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# THE REGULATED RIPARIAN MODEL WATER CODE: BLUEPRINT FOR TWENTY FIRST CENTURY WATER MANAGEMENT

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## I. INTRODUCTION

While riparian doctrine began as a common law creation in the eastern thirty-one states,<sup>1</sup> seventeen of those states have already adopted water use regulation statutes that create forms of regulated riparianism.<sup>2</sup> The conditions that gave rise to these statutes have expanded and new factors have come to the fore, making it imperative that every eastern state review its current law, common or statutory, to make sure it has in place the best legal structure for dealing with change. These old and new conditions include continued population growth, continued environmental and ecological degradation, global warming, and conversion from individual withdrawals of water to more and more multiple, larger acquisition and delivery systems. The result is increasing demand with no significant new supply becoming available.

Robert H. Abrams in a 1989 article<sup>3</sup> presented a thorough and sound review of supply and demand for water in the eastern United States,<sup>4</sup> concluding that a change in common law riparianism was needed to deal with the perceived imbalance in supply and demand.<sup>5</sup> There is no

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<sup>1</sup> Joseph W. Dellapenna, *The Right to Consume Water Under 'Pure' Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.01 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>2</sup> Joseph W. Dellapenna, *Regulated Riparianism*, in 1 WATERS AND WATER RIGHTS 413-579 (R. Beck ed. 1991 & Supp. 1999). See *id.* at 445-46. Dellapenna coined the phrase "regulated riparianism" to describe these statutory systems. See Joseph W. Dellapenna, *Owning Surface Water in the Eastern United States*, in PROCEEDINGS OF THE SIXTH ANN. INST. E. MIN. L. FOUND. § 1.03[3] (1985). See also Abrams, *infra* note 3, at 1381 n. 4.

<sup>3</sup> Robert H. Abrams, *Charting the Course of Riparianism: An Instrumentalist Theory of Change*, 35 WAYNE L. REV. 1381 (1989).

<sup>4</sup> *Id.* at 1405-1445.

<sup>5</sup> *Id.* at 1445-46. Abram's recommendations for change were presented in two subsequent articles: Robert H. Abrams, *Water Allocation by Comprehensive Permit Systems in the East: Considering a Move Away from Orthodoxy*, 9 VA. ENVTL. L.J. 255

need to do that analysis again. All that is necessary is to state the above conclusion and to point out that in the intervening years since Abrams' article, new data and commentary has simply reinforced and solidified Abrams' conclusions. For example, a part of Abrams' analysis is based on the evidence of global warming,<sup>6</sup> now at a point of even greater certainty<sup>7</sup> than when Abrams wrote. While the world has taken notice of global warming<sup>8</sup> and there has been some movement toward an effort to at least slow the process of global warming,<sup>9</sup> these efforts overall do not appear very significant.<sup>10</sup>

One positive development on the supply front, however, is the continuing push for advancement in desalination technology. At a recent public symposium<sup>11</sup> led by former United States Senator Paul Simon,<sup>12</sup> experts from around the world<sup>13</sup> gathered to consider the global need for

(1990), and Robert H. Abrams, *Replacing Riparianism in the Twenty-First Century*, 36 WAYNE L. REV. 93 (1989).

<sup>6</sup> Abrams, *supra* note 3, at 1409-1418.

<sup>7</sup> See Peter H. Gleick, *Climate Change and Water Resources: What Does the Future Hold?*, in THE WORLD'S WATER 1998-1999: THE BIENNIAL REPORT ON FRESHWATER RESOURCES 137-153 (1998).

<sup>8</sup> UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT: FRAMEWORK CONVENTION ON CLIMATE CHANGE, May 19, 1992, 31 I.L.M. 849; *The Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 3rd Sess., Agenda Item 5, UN Doc. FCCC/cp/1997/L7/Add.1 (1997); *Global Warming Fears on the Rise*, S. ILLINOISAN, Nov. 3, 1999, at 4C, (U.N. Climate Conference in Bonn, Germany, Nov. 2, 1999); "Our new data and understanding now point to the critical situation we face: To slow future change, we must start taking action soon." D. James Baker, Administrator, U.S. National Oceanic and Atmospheric Administration, & Peter D. Ewins, CEO, United Kingdom Meteorological Office, Letter, *Basic Science of Global Warming Has not Changed*, USA TODAY, Jan. 6, 2000, at 14A.

<sup>9</sup> See U.S. DEP'T OF ENERGY, MEETING THE CLIMATE CHANGE CHALLENGE: REDUCING GREENHOUSE GASES BY MORE EFFICIENT USE OF FOSSIL FUELS (1994); AMERICA'S CLIMATE CHANGE STRATEGY: AN ACTION AGENDA (1990).

<sup>10</sup> See Gleick, *supra* note 7; Baker, *supra* note 8.

<sup>11</sup> THE ROLE OF DESALINATION IN AVERTING A GLOBAL WATER CRISIS (Held September 19-20, 1999, Southern Illinois University Carbondale).

<sup>12</sup> PAUL SIMON, TAPPED OUT: THE COMING WORLD CRISIS IN WATER AND WHAT WE CAN DO ABOUT IT (1998).

