# What If? Using Medicare Regulations to Control and Commercialize Rainwater Harvesting 

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## I. Introduction

"What" and "If" are two words as non-threatening as words can be.
But put them together side-by-side and they have the power to haunt you for the rest of your life:

What if? What if? What if? ${ }^{1}$
What if? That is a question that people ask and hear in various situations every day. For law students, "what if?" is asked hourly. Most of the time, an individual asks "what if" about situations that affect only them. What if (s)he doesn't like me? What if I get sick? What if I get a bad grade? What if I don't get this job? What if my team finally wins the World Series? And so on. ${ }^{2}$

Additionally, "what if" can be scary, as the introductory quote states. "What if" can be haunting because it can force the individual asking the question to regret the choice they made or imagine a different life. However, "what if" is sometimes asked by individuals focused on the populous as a whole: what if climate change is increased by

[^0]humans? What if we can start a colony on Mars? What if we run out of water?
What if we truly do run out of water? Both aquifers in Texas are rapidly depleting as the population of Texas continues to grow. Eventually, water will become scarce. "What if we run out of water?" will become "what now?"

Many solutions have been proposed to fix this quandary. The most feasible, in this Author's opinion, is rainwater harvesting. ${ }^{3}$ Texas does not have uniform rainwater harvesting regulations. The Texas Water Code does encourage rainwater harvesting, ${ }^{4}$ though it is ultimately left to the municipalities to regulate their own rainwater harvesting if regulations in fact exist. We are now back to a "what if," but the question has changed. The question now is the following: what if rainwater harvesting was regulated like $\qquad$ ?
Now to ask a more intriguing question: when you think of Medicare, what comes to mind? Rising costs? "Obamacare?" "Trumpcare?" Reaching the age of 65 ? Prescriptions? Rainwater harvesting? Of all the possible things that could come to mind regarding Medicare, rainwater harvesting is most likely not towards the top of the list, because, simply put, rainwater harvesting and Medicare do not mix. First, Medicare involves healthcare and rainwater harvesting does not. Second, Medicare is highly regulated and rainwater harvesting in Texas is not. ${ }^{5}$ But what if they could mix? Rainwater harvesting would not soon be available to Medicare beneficiaries like Medicare Part A, B , or D , but rainwater harvesting would take a similar governance structure to Medicare.

Yes, it may seem like an absurd possibility, but that is what makes it intriguing. As stated above, rainwater harvesting in Texas is not highly regulated as compared to other states. ${ }^{6}$ Some regulations do exist, but there is still room for more, especially since rainwater harvesting systems continue to grow in popularity. ${ }^{7}$ As such, a governance structure is needed to control and enforce the regulations.

This Article will examine how rainwater harvesting in Texas would look if applied to a structure for rainwater governance similar to the

[^1]structure of Medicare governance. Section II addresses the reasons why rainwater harvesting must be considered a necessity. Next, Section III will provide an overview of the applicable Medicare regulations that will later be reappropriated and rewritten for rainwater harvesting. Section IV will apply the discussed Medicare structure to rainwater harvesting. Finally, Section V will provide a closing answer to what if we applied the Medicare structure to rainwater harvesting.

## II. Water

## A. Water Scarcity and Water Stress

When the well runs dry, we know the worth of water.

- Benjamin Franklin ${ }^{8}$

For many years, Texans have been hearing the words "water scarcity." Typically, these words are believed to be associated with droughts. Texas is just recently removed from a drought that lasted more than five years, so that would make sense, right? ${ }^{9}$ Droughts can affect the amount of water available and can tap surpluses, but water scarcity goes far beyond just a drought. The European Environment Agency defines water scarcity as the following:

Water scarcity occurs where there are insufficient water resources to satisfy long-term average requirements. It refers to long-term water imbalances, combining low water availability with a level of water demand exceeding the supply capacity of the natural system. ${ }^{10}$

## The Pacific Institute also defines water scarcity:

"Water scarcity" refers to the volumetric abundance, or lack thereof, of water supply. This is typically calculated as a ratio of human water consumption to available water supply in a given area. Water scarcity is a physical, objective reality that can be measured consistently across regions and over time. ${ }^{11}$
Scientists estimate that 4 billion people, which would be about twothirds of the world population, experience severe water scarcity, during at least part of the year. Simply put, this means that the situation is worse than what was previously thought as previous studies gave esti-

[^2]mates between 1.7 and 3.1 billion. ${ }^{12}$ The United Nations believes that "water scarcity is among the main problems to be faced by many societies and the World in the XXIst century. Water use has been growing at more than twice the rate of population increase in the last century. . . ."13

If water scarcity did not sound dire enough, a phenomenon known as "water stress" also exists. The Pacific Institute defines water stress as the following:
> "Water stress" refers to the ability, or lack thereof, to meet human and ecological demand for water. Compared to scarcity, "water stress" is a more inclusive and broader concept. It considers several physical aspects related to water resources, including water scarcity, but also water quality, environmental flows, and the accessibility of water. ${ }^{14}$

Water scarcity contributes to water stress, but it is not the only factor of water stress. ${ }^{15} \mathrm{An}$ area that has a high concentration of contaminated water would be water stressed but not water scarce. ${ }^{16}$ Currently, it is believed that enough freshwater exists to supply the current population, but, unfortunately, the freshwater is distributed unevenly, and too much of it is wasted, polluted, and unsustainably managed. ${ }^{17}$

Water scarcity and water stress are realities facing the population today. And they are not going to go away. ${ }^{18}$ Currently, the population of Texas is $27,862,596$ according to 2016 US Census estimates. ${ }^{19}$ In

[^3]2070, the population of Texas is expected to reach 51 million. ${ }^{20}$ All of those people will have one thing in common: a need for water.

