>10</sup> 675 P.2d 361, 234 Kan. 618 (Kan. 1984).

<sup>11</sup> *Id.* at 620 (*citing, Malone v Univ of Kan. Medical Center*, 220 Kan. 371 at 374, 552 P.2d 885 (1976)).

<sup>12</sup> *Id.* at 622.

<sup>13</sup> 263 N.W.2d 420 (Minn. 1978).

<sup>14</sup> 488 N.W.2d 606 (N.D. 1992)

<sup>15</sup> 599 P.2d 269 (Colo. App. 1979).

<sup>16</sup> *Middlesex County Sewerage Authority v. National Sea Clammers Ass’n*, 453 U.S. 1, 101 S. Ct. 2615, 69 L. Ed. 2d 435, 16 Env’t. Rep. Cas. (BNA) 1118, 11 Env’tl. L. Rep. 20684 (1981).

<sup>17</sup> *Kostyal v. Cass*, 163 Conn. 92, 302 A.2d 121 (1972) (groundwater contamination).

<sup>18</sup> *See, Knabe v. National Supply Division of Armco Steel Corp.*, 592 F.2d 841, 13 Env’t. Rep. Cas. (BNA) 1119, 9 Env’tl. L. Rep. 20257 (5th Cir. 1979).

<sup>19</sup> 164 Conn. App. 647 (2016).

<sup>20</sup> 42. USC § 9613(f).

<sup>21</sup> No. 13-CV-03452-MSK-NYW, (D. Colo. Feb. 17, 2016).

<sup>22</sup> No. CIV. 11-00487 LEK, (D. Haw. Mar. 16, 2012).

<sup>23</sup> 545 U.S. 1 (2005).

<sup>24</sup> 201 Cal. App. 3d 832, 247 Cal. Rptr. 340 (1988).

<sup>25</sup> *Id.* at 519.