<sup>13</sup> The Symposium included representatives from West Neck Strategies; The Population Institute; The Pacific Institute for Studies in Development, Environment and Security; Southwest Florida Water Management District; Stone and Webster Engineering Corporation; International Desalination and Water Reuse Quarterly; The World Bank; U.S. Bureau of Reclamation; International Water Resources Association; Defense Advanced Research Projects Agency; AEPI/RosTek, Inc.; and American States Water Company. See GLOBAL WATER CRISIS RECOMMENDATIONS c. p. 6 (unpaginated 1999).

water. Their consensus report to the public called not only for substantial further developments in desalination,<sup>14</sup> which at least creates potable water, but also for (1) a U.N. resolution asking countries to devote 5 percent of their current weapons research budgets to water supply and sanitation needs; (2) encouraging international mechanisms for resolving water access disputes; and (3) intensifying efforts to stabilize global population growth.<sup>15</sup> The relevance of desalination technology to coastal states is obvious;<sup>16</sup> the relevance for users far inland is much less clear. However, because the cost is so high, desalination's potential in the current market is limited.<sup>17</sup> It is also possible that weather modification could lead to augmented supplies.<sup>18</sup> However, considerable uncertainty exists about the precipitation that could be gained, although some studies suggest a 12 to 17 percent increase,<sup>19</sup> this effort is also expensive.<sup>20</sup> Thus it is unlikely that even desalination and weather modification taken together would solve current and projected water problems.

Although the rising demand and environmental needs noted above face the entire country, my focus in this paper is on the riparian approaches extant in the thirty-one eastern states of the United States. My general hypothesis is that The Regulated Riparian Model Water Code (hereinafter in text as Code)<sup>21</sup> offers a model for the twenty-first century that will allow these needs to be addressed not only by the states that have no pertinent statutes, but also by states with inadequate statutes.

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<sup>14</sup> *Id.*

<sup>15</sup> *Id.* at c. p. 3.

<sup>16</sup> See Clifford Nielson, *Desalination Becoming a Major Industry*, U.S. WATER NEWS, July 1999, at 13, col. 1 (Tampa proposed 2.5 million gallon per day plant scheduled to begin operation in 2002).

<sup>17</sup> Peter H. Gleick, *The Changing Water Paradigm*, in THE WORLD'S WATER 1998-1999: THE BIENNIAL REPORT ON FRESHWATER RESOURCES 29-32 (1998). The Tampa plant, see Nielson, *supra* note 16, would cost \$2 per 1000 gallons, apparently twice the cost of well water.

<sup>18</sup> Robert E. Beck, *Augmenting the Available Water Supply*, in 1 WATERS AND WATER RIGHTS § 3.04 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>19</sup> Robert E. Beck, *Augmenting the Available Water Supply*, in 1 WATERS AND WATER RIGHTS § 3.04(a) *text accompanying* n. 48 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>20</sup> See Robert E. Beck, *Augmenting the Available Water Supply*, in 1 WATERS AND WATER RIGHTS § 3.04(c) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>21</sup> THE REGULATED RIPARIAN MODEL WATER CODE: FINAL REPORT OF THE WATER LAWS COMMITTEE OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS (Joseph W. Dellapenna ed., 1997) [hereinafter referred to in citations as RRMWC].

The Code<sup>22</sup> was published in 1997 under the auspices of the American Society of Civil Engineers.<sup>23</sup> It is the first of two<sup>24</sup> end products of a seven-year effort by the Society's Water Laws Committee, which began under the chairmanship of Professor Ray Jay Davis<sup>25</sup> and concluded under the chairmanship of Professor Joseph W. Dellapenna.<sup>26</sup> Professor Dellapenna also served as Editor of the Code. The Code is well crafted in its scheme of sections, commentary, cross-references, and references to comparable statutes.<sup>27</sup>

As noted above,<sup>28</sup> concern about the adequacy of extant water allocation systems arises because of the growing population competing for the same water and the recognition of needs to sustain the human environment. One of the touted approaches for effecting a balance between water consumption and preventing further environmental degradation is watershed management, the subject of this symposium.<sup>29</sup>

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<sup>22</sup> An earlier Code, F. MALONEY, R. AUSNESS, & J. MORRIS, A MODEL WATER CODE (1972), drew on legislation in Iowa and, in turn, formed the basis for Florida legislation adopted in 1972. See Joseph W. Dellapenna, *Regulated Riparianism*, in 1 WATERS AND WATER RIGHTS 447-48, & ch. 9 *passim* (Robert E. Beck ed., 1991 & Supp. 1999); Richard Ausness, *The Influence of the Model Water Code on Water Resources Management Policy in Florida*, 3 J. LAND USE & ENVTL. L. 1 (1987). For an even earlier model act effort see *Model Water Use Act*, in WATER RESOURCES AND THE LAW 533 (U. Mich. 1958).

<sup>23</sup> See *supra* note 21. For information about the society, see [www.asce.org](http://www.asce.org).

<sup>24</sup> The second end product, THE APPROPRIATIVE RIGHTS MODEL WATER CODE, is in the final stages of completion. See THE APPROPRIATIVE RIGHTS MODEL WATER CODE (Final Report, Water Laws Committee, American Society of Civil Engineers, August, 1996).

<sup>25</sup> Professor of Law, Brigham Young University Law School. Professor Davis is an expert on weather modification, having written two texts and eight articles on the subject. See generally Robert E. Beck, *Augmenting the Available Supply*, in 1 WATERS AND WATER RIGHTS § 3.04 notes 60 & 61 and accompanying text (Robert E. Beck ed., 1991 & Supp. 1999). See RRMWC at iii.

<sup>26</sup> Professor of Law, Villanova University School of Law. Professor Dellapenna is an expert on riparian water law. See Joseph W. Dellapenna, *Riparianism*, in 1 WATERS AND WATER RIGHTS 85-579 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>27</sup> Thus even if not enacted as a code, the Code can serve several other purposes; first, as a checklist of items to consider for any statutory scheme, and second, as a rich commentary on the law that now exists in the thirty-one states by means of its cross-references, illustrations of the applications of particular provisions, and explanations of why a particular approach was chosen over a competing approach.

<sup>28</sup> See Lynda L. Butler, *Allocating Consumptive Water Rights in a Riparian Jurisdiction: Defining the Relationship Between Public and Private Interests*, 47 U. PITT. L. REV. 95, 96-103 (1985).