## B. A Need for Water

## Water is the driving force of all nature.

-Leonardo Da Vinci ${ }^{21}$
People use water every day. According to the United States Geological Survey ("USGS"), the average person uses $80-100$ gallons of water per day. ${ }^{22}$ The USGS goes on to list in a table the amount of water used per day per activity. For example, a bath averages thirtysix gallons; a shower averages five gallons of water per minute; teeth brushing averages less than one gallon; a dishwasher uses between six and sixteen gallons; washing clothes uses twenty-five gallons per load for newer washers; outdoor watering uses two gallons per minute; and finally, a small glass of water for drinking is eight ounces. ${ }^{23}$ Reviewing the examples above, it is easy to see how that number can reach eighty to one hundred gallons.

Now, if it is assumed that the population of Texas does reach 51 million by 2070, then it can also be assumed, based on the figures in the preceding paragraph, that on any given day, Texans will consume between 4.8 billion and 5.1 billion gallons of water. ${ }^{24}$ When converted to acre-feet, which is a common measurement for large quantities of water, the result is between $14,730.66$ and $15,651.33$ acre-feet daily. ${ }^{25}$ An acre-foot is the amount of water it would take to cover an acre of land in water in foot deep. ${ }^{26}$ Yearly, Texans in 2070 would consume between $5,376,690$ and $5,712,735.45$ acre-feet. To put it in perspective,

[^4]26. Peacock, supra note 25.
the amount of water Texans alone would need yearly is almost five-and-a-half times the state of Rhode Island. ${ }^{27}$

The math in the preceding paragraph only calculates Texas' water needs in the future. It does not calculate the needs of other states or the needs of agriculture. According to the USDA, agriculture accounts for $80 \%$ of all water use in the nation. ${ }^{28}$ According to UN Water, without improvements in efficiency, agricultural water consumption is expected to increase by about $20 \%$ globally. ${ }^{29}$ Simply put, water is needed, and it will continue to be needed.

The next Section of this Article will discuss several Medicare regulations that apply to providers. The regulations and structure that are discussed will be later applied and rewritten for rainwater harvesting. Not all Medicare regulations will be discussed, as Medicare is extremely complex. Only selected regulations that can be retrofitted for rainwater harvesting will be discussed.

## III. Medicare <br> A. Medicare Payment Rules

[Johnson] said, "I'm going to make Harry Truman's dream come true. Old folks are not going to be barred from a doctor's office or a hospital because they don't have any money for medical attention.
They are never again going to have to be sick and hurt and cry alone. It's a god- damned crime," he said, "and we're never going to have that happen again in this country. When this bill is passed, I'm going to Independence, and I'm going to sign it in Harry Truman's presence." He did exactly that.

$$
\text { -Jack Valenti }{ }^{30}
$$

The Medicare program was established as part of the Social Security Amendments of $1965 .{ }^{31}$ Medicare is defined as the health insurance program for the aged and disabled under title XVIII of the Social Security Act. ${ }^{32}$ Medicare is made up of four separate programs or "parts." Medicare Part A "covers inpatient hospital stays, care in a

[^5]skilled nursing facility, hospice care, and some home health care., ${ }^{33}$ Medicare Part A is typically known "Hospital Insurance." ${ }^{34}$ Medicare Part B, known as the "Medical Insurance" portion of Medicare, "covers certain doctors' services, outpatient care, medical supplies, and preventative services. ${ }^{355}$ If someone has a policy under Medicare Part C , then that individual has what is known as a "Medicare Advantage Plan." ${ }^{36}$ Under Medicare Advantage Plans, a private company contracts with Medicare to provide all of the services listed under Parts A and B, and most offer prescription drug coverage. ${ }^{37}$ Finally, Medicare Part D "adds prescription drug coverage." ${ }^{38}$ Medicare Parts A and B were established under the amendments to the Social Security Act of 1965. ${ }^{39}$ Medicare Part C was established in 1997 by the Balanced Budget Act of $1997^{40}$ and expanded under the Medicare Modernization Act of 2003. ${ }^{41}$ Part D was created under the Medicare Modernization Act of $2003 .{ }^{42}$

Imagine a woman has coverage under Medicare Parts A and D. This individual goes to the hospital for what she believes is the flu. Unfortunately, the woman is sicker than she originally thought. She is then hospitalized for several days and sent home with prescription drugs to treat the illness. Her hospital stay and prescription drugs should be covered under Medicare Part A and Part D. ${ }^{43}$ Since the hospital provided treatment and prescription drugs to the individual, it should be entitled to compensation.

To receive compensation for the treatment of Medicare beneficiaries, the hospital described above must be a qualified provider and have a Medicare Provider Agreement. ${ }^{44}$ The framework for how to become a Medicare provider is found in 42 C.F.R. $489 .{ }^{45}$ A provider

[^6]agreement is "an agreement between CMS and one of the providers specified in § 489.2(b) to provide services to Medicare beneficiaries and to comply with the requirements of section 1866 of the Act." ${ }^{36}$ The Centers for Medicare and Medicaid Services ("CMS"), a branch of the Department of Health and Human Services ("HHS"), administers Medicare, Medicaid, the Children's Health Insurance Program, and the Health Insurance Marketplace. ${ }^{47}$

A provider under 42 C.F.R. § 489.2 is a: hospital; skilled nursing facility; home health agency; a clinic, rehabilitation agency, and public health agency; ${ }^{48}$ comprehensive outpatient rehabilitation facility; hospice; critical access hospital; community mental health center; ${ }^{49}$ or a religious nonmedical health care institution. ${ }^{50}$ To participate in Medicare, a provider must simply request participation through the completion of a CMS Form 855 and meet certain conditions of participation. ${ }^{51}$