<sup>29</sup> During the past twenty years there has been some movement toward an ecosystem approach to water management, focusing on the watershed. See BOB DOPPETT ET AL.,

The intent of this article is to delineate the approach, scope, and elements covered in the Code and to recognize the criticism leveled at both common law riparian doctrine and existing regulated riparianism statutes and indicate how the Code responds, but doing both from the viewpoint of identifying the potential of the Code for supporting a watershed management approach.

While critics of riparianism go as far back as those in the West who rejected its application in the western United States,<sup>30</sup> I focus on the work of three critics, Robert Abrams,<sup>31</sup> Richard Ausness,<sup>32</sup> and Lynda Butler,<sup>33</sup> because of the substantive quantity and quality of their work as well as their differing critical contributions.

Several prerequisites seem necessary in any legal regime for significant water resource management from a watershed management approach.<sup>34</sup> First, all water has to be included and all aspects of water regulation, such as quantity allocation and quality control, must be

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ENTERING THE WATERSHED: A NEW APPROACH TO SAVE AMERICA'S RIVER ECOSYSTEMS (1993); Robert E. Beck, *Introduction, Background, and Trends*, in 1 WATERS AND WATER RIGHTS § 52.06(d)(4) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>30</sup> See Joseph W. Dellapenna, *Dual Systems*, in 1 WATERS AND WATER RIGHTS § 8.01 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>31</sup> Robert H. Abrams, *Charting the Course of Riparianism: An Instrumentalist Theory of Change*, 35 WAYNE L. REV. 1381 (1989); Robert H. Abrams, *Water Allocation by Comprehensive Permit Systems in the East: Considering a Move Away from Orthodoxy*, 9 VA. ENVTL. L.J. 255 (1990); Robert H. Abrams, *Replacing Riparianism in the Twenty-First Century*, 36 WAYNE L. REV. 93 (1989). These articles constitute a trilogy and are set forth in the order that Abrams intended them to be read.

<sup>32</sup> Frank E. Maloney & Richard C. Ausness, *Administering State Water Resources: The Need for Long-Range Planning*, 73 W. VA. L. REV. 209 (1971); Richard C. Ausness, *Water Use Permits in a Riparian State: Problems and Proposals*, 66 KY. L.J. 191 (1977); Richard C. Ausness, *Water Rights Legislation in the East: A Program for Reform*, 24 WM. & MARY L. REV. 547 (1983); Richard C. Ausness, *The Influence of the Model Water Code on Water Resources Management Policy in Florida*, 3 J. LAND USE & ENVTL. L. 1 (1987).

<sup>33</sup> Lynda L. Butler, *Environmental Water Rights: An Evolving Concept of Public Property*, 9 VA. ENVTL. L.J. 323 (1990); Lynda L. Butler, *Defining a Water Ethic Through Comprehensive Reform: A Suggested Framework for Analysis*, 1986 U. ILL. L. REV. 439; Lynda L. Butler, *Allocating Consumptive Water Rights in a Riparian Jurisdiction: Defining the Relationship Between Public and Private Interests*, 47 U. PITT. L. REV. 95 (1985).

<sup>34</sup> See generally Robert E. Beck, *Introduction, Background, and Trends*, in 5 WATERS AND WATER RIGHTS § 52.06(d)(4) (Robert E. Beck ed., 1998 & Supp. 1999); A. Dan Tarlock, *Reconnecting Property Rights to Watersheds*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 69.

coordinated, if not integrated. Second, there has to be meaningful integration of environmental and ecological factors into the management process. Third, any private rights that exist in water have to be delineated and their nature identified, particularly the extent to which they can be subjected to regulation in the public interest. This article considers how each of these prerequisites fare under the Code. While the Code may contain these basic prerequisites necessary to watershed management, it does not insist upon the use of the watershed management approach; rather, such a decision would come through the comprehensive planning process provided for by the Code. Therefore, that comprehensive planning process is explored in this article as well.

## II. WATER RESOURCE AND REGULATORY ASPECTS COVERED BY THE CODE

The very first section of the Code declares that the "waters of the State" are owned by the State in trust for the public and subject to the state's regulatory power to protect the public interest.<sup>35</sup> Waters of the State are defined to encompass the entire hydrologic cycle: "all waters, on the surface, under the ground, and in the atmosphere, wholly within or bordering the State or within the jurisdiction of the State."<sup>36</sup> In that context of covering all waters, the Code establishes the principle that the Code and all regulatory activities pursuant to the Code are to be interpreted "to conform to the physical laws which govern the natural occurrence, movement, and storage of water."<sup>37</sup>

The most frequent critics of the law's failure to look at the reality of the hydrologic cycle, particularly as it concerns the interconnection between surface waters and groundwater, have been scientists.<sup>38</sup> The law, however, did not divide surface waters and groundwater into different regimes because we did not know about the interconnection; the law divided them because we lacked the wherewithal to determine the nature of the interconnection in specific cases.<sup>39</sup> Thus where we could determine that an underground stream existed by examining surface manifestations,

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<sup>35</sup> RRMWC § 1R-1-01.

<sup>36</sup> *Id.* § 2R-2-32.

<sup>37</sup> *Id.* § 1R-1-03.

<sup>38</sup> See Joseph W. Dellapenna, *Introduction to Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 6.02, text accompanying note 341 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>39</sup> See Robert E. Beck, *The Legal Regimes*, in 1 WATERS AND WATER RIGHTS § 4.05(c) (Robert E. Beck ed., 1991 & Supp. 1999); Earl Finbar Murphy, *Geology and Hydrology*, in 3 WATERS AND WATER RIGHTS § 18.01 (Robert E. Beck ed., 1991 & Supp. 1999).

we treated it as a surface stream.<sup>40</sup> Where we otherwise knew the interconnection, we treated the sources accordingly.<sup>41</sup> In all other cases, we applied limiting doctrine to groundwater that did not require us to look underground, such as the methods for preventing waste<sup>42</sup> and malicious use.<sup>43</sup> Even today it might be too expensive to look underground to solve a particular problem.<sup>44</sup> But any effort to provide rational management of the water resource from a watershed approach needs to look at all aspects of the resource and certainly there is strong argument that application of the same principles to all water fosters efficiency in management.<sup>45</sup>

There has been some movement to connect the management of surface waters and groundwater in statutes that have already been enacted.<sup>46</sup> For example, when courts in Illinois<sup>47</sup> and Vermont<sup>48</sup> declined to abandon those states' perceived adherence to the absolute ownership doctrine for groundwater in favor of the reasonable use rule then being applied to surface waters, the legislatures stepped in. The responsive Illinois statute<sup>49</sup> stated simply that "[t]he rule of 'reasonable use' shall apply to groundwater withdrawals in the State"<sup>50</sup> and then defined 'reasonable use' as meaning "the use of water to meet natural wants and a fair share for artificial wants."<sup>51</sup> When the Illinois appellate court first considered the statute,<sup>52</sup> it identified the legislature's purpose: "By using the terms 'natural wants' and 'artificial wants' in the definition of reasonable use in the Act . . . the legislature has adopted the same

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<sup>40</sup> See Earl Finbar Murphy, *Legal Classifications*, in 3 WATERS AND WATER RIGHTS § 20.07(a) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>41</sup> *Smith v. City of Brooklyn*, 18 N. Y. App. Div. 340, 46 N.Y.S. 141, 144 (1897).

<sup>42</sup> See Peter N. Davis, *Wells and Streams: Relationship at Law*, 37 MO. L. REV. 189, 202-03 (1972).

<sup>43</sup> See A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 4:6 (2000).

<sup>44</sup> See Peter N. Davis, *Wells and Streams: Relationship at Law*, 37 MO. L. REV. 189, 234-38 (1972).

<sup>45</sup> See Richard C. Ausness, *Water Rights Legislation in the East: A Program for Reform*, 24 WM. & MARY L. REV. 547, 579-581 (1983).

<sup>46</sup> See the commentary in the Code, RRMWC at 73.

<sup>47</sup> *Lee v. City of Pontiac*, 99 Ill. App. 3d 982, 426 N.E.2d 300 (4<sup>th</sup> Dist. 1981).

<sup>48</sup> *Drinkwine v. State*, 131 Vt. 127, 300 A.2d 616 (1973).

<sup>49</sup> Water Use Act of 1983, Pub. Act 83-700 (codified at 525 ILCS 45/1 to 45/7). The Vermont statute is at VT. STAT. ANN. tit. 10, § 1410 (added in 1985). "It is the policy of the State that the common-law doctrine of absolute ownership of groundwater is hereby abolished." *Id.* § 1410(a)(5).

<sup>50</sup> 525 ILCS 45/6.

<sup>51</sup> 525 ILCS 45/4(g).

<sup>52</sup> *Bridgman v. Sanitary District*, 164 Ill. App. 3d 287, 517 N.E.2d 309 (4<sup>th</sup> Dist. 1987).



standards for groundwater as that which applies to surface water withdrawals . . . ."<sup>53</sup>

Despite the seeming inclusiveness of "all waters" as defined in the Code, not all waters are necessarily subject to allocation under the Code.<sup>54</sup> The Code provides for two types of waters that may be exempted from allocation; "certain shared waters"<sup>55</sup> and "small water sources,"<sup>56</sup> and one type of water which is not to be allocated; "protected minimum flows or levels."<sup>57</sup>

No matter how devoutly a state might wish it, the state does not have complete control over the water within the state in whatever form it appears. Any realistic code must take this lack of control into account. Thus those waters managed by federal mandate,<sup>58</sup> under interstate compact<sup>59</sup> or under international treaty<sup>60</sup> would be recognized as such, and as to those waters any allocation by the state agency would proceed only if consistent with the mandate, compact or treaty.<sup>61</sup> However, the Code does

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<sup>53</sup> *Id.* at 293, 517 N.E.2d at 313.

<sup>54</sup> RRMWC § 3R-1-01 declares that "all waters of the State" are subject to allocation under the Code unless expressly exempted in Chapter III of the Code. However, not all users of water under the Code may need to have a permit. *See infra* Part IV of this article.

<sup>55</sup> RRMWC § 3R-1-02.

<sup>56</sup> *Id.* § 3R-1-03.

<sup>57</sup> *Id.* § 3R-2-01.

<sup>58</sup> Federal laws are "the supreme Law of the Land." U.S. CONST. Art. VI § 2. The federal government exercises considerable jurisdiction in (1) pollution control, (2) ecosystem protection, (3) protecting navigability, and (4) constructing and managing reservoirs. As to pollution control, *see infra* note 70. As to ecosystem protection, *see, e.g.*, Clean Water Act § 404, 33 USC § 1344 & Wild and Scenic Rivers, 16 U.S.C. §§ 1271-1287. As to navigability, *see* Navigation and Navigable Waters, 33 U.S.C. tit. 33. As to constructing and managing reservoirs, *see* William L. Andreen, *Alabama*, in 6 WATERS AND WATER RIGHTS 185, 190-191 (Robert E. Beck ed., 1994 & Supp. 1999); James L. Bross, *Georgia*, in 6 WATERS AND WATER RIGHTS 301, 310-311 (Robert E. Beck ed., 1994 & Supp. 1999); J. THORSON, RIVER OF PROMISE, RIVER OF PERIL: THE POLITICS OF MANAGING THE MISSOURI RIVER *passim* (1994).