Additionally, some basic requirements for participation in the Medicare program exist. The first basic requirements of participation facing all providers wanting to participate in Medicare are certain civil rights requirements. ${ }^{52}$ After the civil rights requirements are met, each
incorrect collections are to be handled. Subpart F sets forth the circumstances and procedures for denial of payments for new admissions and for withholding of payment as an alternative to termination of a provider agreement." 42 C.F.R. § 489.2(a) (2016).
46. 42 C.F.R. § 489.3 (2016).
47. About CMS, CMS.gov, https://www.cms.gov/about-cms/about-cms.html [https://permacc/U8MA-EARB] (last visited Sept. 18, 2017).
48. "Clinics, rehabilitation agencies, and public health agencies may enter into provider agreements only for furnishing outpatient physical therapy, and speech pathology services." 42 C.F.R. § 489.2(c)(1) (2016).
49. Community mental health centers "may enter into provider agreements only to furnish partial hospitalization services." 42 C.F.R. § 489.2(c)(2).
50. § $489.2(\mathrm{~b})$.
51. 42 C.F.R. § 489.10(a) (2016). Enrollment Applications, CMS.gov, https://www .cms.gov/medicare/provider-enrollment-and-certification/medicareprovidersupenroll/ enrollmentapplications.html [https://permacc/V3DZ-N6AW] (last visited Sept. 18, 2017).
52. 42 C.F.R. § 489.10 (b) (2016) ("In order to participate in the Medicare program, the provider must meet the applicable civil rights requirements of: (1) Title VI of the Civil Rights Act of 1964, as implemented by 45 CFR part 80, which provides that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under, any program or activity receiving Federal financial assistance (section 601); (2) Section 504 of the Rehabilitation Act of 1973, as implemented by 45 CFR part 84, which provides that no qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subject to discrimination under any program or activity receiving Federal financial assistance; (3) The Age Discrimination Act of 1975, as implemented by 45 CFR part 90 , which is designed to prohibit discrimination on the basis of age in programs or activities receiving Federal financial assistance. The Age Discrimination Act also permits federally assisted programs and activities, and beneficiaries of Federal funds, to continue to use certain age distinctions, and factors other than age, that meet the
individual type of provider faces different requirements. ${ }^{53} \mathrm{~A}$ hospital, skilled nursing facility, home health agency or religious nonmedical health care institution must follow advance directive requirements set forth in 42 C.F.R. § $489.102 .{ }^{54}$ If a provider is a skilled nursing facility, it faces a survey from a state survey agency to confirm that it meets the conditions for participation and requirements. ${ }^{55}$ In addition to the conditions for participation set out in 42 C.F.R. § 484, a home health agency must meet surety bond requirements and certain capitalization requirements. ${ }^{56}$

If a provider meets the conditions for participation and the basic requirements listed above send a provider a written notice informing the provider that they have been accepted to participate in the Medicare program. ${ }^{57}$ CMS will also send the provider two copies of their provider agreement. ${ }^{58}$ If the provider wants to participate in Medicare, "it must return both copies of the agreement, duly signed by an authorized official, to CMS, together with a written statement indicating whether it has been adjudged insolvent or bankrupt in any state or federal court, or whether any insolvency or bankruptcy actions are pending."59

If, after a provider has sent in all the documentation listed in 42 C.F.R. § 489.11(a) and CMS decides to accept the agreement, it will send one copy of the provider agreement to the provider with a written notice that details when the agreement was signed by the provider and accepted by CMS, and the effective date of the provider agreement. ${ }^{60}$ However, CMS can ultimately decide that it does not want to enter into an agreement with a provider if the principals of the provider have been convicted of fraud; the provider failed to disclose ownership and control interests; fails to have procedures in place to disclose physician ownership to patients if the provider is a physician owned hospital; and if the provider gives unsatisfactory assurances of compliance. ${ }^{61}$

The provider agreement that is entered into between CMS and the provider details several things. The provider agreement mainly details basic commitments the provider makes to Medicare and Medicare

[^7]beneficiaries. ${ }^{62}$ Additionally, it provides information for the provider on compensation limitations for services. ${ }^{63}$

Returning to the previous example of the woman in the hospital, prior to treating the patient, the hospital was approved as a provider. Therefore, it could receive payment for all services provided to the patient. Since the provider is a hospital, it would bill both the patient and Medicare under Part A. The hospital would receive "the amount of the inpatient hospital deductible or, if less, the actual charges for the services; the amount of inpatient hospital coinsurance applicable for each day the individual is furnished inpatient hospital services after the 60th day, during a benefit period; and the posthospital skilled nursing facility care coinsurance amount." ${ }^{64}$ If the patient in the above example had needed durable medical equipment, like knee braces, the deductible would have been $20 \%$ of the customary charge, with Medicare paying the remainder. ${ }^{65}$ Part B providers would be able to receive:
> the basic allowable charges are the $\$ 75$ deductible and 20 percent of the customary (insofar as reasonable) charges in excess of that deductible. For hospital outpatient services, the allowable deductible charges depend on whether the hospital can determine the beneficiary's deductible status. If the hospital is unable to determine the deductible status, it may charge the beneficiary its full customary charges up to $\$ 75$. If the beneficiary provides official information as to deductible status, the hospital may charge only the unmet portion of the deductible. In either of the cases discussed in paragraph (b)(2) of section 489.30, the hospital is required to file with the intermediary, on a form prescribed by CMS, information as to the services, charges, and amounts collected. The intermediary must reimburse the beneficiary if reimbursement is authorized and credit the expenses to the beneficiary's deductible if the deductible has not yet been met. ${ }^{66}$

If a Medicare beneficiary needs durable medical products, the cost to the beneficiary is $20 \%$ of the customary charge, provided that the durable medical equipment is not purchased by or on behalf of the beneficiary at a price that is $25 \%$ less than the customary charge. ${ }^{67}$

If the patient in the example above decided that he or she wanted additional testing or treatments, a full body scan for example, then a provider may charge the beneficiary an amount that does not exceed the difference between the provider's customary charge for the services furnished and the provider's customary charge to Medicare. ${ }^{68}$

[^8]The provider cannot charge for the services unless the services have been requested by the beneficiary. ${ }^{69}$ Additionally, the provider cannot require a beneficiary to request services as a condition of admittance to the provider. ${ }^{70}$ Finally, to avoid any misunderstanding or dispute, a provider must inform a beneficiary who requests a service that there will be a specified charge for the service. ${ }^{71}$

## B. Payment Issues, Terminations, and Appeals

Medicare made an enormous difference in the lives of older Americans. It has had its problems, as every great social program inevitably must have. But it stands as a towering achievement. That's not really
debatable. You'll encounter, occasionally, financially secure people who scorn Medicare-and Social Security, too-and cry for the good old days when each family looked after its own aging members. I'm . . . old enough to remember those good old days. So was Lyndon Johnson. In that time old age and poverty were firmly linked, and a good many old folks went "over the hill to the poorhouse." That was the phrase of the day, "over the hill to the poorhouse." . . .

Don't talk to me about the good old days.
-John Gardner ${ }^{72}$
Think back to the hospital example in the previous Section. The hospital billed the patient and Medicare for the services it provided to her. Unfortunately, the hospital made an error and billed the patient an incorrect amount. This is known as an incorrect collection. ${ }^{73}$ In this case, the hospital would be required to promptly refund the patient. ${ }^{74}$ If another individual paid for the services on behalf of the patient, the hospital would also be required to promptly refund the individual that made the payment on behalf of the patient. ${ }^{75}$ If the hospital cannot refund the amount within sixty days from the date it was noticed of the improper collection by CMS, the hospital must set aside an amount that is equal to the incorrect collection in a separate account identified as to the individual to whom payment is owed. ${ }^{76}$ The hospital must carry this amount in its records until a final disposition is made in accordance with state law. ${ }^{77}$ Additionally, if the hospital fails

[^9]to promptly refund the incorrect collections, CMS may step in and withhold funds from the hospital to pay the incorrect collection. ${ }^{78}$
Now imagine that the hospital decided that it no longer wanted to participate in Medicare. In that case, the hospital would send a written notice to CMS that stated the intended date of termination, which must be the first of the month. ${ }^{79}$ If a skilled nursing facility wishes to terminate its agreement due to a closure of the facility, it must notify CMS at least sixty days prior to the date of the closure. ${ }^{80}$ If a notice of termination does not specify a date, or a date is not acceptable to CMS, CMS can set a date for termination that is no more than six months from the date of the notice. ${ }^{81}$ CMS can accept a termination date that is less than six months from the date of the notice if it determines that acceptance would not unduly disrupt services to the community or otherwise interfere with the administration of the Medicare program. ${ }^{82}$ If the provider simply ceases to provide services to a community, an example of which would be closing the provider without providing notice, the date of termination is the date of cessation of services. ${ }^{83}$ Additionally, a provider must give the public fifteen days' notice before the effective date of termination. ${ }^{84}$
CMS can ultimately terminate a provider on its own volition for a host of reasons. ${ }^{85}$ If CMS decides to terminate a provider's agreement, the basic rule is that CMS will provide notice to the affected provider at least fifteen days before the date of the termination of the provider agreement. ${ }^{86}$ Certain situations allow for the notice period to be adjusted. ${ }^{87}$ The notice from CMS will state the reasons for the termination, the effective date of the termination, and whether any services may continue after the date of the termination. ${ }^{88}$ Additionally, CMS provides notice to the public that the provider's agreement has been terminated. ${ }^{89}$

In our previous hospital example, it was stated that the hospital decided to terminate its provider agreement. In this example, assume that CMS terminated the provider's agreement. What can the hospital

[^10]do now? Thankfully, appeal rights do exist for the hospital. ${ }^{90}$ The notice letter sent by CMS in the previous paragraph is what is known as an initial determination. ${ }^{91}$ Any provider that is unsatisfied with the initial determination made by CMS may file what is known as a request for reconsideration. ${ }^{92}$

A request for reconsideration is a request asking CMS or one of its contractors to reconsider the initial determination that affects a provider's agreement with Medicare. ${ }^{93}$ The request for reconsideration must be filed with CMS directly or through its legal representative or other authorized official within sixty days from receipt of the initial determination. ${ }^{94}$ The date of receipt is presumed to be five days after the date on the notice unless the provider can show that it was, in fact, received earlier or later. ${ }^{95}$ The request for reconsideration must state the issues or findings of fact with which the affected provider disagrees. ${ }^{96}$

Imagine the hypothetical hospital disagreed with the notice of initial determination it received and then filed a request for reconsideration. After reviewing the request for reconsideration, the contractor decided to uphold the termination. The next step the hospital can take is to request a hearing before an administrative law judge. ${ }^{97}$ The request for administrative law judge hearing must be filed in writing within sixty days of reconsideration decision. ${ }^{98}$ The content of the request for administrative law judge hearing is identical to that of a request for