<sup>59</sup> *See* Douglas L. Grant, *Water Apportionment Compacts Between States*, in 4 WATERS AND WATER RIGHTS § 46.01 (Robert E. Beck ed., 1996 & Supp. 1999); Robert E. Beck, *Introduction, Background, and Trends*, in 5 WATERS AND WATER RIGHTS § 52.06(c)(1) (Robert E. Beck ed., 1998).

<sup>60</sup> *See generally* Albert E. Utton, *Canadian International Waters*, in 5 WATERS AND WATER RIGHTS 51-97 (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>61</sup> RRMWC § 3R-1-02.

place an affirmative duty on state agencies to cooperate with federal agencies and with compact- and treaty-created agencies.<sup>62</sup>

The optional Code provision relating to small water sources in effect gives the land owner control over the diffused surface water that arises on the land.<sup>63</sup> As a general rule under the common law, diffused surface waters are not treated as waters subject to riparian principles.<sup>64</sup> However, the language used in the Code limits the water included in the exception to water (1) originating on the landowner's land, (2) not drawn from an eight-acre or larger basin, and (3) being used on the landowner's land.<sup>65</sup> The commentary in the Code points out that this exemption can be viewed from a *de minimis* perspective as well.<sup>66</sup>

The purpose and status of minimum flows or levels will be considered in Part III of this article.<sup>67</sup> It only needs to be pointed out here that because some of those waters can be allocated during a water emergency, the protection for such flows or levels is not absolute.<sup>68</sup>

When different agencies within the state have different responsibilities relative to the water resource, the Code can and does do more, particularly with the often separated water quality control versus water quantity allocation.<sup>69</sup> While the Code mandates coordination, it does not set out specific quality control measures. Considering the expansive extant base for water quality protection in several federal statutes,<sup>70</sup> an

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<sup>62</sup> *Id.* § 4R-3-01.

<sup>63</sup> *Id.* § 3R-1-03.

<sup>64</sup> Joseph W. Dellapenna, *Introduction to Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 6.02 (Robert E. Beck ed., 1991 & Supp. 1999). Usually diffused surface waters were viewed as unwanted and something, therefore, to be eliminated. This resulted in the law relating to drainage. See Joseph W. Dellapenna, *Related Systems of Water Rights*, in 2 WATERS AND WATER RIGHTS § 10.03 (Robert E. Beck ed., 1991 & Supp. 1999); Peter N. Davis, *Drainage*, in 5 WATERS AND WATER RIGHTS § 59 (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>65</sup> RRMWC § 3R-1-03.

<sup>66</sup> RRMWC at 79.

<sup>67</sup> See *infra* text accompanying notes 160-176.

<sup>68</sup> See *infra* text accompanying notes 174-175.

<sup>69</sup> Other deviations may exist; for example, some states assign weather modification duties to agriculture departments. See, e.g., MICH. COMP. LAWS § 295.105; PA. STAT. ANN. tit. 3, §§ 1103, 1104.

<sup>70</sup> See, e.g., The Clean Water Act, 33 U.S.C. §§ 1251-1387; Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j-26; RCRA Subch. IX, §§ 6991-6991k. The Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j-26, contains several programs that assist in maintaining the integrity of underground water supplies, particularly the underground injection control program, §§ 300h to 300h-8, the sole source aquifer protection program, § 300h-6, and

effort to restate those rules within the Code is unnecessary and probably would do no more than create an excessively heavy volume. Nor does the Code insist that one agency handle both. What a code does need to do and what this Code does is to provide awareness of the need for integration and coordination, specify particularly the circumstances in which this needs to be accomplished,<sup>71</sup> and indicate how this can be accomplished.

In doing so, the Code reflects the view articulated by the United States Supreme Court in *PUD No. 1 v. Washington Department of Ecology*:<sup>72</sup>

"Petitioners . . . assert . . . that the Clean Water Act is only concerned with water 'quality' and does not allow the regulation of water 'quantity.' This is an artificial distinction. In many cases, water quantity is closely related to water quality; a sufficient lowering of water quantity in a body of water could destroy all of its desired uses, be it for drinking water, recreation, navigation or, as here, as a fishery."<sup>73</sup>

Although the Code provides in the Declarations of Policy that "the State shall coordinate the plans, laws, regulations, and decisions pertaining to water allocation with those pertaining to water quality,"<sup>74</sup> the primary effort comes in the chapter on establishing a water right,<sup>75</sup> where one part is devoted specifically to "[c]oordination of Water Allocation and Water Quality Regulation."<sup>76</sup> There the Code puts the basic duty on the quantity agency to allocate water in a manner that will "protect and preserve the

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the wellhead protection program, § 300h-7. The RCRA citation is to the underground storage tank program.

<sup>71</sup> See generally D. GETCHES, ET AL., *CONTROLLING WATER USE: THE UNFINISHED BUSINESS OF WATER QUALITY PROTECTION* *passim* (1991); Ausness, *supra* note 45, at 579-81, 24 WM. & MARY L. REV. 547, 579-581 (1983).

<sup>72</sup> 511 U.S. 700 (1994).

<sup>73</sup> *Id.* at 719. See also the commentary to RRMWC § 1R-1-09.

<sup>74</sup> RRMWC § 1R-1-09. However, the coordination provision preserves private rights of action, particularly the rights of persons to seek suppression of nuisances or to use other pollution abatement remedies. RRMWC § 6R-04 (sic)-05.

<sup>75</sup> RRMWC ch. VI.