[^11]reconsideration except now the provider must also specify the basis for contending that the findings of fact and conclusions are incorrect. ${ }^{99}$

If a provider disagrees with the administrative law judge decision, it may request review before the Departmental Appeals Board. ${ }^{100}$ The manner and time of filing a request for review by the Departmental Appeals Board is like that of the request for reconsideration and request for administrative law judge hearing. The request must be a written request and it must be filed within 60 days from receipt of the administrative law judge's decision. ${ }^{101}$ The request for review must specify the issues, the findings of fact or the conclusions of law with which the provider disagrees, and the basis for the contention that the findings and conclusions are incorrect. ${ }^{102}$
The hypothetical hospital completed a request for reconsideration, a request for administrative law judge hearing, and a request for review by the Departmental Appeals Board. ${ }^{103}$ Each separate level reached a conclusion that is unfavorable to the hospital. The Departmental Appeals Board's decision is final and binding, unless the hospital seeks judicial review by filing a civil action in a United States District Court. ${ }^{104}$ To be considered timely, the civil action must be filed within 60 days from receipt of the Departmental Appeal Board's decision. ${ }^{105}$ Federal Rules of Civil Procedure apply to judicial review.

Now that the appropriate regulations have been discussed, it is time to apply them to rainwater harvesting.

## IV. Putting It All Together

## A. Using Medicare's Structure to Regulate Rainwater Harvesting

I love it when a plan comes together.
-Colonel John "Hannibal" Smith ${ }^{106}$
The A-Team was a television series that ran from 1983-1987. The premise of the show is that the members of The A-Team were essen-

[^12]tially heroes for hire. ${ }^{107}$ Usually, the episodes involved some sort of elaborate plan to capture the "bad guys" and help the oppressed. During the episodes, Colonel Smith said the line, "I love it when a plan comes together" numerous times. ${ }^{108}$ The hope is that Colonel Smith would be impressed with the attempt to apply the Medicare structure discussed above to rainwater harvesting and would utter his famous line. ${ }^{109}$

So how would applying a Medicare structure to rainwater harvesting begin? First, a governing agency would need to be established. In Medicare, the governing agency is CMS. In Texas, two options for a governing agency exist: The Texas Commission on Environmental Quality ("TCEQ") or The Texas Water Development Board ("TWDB"). Because the TCEQ currently regulates the issuance of permits to divert and use state water, logic follows that the TCEQ should be in charge of rainwater harvesting. ${ }^{110}$ However, the TWDB submits a yearly state water plan ${ }^{111}$ and has Regional Water Development Teams already in place to support water projects across the state. ${ }^{112}$ Therefore, the TWDB would be the equivalent to CMS with the Regional Water Development Teams serving in a support role similar to that of CMS contractors.

The next step would be to define who could harvest rainwater, the equivalent of who is a provider under Medicare. As discussed previously, under Medicare regulations, there are several different types of providers. ${ }^{113}$ The same could apply for those that could capture rainwater harvesting. As stated in the Texas Water Code, it is the public policy of the State of Texas to promote "rainwater harvesting for potable and nonpotable purposes at public and private facilities in this state, including residential, commercial, and industrial buildings." ${ }^{114}$ Therefore, we can use this public policy to create different types of "harvesters." In this case, a harvester is "an individual or corporation engaged in the activity of harvesting rainwater for private consumption or sale to consumers. The harvester may use the harvested rainwater for potable and nonpotable uses. A governmental entity may

[^13]harvest rainwater to use on its premises, but it may not engage in the sale of harvested rainwater." Based on this definition, we have three types of harvesters: individuals, corporations, and governmental entities.
The first category of harvester is the individual. This would be a single homeowner that would like to harvest rainwater for use in their own home or would like to sell to other consumers. Under this definition, a Corporation would use harvested rainwater for use in its business or for sale to consumers. Finally, a governmental entity for purposes of this Article is any public institution that receives state funding. It can only harvest rainwater for use on its premises.

To be a harvester, each of the three categories will have to submit a Rainwater Harvesting Agreement to the TWDB. This is equivalent to the Medicare Provider Agreement that every provider that participates in Medicare enters into with CMS. The Rainwater Harvesting Agreement is more than simply a rainwater harvesting permit as the agreement would have requirements of both the harvester and the TWDB.

If the rainwater harvesting system is used by a harvester for noncommercial uses, the harvester needs to provide verification that it owns a rainwater harvesting system. If that system is used for potable purposes, the harvester must verify that the system contains the appropriate purification measures in place. The harvester must also verify that appropriate cross-connection safeguards exist if the rainwater harvesting system is to be used in conjunction with a public water supply.

If the harvester is to use rainwater harvesting for commercial purposes, an additional verification applies. The harvester must verify that it will follow all standards for drinking water set forth in the appropriate statute and regulations. Additionally, if the harvester is a corporation, it must pay a nonrefundable fee to participate.

If after reviewing the verifications made by harvesters, the TWDB determines that the harvesters are competent to participate in rainwater harvesting, it will send the harvester notice regarding whether the agreement was approved or denied. If approved, the harvester may begin harvesting rainwater. If the agreement is denied, the TWDB will give notice as to the deficiencies in the agreement and what measures the harvester can take to correct the deficiencies.

As stated above, the Rainwater Harvesting Agreement would not be a permit. It requires action by both harvesters and the TWDB. The TWDB agrees to monitor rainwater harvesting systems across the State of Texas and agrees to monitor the sale of harvested rainwater.