<sup>76</sup> RRMWC ch. VI, pt. 4. This part is written on the assumption that different state agencies handle allocation and quality control and would require language adjustment if one agency handles both functions. See RRMWC at 254.

quality of those waters,”<sup>77</sup> and not to allocate water to a use “that appears likely to result in a violation” of the State’s water quality standards<sup>78</sup> without consulting the quality control agency.<sup>79</sup> If the quality agency objects to a proposed quantity allocation and the allocation agency goes ahead with the allocation, the quality agency can pursue the matter through the state’s regular interagency dispute resolution mechanism.<sup>80</sup> In order to facilitate the performance of these duties, the allocation agency is required to maintain within the statewide data system<sup>81</sup> a variety of water quality related information to be supplied by the quality control agency.<sup>82</sup>

To further the evaluation process, the Code provides (1) that the quantity agency is to establish and implement standards and procedures that accomplish coordination in four specific instances,<sup>83</sup> (2) guidance on evaluating quantity allocations for their potential effect on water quality,<sup>84</sup> and (3) guidance on combining water quantity and water quality permits.<sup>85</sup>

The first specific instance for which the agency is to establish standards and procedures is where a withdrawal of water from the source may affect the volume of flow in waters that receive effluent discharges.<sup>86</sup> A case from Colorado<sup>87</sup> factually illustrates the problem nicely. In this case, Kodak had a permit to withdraw water from a stream for waste treatment purposes and a permit to discharge wastewater into the stream. The City of Thornton applied for and received a permit to withdraw water from the stream above Kodak’s discharge point. Kodak had argued that with the City’s withdrawal from the stream, the stream could no longer assimilate Kodak’s wastewater discharge. This would cause Kodak to be

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<sup>77</sup> RRMWC § 6R-4-01(1).

<sup>78</sup> States adopt water quality standards pursuant to the Clean Water Act (CWA). CWA, 33 U.S.C. § 1313. See Robert E. Beck & C. Peter Goplerud, *The Water Quality Approach in 5 WATERS AND WATER RIGHTS* § 54.02 (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>79</sup> RRMWC § 6R-4-01(2).

<sup>80</sup> *Id.* § 6R-4-01(3).

<sup>81</sup> This system is created pursuant to RRMWC § 4R-2-03. Abrams points out the need for data collection, particularly of water use patterns, of stream flow, of storage, and of recharge. Robert H. Abrams, *Water Allocation by Comprehensive Permit Systems in the East: Considering a Move Away from Orthodoxy*, 9 VA. ENVTL. L.J. 255, 279 (1990).

<sup>82</sup> RRMWC § 6R-4-02.

<sup>83</sup> *Id.* § 6R-4-03(1).

<sup>84</sup> *Id.* § 6R-4-03.

<sup>85</sup> *Id.* § 6R-4-04.

<sup>86</sup> *Id.* § 6R-4-03(1)(a). See also Peter N. Davis, *Protecting Waste Assimilation Streamflows by the Law of Water Allocation, Nuisance, and Public Trust, and by Environmental Statutes*, 28 NAT. RESOURCES J. 357 (1988).

<sup>87</sup> *City of Thornton v. Bijou Irrigation Co.*, 926 P.2d 1, 91-95 (Colo. 1996).

in violation of the Clean Water Act, forcing Kodak to spend \$9 to \$12 million to redo its waste treatment system. The Colorado Supreme Court rejected Kodak's argument on the basis that it had not acquired a water right to maintain the assimilative capacity of the stream, only to withdraw water from the stream for treatment purposes.<sup>88</sup>

The second instance for which the agency must establish and implement standards and procedures that accomplish coordination is when the water to be allocated will result in return flow that will carry with it any category of pollutant regulated by either federal or state statutes or regulations.<sup>89</sup> The third instance is when withdrawal of groundwater would cause a zone of depression that results in a threat of the intrusion of saline water, hazardous wastes or other pollutants into the groundwater supply.<sup>90</sup> The final instance is when artificial recharge of groundwater appears likely to create a risk that any category of pollutant regulated by federal or state statute or regulations will enter the groundwater.<sup>91</sup>

In addition to requiring the establishment and implementation of the standards and procedures in these four instances, the Code lists seven factors for the quantity agency to consider in determining the impact that any allocation might have on the quality of waters in the water source.<sup>92</sup>

The seven factors that must be considered are: (1) nature, size and safe yield of the source;<sup>93</sup> (2) biological and chemical effects of degradation of water quality resulting from proposed allocation by itself or in combination with other existing, permitted, or planned uses which adversely affect the availability or fitness of the water for other uses;<sup>94</sup> (3) injuries to public health, safety or welfare or to environmental quality and integrity if the degradation is not prevented or abated;<sup>95</sup> (4) need for the withdrawal and cost of an alternative source;<sup>96</sup> (5) extent of adverse quality effects on other uses and the amount of remedial costs necessary to mitigate those effects;<sup>97</sup> (6) effect on waste assimilative capacity under

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<sup>88</sup> *Id.*

<sup>89</sup> RRMWC § 6R-4-03(1)(b).

<sup>90</sup> *Id.* § 6R-4-03(1)(c).

<sup>91</sup> *Id.* § 6R-4-03(1)(d).

<sup>92</sup> *Id.* § 6R-4-03(2).

<sup>93</sup> *Id.* § 6R-4-03(2)(a). Safe yield is discussed *infra* text accompanying notes 179-181.

<sup>94</sup> RRMWC § 6R-4-03(2)(b).

<sup>95</sup> *Id.* § 6R-4-03(2)(c).

<sup>96</sup> *Id.* § 6R-4-03(2)(d).

<sup>97</sup> *Id.* § 6R-4-03(2)(e).

subsection 3;<sup>98</sup> and (7) any other impact on public interest and sustainable development.<sup>99</sup>

Finally, subsection 3,<sup>100</sup> referred to in item (6) above, requires the agency to determine the effect of the allocation on the capacity of the source to assimilate effluent from point and nonpoint sources, balancing the cost of additional pollution control against the cost of losses imposed on other users (actual or potential) of source waters by the impact.