By entering into a Rainwater Harvesting Agreement, the harvester agrees to allow the TWDB to inspect the system at any time, similar to the survey requirement that skilled nursing facilities face. The survey will be conducted by a member of a survey team that falls under
the jurisdiction of the Regional Water Development Teams. The survey team would periodically review harvester's rainwater harvesting systems to confirm that they comply with the verifications of the Rainwater Harvesting Agreement. If they do not, the surveyor may make recommendations on sanctions to the TWDB. It is up to the TWDB to approve the recommendation of the survey team, or to dismiss the recommendation. The TWDB may approve the recommendation of the survey team and increase the level of severity of the sanction. Some examples of sanctions would be monetary fines, termination of the Rainwater Harvesting Agreement, or potential criminal charges. If the TWDB decides to take action against a harvester, it would send an initial determination letter to the harvester informing it of the action taken, the reasons for the action taken, and whether appeal rights are offered.
The appeals procedure would be identical to that of Medicare. The first stage would be the reconsideration stage. In Medicare, the stage is handled by CMS or one of its contractors. ${ }^{115}$ Here, the Regional Water Development Team would handle the reconsideration. The harvester would have sixty days from the date of the notice to request reconsideration. The request must be in writing and state the issues or findings of fact with which the affected harvester disagrees.

If the harvester disagrees, he or she can appeal to the second stage of the administrative process. The second stage would be a hearing before an administrative law judge. The State Office of Administrative Hearings is the current mechanism for a hearing before an administrative law judge in Texas. ${ }^{116}$ The harvester must file a written request within 60 days from the date of notice of a reconsideration decision. The content of the request for administrative law judge hearing is identical to that of a request for reconsideration except now the harvester is to also specify the basis for contending that the findings of fact and conclusions are incorrect.

The third stage would be an appeal before the Texas Water Development Board. This is similar to the Departmental Appeals Board in Medicare, and it will require the creation of a specialized department or branch of the TWDB to handle the appeal. The manner and time of filing a request for review by the TWDB is like that of the request for reconsideration and request for administrative law judge hearing. The harvester must file a written request within sixty days from the date of the notice of the administrative law judge's decision. The request for review must specify the issues, the findings of fact or conclusions of law with which the harvester disagrees, and the basis for the contention that the aforementioned findings and conclusions are indeed incorrect.

[^14]Finally, if a harvester makes it through the entire administrative appeal process and disagrees with the determination of the TWDB, it can file a civil action in the appropriate district court in its jurisdiction in the State of Texas within sixty days from the date of the notice of the TWDB's decision. Texas Rules of Civil Procedure would apply to the civil action.

To put all of this together, assume an individual named Raider Red wants to be a harvester. ${ }^{117}$ Raider Red contacts the TWDB or his local Regional Water Development Team to obtain a Rainwater Harvesting Agreement Form. Raider Red makes the appropriate verifications on the form and provides any additional documentation that may be required. ${ }^{118}$ Raider Red then submits this information to the TWDB. The TWDB reviews the information, approves the agreement, and sends Raider Red notice that he can now harvest rainwater.

Several weeks later, Raider Red finds himself subject to a survey conducted by a survey team from his local Regional Water Development Team. Raider Red then passes the survey with flying colors and is allowed to continue harvesting rainwater. If a defect is found in either Raider Red's application or at the survey, Raider Red will have to go through the administrative appeals process.

## B. Commercializing Rainwater Harvesting

Money, it's a gas, Grab that cash with both hands and make a stash, New car, caviar, four star daydream, Think I'll buy me a football team.
-Pink Floyd ${ }^{119}$
Money. It tends to be a motivator of all things. That motivation can be seen daily. Kids doing chores for allowances. Businesses offering special sales to entice potential customers to buy something since it is at a reduced price. Individuals going to their jobs daily. Money, it seems, makes the world go 'round.

Rainwater harvesting, while gaining in popularity, will never reach a point of mass usage without some form of commercialization or without a monetary incentive. Different municipalities in Texas have offered tax savings or rebate programs to entice homeowners to use rainwater harvesting systems with varying degrees of success. The solution, according to this author, is to allow harvesters to sell harvested rainwater. No one voluntarily participates in Medicare because they like the structure. They participate so that they can receive Medicare money. The same logic should apply to rainwater harvesting. How-

[^15]ever, instead of receiving money from the TWDB, like providers receive funds from CMS, harvesters will receive money from consumers.
To do this, the Rainwater Harvesting Agreement that the harvester completes in order to harvest rainwater in the State of Texas will contain one additional verification-whether the harvester will be selling the harvested rainwater. From there, the opportunities are limitless as to where the harvester can sell the water. Examples include corporations harvesting rainwater from the roof of their business to sell to customers; individuals building a rainwater harvesting plant on ranch land to sell to landowners; and corporations and individuals selling harvested rainwater to drought stricken communities. By opening up rainwater harvesting to market forces, its use may increase.

## V. Conclusion

Where do we go from here?
-Dr. Martin Luther King, Jr. ${ }^{120}$
Dr. Martin Luther King, Jr. asked that question in a speech given on August 16, 1967, at the Southern Christian Leadership Conference in Atlanta, GA. ${ }^{121}$ The purpose of the speech was to discuss what was next in the movement for civil rights. Many advances had been made, but there was still a long way to go. ${ }^{122}$ Unfortunately, it seems as though there still is a long way to go today. Dr. King asked the question because he knew so much more was required in the movement for equality. He knew that the status quo was not acceptable, nor should it have been.

This Article started out asking "what if?" What if rainwater harvesting was regulated like Medicare? Through the course of this Article, that question has been answered. Rainwater harvesting can in fact be regulated with a similar structure to that of Medicare. It may take some work, but it is possible.