The guidance on combining permits states that “[w]henever consistent with” the policies and requirements of the Code, the quantity agency and the quality agency “shall issue a combined permit” that contains the terms and conditions for both.<sup>101</sup> If the quantity agency determines that a combined permit is not possible, that agency is required to (1) publish a notice of intent to issue a permit, (2) send written notice to the quality agency, and (3) issue the permit as planned unless precluded by order of a court or other body authorized to review the decision.<sup>102</sup>

### III. ENVIRONMENTAL AND ECOLOGICAL VALUES UNDER THE CODE

Common law riparian doctrine did make some contribution to protecting environmental and ecological values. It included water quality as an aspect of water allocation.<sup>103</sup> It also recognized recreation, wildlife and even aesthetics as reasonable uses, all of which would result in keeping water in the stream or lake.<sup>104</sup> Indeed, a principal reason that western courts and legislatures rejected riparianism was that they believed that it would leave too much water flowing in stream, and water that reached the ocean was considered wasted.<sup>105</sup> Obviously had the riparianism flirtation with natural flow<sup>106</sup> been developed and maintained,

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<sup>98</sup> *Id.* § 6R-4-03(b)(f). See *infra* text accompanying note 100.

<sup>99</sup> RRMWC § 6R-4-03(b)(g).

<sup>100</sup> *Id.* § 6R-4-03(3).

<sup>101</sup> *Id.* § 6R-4-04

<sup>102</sup> *Id.* § 6R-4-04(2)(a)-(c).

<sup>103</sup> See also Joseph W. Dellapenna, *Introduction to Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 6.01(a)(3) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>104</sup> *Id.*

<sup>105</sup> As recently as 1966, the Nebraska Supreme Court wrote: “It is axiomatic that waters which flow beyond the points of use to the sea are lost and constitute a form of waste, which is against public policy.” *In re Metropolitan Utilities Dist. of Omaha*, 140 N.W.2d 626, 637 (Neb. 1966).

<sup>106</sup> Joseph W. Dellapenna, *The Right to Consume Water Under ‘Pure’ Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.02(c) (Robert E. Beck ed., 1991 & Supp. 1999).

it would have meant even greater ecosystem protection. However, even the western authorities recognized that considerable stream flow had to be maintained in any reasonable water use system. Otherwise, there would not be enough water available to the downstream users, who had a water use right equal to any of the water's other users' rights.<sup>107</sup>

However, the eastern states interfered early on with natural flow, not only by putting the focus of the common law doctrine on reasonable use, but also in other ways. Under early doctrine riparian land was limited to land owned abutting the water,<sup>108</sup> and the outer limits of riparian land were the watershed boundaries.<sup>109</sup> However, many courts changed their doctrine to accommodate use on nonriparian land as long as a riparian user was not injured.<sup>110</sup> This change could be justified on the basis that the happenstance of ownership was artificial and that the entire watershed contributed to the source, but the latter justification would not extend use outside the watershed. Nevertheless, states began to ignore even the watershed limitation,<sup>111</sup> just as the United States Supreme Court apparently did in fashioning decrees allocating interstate waters among eastern states.<sup>112</sup> Other state interference with riparian doctrine came early in enacting mill dam statutes,<sup>113</sup> in draining swamps,<sup>114</sup> and in providing for municipal water supplies, often by damming or diverting a stream.<sup>115</sup>

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<sup>107</sup> See *infra* note 281 for the description of the common law riparian right. Inefficiency in delivery and use of water had protected environmental and ecological values. Increasing demand led to efforts at attaining efficiency in water use; this efficiency gives rise to the need for express recognition and protection of the environmental and ecological values. It is wrong to remove inefficiencies that protect these values without providing substituted protection in the process.

<sup>108</sup> See Butler, *supra* note 28, at 161-64; Joseph W. Dellapenna, *The Right to Consume Water Under 'Pure' Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.02(a)(1) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>109</sup> See Joseph W. Dellapenna, *The Right to Consume Water Under 'Pure' Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.02(a)(2) (R. Beck ed. 1991 & Supp. 1999).

<sup>110</sup> See *supra* note 108.

<sup>111</sup> See *Stratton v. Mt. Hermon Boys' School*, 216 Mass. 83, 103 N.E. 87 (1913).

<sup>112</sup> See *Connecticut v. Massachusetts*, 282 U.S. 336 (1931) (finding against Connecticut for failing to prove injury, despite allegation of diversion of water beyond watershed).

<sup>113</sup> See Joseph W. Dellapenna, *Regulated Riparianism*, in 1 WATERS AND WATER RIGHTS § 9.02(a) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>114</sup> See Robert E. Beck, *Background*, in 5 WATERS AND WATER RIGHTS 727-29 (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>115</sup> See Joseph W. Dellapenna, *The Right to Consume Water Under 'Pure' Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.05(c)(1) (Robert E. Beck ed., 1991 & Supp. 1999).

These and other human interventions caused considerable changes to ecosystems.<sup>116</sup> Today there is all the more pressure to preserve those ecosystems that have not been greatly changed by human intervention and to restore some that have.<sup>117</sup>

Lynda Butler<sup>118</sup> sums up the focus as follows: "As the demand for out-of-stream uses continues to rise, the need for protection of instream uses<sup>119</sup> has become increasingly apparent."<sup>120</sup> The reason for the concern is clear: "[d]espite the need for protection of instream uses, out-of-stream uses have, for the most part, prevailed in both western and eastern states."<sup>121</sup> Butler recognizes that there have been positive developments in the law, enough "to establish the basic legitimacy of the public interest in environmental water uses,"<sup>122</sup> but that little guidance has been provided on how the public interest should be protected and what impact it would have on those pre-existing private rights. In an earlier article,<sup>123</sup> she discussed why then current proposals for reform had failed and found that it was "because they do not consider key factors and concerns."<sup>124</sup> "[R]eformists must define and develop a responsible water ethic . . . that balances factors

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<sup>116</sup> See *Howard v. City of Buffalo*, 211 N.Y. 241, 264, 105 N.E. 426, 433 (1914).