As discussed earlier, water is depleting due to overuse and an expanding population. Today, when it comes to water, we unfortunately have to ask the same question Dr. King asked because, even though gains have been made, this is not enough. Where do we go from here?

[^16]
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    6. See Katherine Cummings, Comment, Adapting to Water Scarcity: A Comparative Analysis of Water Harvesting Regulations in the Four Corner States, 27 J. Envtl. L. \& Litig. 539, 540 (2012).
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    11. Peter Schulte, Defining Water Scarcity, Water Stress, and Water Risk: It's Not Just Semantics, Pacific Institute (Feb. 4, 2014), http://pacinst.org/water-definitions/ [https://permacc/JX82-RC3H].
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    14. Schulte, supra note 11, at 1.
    15. $I d$. at 2.
    16. $I d$.
    17. Water Scarcity, supra note 13.
    18. See generally Cassandra Pollock, The $Q \& A$ : Carrie Thompson, Tex. Tribune (Apr. 18, 2017), https://www.texastribune.org/2017/04/18/q-carrie-thompson/ [https:// permacc/5JHN-THQT]; Jamie Vaughan Johnson, Columbia headed for serious water shortage by 2050, Colum. Rep. (Apr. 26, 2017), http://colombiareports.com/colombia-headed-serious-water-shortage-2050/ [https://permacc/V6TE-R8DB]; Sean Martin, UAE to DRAG ICEBERG from Antarctica to solve water shortage set to last 25 years, Express (May 5, 2017), http://www.express.co.uk/news/science/800325/UAE-to-DRAG-ICEBERG-from-Antarctica-water-shortage [https://permacc/CGH9-JE67].
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[^4]:    20. 2016 Regional Water Plan - Population Projections for 2020-2070, Tex. Water Dev. Bd. (Jan. 2015), http://www2.twdb.texas.gov/ReportServerExt/Pages/Re portViewer.aspx?\%2fProjections\%2fpop_region\&rs:Command=Render [https://per macc/V5ZY-VZQ4].
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    24. Eighty gallons per day multiplied by fifty-one million people equals 4.08 billion gallons per day, and one hundred gallons per day multiplied by fifty-one million people equals 5.1 billion gallons per day.
    25. One acre-foot is equal to 325,851 (rounded) gallons. See Bill Peacock, Understanding Water Units, Univ. of Cal. Coop. Extension, http://cetulare.ucdavis.edu/ files/82041.pdf [https://permacc/M3P6-LCML] (last visited Oct. 22, 2017). 4.8 billion gallons divided by 325,851 equals $14,730.66$ acre-feet, and 5.1 billion gallons equals 15,651.33 acre-feet
[^5]:    27. One square mile equals 640 acres; therefore $5,376,690$ acres divided by 640 acres equals $8,401.08$ square miles. The state of Rhode Island is 1,545 square miles; therefore $8,401.08$ divided by 1,545 equals 5.44 times. State Area Measurements and Internal Point Coordinates, U.S. Census Bureau, https://www.census.gov/geo/refer ence/state-area.html [https://permacc/RSZ9-JM3P] (last visited May 6, 2017).
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    31. Medicare Explained 15 (Nicole T. Stone ed., Wolters Kluwer 2015); see also 42 U.S.C. § 1395 (2012).
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[^6]:    33. What's Medicare?, Medicare.gov, https://www.medicare.gov/sign-up-change-plans/decide-how-to-get-medicare/whats-medicare/what-is-medicare.html [https://per macc/HK84-BGKH] (last visited Sept. 18, 2017); see also 42 U.S.C. § 1395 (2012).
    34. What's Medicare?, supra note 33.
    35. Id.; see also 42 U.S.C. § 1395 (2012).
    36. What's Medicare?, supra note 33.
    37. Id.; see also 42 U.S.C. § 1395 (2012).
    38. What's Medicare?, supra note 33; see also 42 U.S.C. § 1395 (2012).
    39. Medicare Explained, supra note 31.
    40. Id.
    41. Id.
    42. Id.
    43. This Article will not discuss coverage percentages and potential copays the individual described in the example might face. The focus is on how the hospital will receive reimbursement for the treatment provided to the individual.
    44. "Beneficiary means a person who is entitled to Medicare benefits and/or has been determined to be eligible for Medicaid." 42 C.F.R. § 400.200 (2012).
    45. "Subpart A of this part sets forth the basic requirements for submittal and acceptance of a provider agreement under Medicare. Subpart B of this part specifies the basic commitments and limitations that the provider must agree to as part of an agreement to provide services. Subpart C specifies the limitations on allowable charges to beneficiaries for deductibles, coinsurance, copayments, blood, and services that must be part of the provider agreement. Subpart D of this part specifies how
[^7]:    requirements of the Age Discrimination Act and 45 CFR part 90; and (4) Other pertinent requirements of the Office of Civil Rights of HHS.").
    53. See generally 42 C.F.R. §§ 482-486 (2016).
    54. 42 C.F.R. § 489.10(c) (2016). For information regarding advance directive requirements, see 42 C.F.R. § 489.102 (2016). This article will not discuss advance directive requirements because an advance directive will not be a requirement for rainwater harvesting in Section IV.
    55. 42 C.F.R. § 489.10(d) (2016).
    56. § 489.10(e), (f).
    57. 42 C.F.R. § 489.11(a) (2016).
    58. Id.
    59. Id. § 489.11(b).
    60. Id. § 489.11(c).
    61. 42 C.F.R. § 489.12(a) (2016).

[^8]:    62. See generally 42 C.F.R. § 489.20 (2016).
    63. See generally 42 C.F.R. § 489.21 (2016).
    64. 42 C.F.R. § 489.30(a) (2016).
    65. Id. § 489.30(a)(4).
    66. Id. § 489.30 (b).
    67. Id. § 489.30 (b)(5).
    68. 42 C.F.R. § 489.32(a) (2016).
[^9]:    69. Id. at (a)(2).
    70. Id.
    71. Id. at (a)(3).
    72. Updegrove, supra note 30, at 161-162.
    73. "'[I]ncorrect collections' means any amounts collected from a beneficiary (or someone on his or her behalf) that are not authorized under subpart C of this part." 42 C.F.R. § 489.40(a) (2016).
    74. 42 C.F.R. § 489.41(a) (2016).
    75. Id.
    76. $I d$. § 489.41(b).
    77. Id.
[^10]:    78. See generally 42 C.F.R. § 489.42 (2014). Remember, providers receive funds from both beneficiaries and Medicare. CMS will provide notice to the provider before the decision to withhold funds is taken. See $\S 489.42(\mathrm{~b})$.
    79. 42 C.F.R. § 489.52(a)(1) \& (3) (2016).
    80. Id. § 489.52(a)(2).
    81. Id. § 489.52(b)(1).
    82. Id. § 489.52(b)(2).
    83. Id. § 489.52(b)(3).
    84. Id. § 489.52(c)(1).
    85. See 42 C.F.R. § 489.53(a) (2016).
    86. Id. § 489.53(d)(1).
    87. Id. § 489.53(d)(2).
    88. Id. § 489.53(d)(4).
    89. Id. § 489.53(d)(5).
[^11]:    90. "A provider may appeal the termination of its provider agreement by CMS in accordance with part 498 of this chapter." § 489.53(e).
    91. See 42 C.F.R. § 498.3 (2016); see also 42 C.F.R. § 498.20 (2016) ("Notice of initial determination (1) General rule. CMS or the OIG, as appropriate, mails notice of an initial determination to the affected party, setting forth the basis or reasons for the determination, the effect of the determination, and the party's right to reconsideration, if applicable, or to a hearing. (4) Other special rules. Additional rules pertaining, for example, to content and timing of notice, notice to the public and to other entities, and time allowed for submittal of additional information, are set forth elsewhere in this chapter, as follows: (b) Effect of initial determination. An initial determination is binding unless it is (1) Reconsidered in accordance with § 498.24; (2) Reversed or modified by a hearing decision in accordance with § 498.78; or (3) Revised in accordance with § 498.32 or § 498.100.").
    92. 42 C.F.R. § 498.5(1) (2016). It should be noted that for this part, the definition of provider is the same as in 42 C.F.R. § 489.2, but in a different order. See 42 C.F.R. § 498.2 (2016).
    93. 42 C.F.R. $\S 498.22$ (a) (2008). Due to the expansive size of Medicare, CMS contracts with entities to perform certain functions. Contractors as referenced in § 498.22(a), are "Medicare Administrative Contractors and other entities that contract with CMS to review and adjudicate claims for Medicare payment of items and services." 42 C.F.R. § 405.201 (2016).
    94. 42 C.F.R. § 498.22(b) (2016).
    95. Id.
    96. § 498.22(c).
    97. 42 C.F.R. § 498.5(b) (2016).
    98. 42 C.F.R. § 498.40(a)(2) (2016).
[^12]:    99. § 498.40(b); for a full list of procedures related to hearings, see generally 42 C.F.R. 498, Subpart D (2016).
    100. 42 C.F.R. §§ $498.5(1)(3), 498.80$ (2016).
    101. 42 C.F.R. § $498.82(a)(1) \&(2)(2016)$.
    102. § $498.82(\mathrm{~b})$.
    103. It should be noted that CMS or one of its contractors can also request a hearing before an administrative law judge and can request Departmental Appeals Board review of an administrative law judge's decision if they receive an unfavorable decision. See 42 C.F.R. §§ 498.5(a)(b) \& (c) (2016).
    104. 42 C.F.R. § 498.90(a)(1) (2017).
    105. 42 C.F.R. § 498.95(a). It should be noted that this section extends the right of judicial review to CMS and its contractors under the definition of "affected party" found in 42 C.F.R. $\S 498.2$ while 42 C.F.R. $\S 498.5(1)(3)$ extends judicial review to only providers.
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[^13]:    107. Marg Baskin, The $A$-Team: Storyline, IMDB, http://www.imdb.com/title/tt0084 967/ [https://permacc/9NBE-2Q9R] (last visited Sept. 18, 2017).
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    109. The Author is open to suggestions on how to improve the proposed structure and can be reached at trey@markkennedylaw.com.
    110. Tex. Water Code Ann. § 11.121 (West Supp. 2016).
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    112. Regional Project Implementation Teams, Tex. Water Dev. Bd., https://www .twdb.texas.gov/financial/programs/swift/regional_project_teams.asp [https://permacc/ DDD8-J7RM] (last visited May 9, 2017).
    113. See generally Section III.
    114. Tex. Water Code Ann. § 1.003(8) (West Supp. 2016).
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[^15]:    117. Wreck ‘em Tech!
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[^16]:    120. Dr. Martin Luther King, Jr., Where Do We Go From Here?, Delivered at the 11th Annual SCLC Convention (Aug. 16, 1967) (transcript available at http://kingen cyclopedia.stanford.edu/encyclopedia/documentsentry/where_do_we_go_from_here_ delivered_at_the_11th_annual_sclc_convention/ [https://permacc/ZP4G-6MP2]).
    121. Id.
    122. See id.