<sup>117</sup> As to restoration, perhaps the best known examples are Mono Lake in the west and the current effort in the Everglades in the east. See Michael L. Davis, *Rescuing an Endangered Ecosystem: The Plan to Restore America's Everglades*, NAT'L WETLANDS NEWSL., Sept.-Oct. 1998, at 11.

<sup>118</sup> Lynda L. Butler, *Environmental Water Rights: An Evolving Concept of Public Property*, 9 VA. ENVTL. L.J. 323 (1990). See also Lynda L. Butler, *Allocating Consumptive Water Rights in a Riparian Jurisdiction: Defining the Relationship Between Public and Private Interests*, 47 U. PITT. L. REV. 95 (1985).

<sup>119</sup> As instream uses she notes environmental preservation, ecological appreciation, and recreational pursuits. Lynda L. Butler, *Environmental Water Rights: An Evolving Concept of Public Property*, 9 VA. ENV'T L. L.J. 323,365 (1990).

<sup>120</sup> *Id.* at 324.

<sup>121</sup> *Id.*

<sup>122</sup> *Id.* at 352. For her the expanding public interest has come about through both judicial and legislative forms. The judicial developments include expansions of the public trust doctrine, *id.* at 331-336, of the definition of navigability, *id.* at 337-340, and of the federal reserved water rights doctrine, *id.* at 341-343. The legislative developments include statutory recognition of instream water rights and a public interest standard in applying traditional allocation doctrines, *id.* at 344-48, establishment of minimum flows, *id.* at 348-350, and indirect protection of instream values such as through wild and scenic river designations, *id.* at 350-51.

<sup>123</sup> Lynda L. Butler, *Defining a Water Ethic Through Comprehensive Reform: A Suggested Framework for Analysis*, 1986 U. ILL. L. REV. 439.

<sup>124</sup> *Id.* at 440.



and concerns falling into one of three general categories:<sup>125</sup> (1) efficiency; (2) equitable or fairness considerations; and (3) environmental values.<sup>126</sup> "An effective system needs a better perspective on environmental objectives" and "must better internalize environmental values in the allocation process."<sup>127</sup> The reforms present at that time contained only vague policy statements like "in the public interest,"<sup>128</sup> and even when environmental requirements were imposed, such as requirements for minimum flows, the standards by which they were to be set were equally vague.<sup>129</sup> Furthermore, environmental values tended to appear as exceptions to a general development goal,<sup>130</sup> when what was needed was clear integration of environmental values into the system.<sup>131</sup> To the extent that integration results in the preservation of the resource, it has the additional benefit of saving the resource for future generations.<sup>132</sup> Butler recognizes that there are uncertainties associated with some environmental risks because of a lack of data, causing precision to be problematic.<sup>133</sup> In discussing the internalizing of environmental values, she considers the public trust doctrine as a possible focal point but notes that in most states courts have not gone very far in developing the doctrine, and to simply refer to it in the legislation as a standard may do nothing but create confusion.<sup>134</sup> What states need to do is to develop a lot of specificity in their environmental goals in relation to the water resource and their methods for achieving those goals.<sup>135</sup> However, it is not until her subsequent article,<sup>136</sup> that she develops the view that the "application of the public property concept to environmental water uses would move the evolutionary process from the legitimization<sup>137</sup> to the integration stage."<sup>138</sup>

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<sup>125</sup> *Id.*

<sup>126</sup> *Id.* at 441. Only the third one is reviewed here.

<sup>127</sup> *Id.* at 468.

<sup>128</sup> *Id.*

<sup>129</sup> Butler, *supra* note 123, at 470.

<sup>130</sup> *Id.*

<sup>131</sup> *Id.* at 471-2.

<sup>132</sup> *Id.* at 472.

<sup>133</sup> *Id.* at 474-75. As to Code provisions on data collecting, see *supra* note 81 and *infra* note 196.

<sup>134</sup> *Id.* at 476-78.

<sup>135</sup> Butler, *supra* note 123, at 479.

<sup>136</sup> Butler, *supra* note 119, at 323, discussed *supra* text accompanying notes 118-122.

<sup>137</sup> See *supra* note 122 and accompanying text.

<sup>138</sup> Butler, *supra* note 119, at 355. Compare Thompson's "environmental water account" and use of watershed ecoservice districts to capitalize on ecosystem service values.

Butler there discusses instream water use as public property focusing on both utilitarian and nonutilitarian justifications.<sup>139</sup> And thus, again, we are back to the subtheme of this symposium: watershed management.

Watershed management is an ecosystem approach to management.<sup>140</sup> In line with the general perception that the eastern states are richer in water than the western states,<sup>141</sup> a 1999 study has pointed out that the eastern states have generally more diverse ecosystems as well.<sup>142</sup> In measuring overall species richness in freshwater ecosystems, the study used the estimated ranges of 2,200 North American species representing five taxonomic groups; fishes, crayfishes, unionid mussels, amphibians that depend on aquatic habitats, and aquatic and semi-aquatic reptiles.<sup>143</sup> It concluded: "the highest number of species occurs in the Southeast and mid-Atlantic."<sup>144</sup> As Tarlock and Thompson point out, watershed management looks to concurrent regulation of water use and land use.<sup>145</sup> The underlying notion is that managing to preserve the watershed can help preserve the species.<sup>146</sup> The question is whether watershed management can accommodate human consumptive use.

While the Code begins<sup>147</sup> with a recognition that the waters of the state are owned by the state<sup>148</sup> in trust for the public and subject to the

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Barton H. Thompson, *Markets for Nature*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 261.

<sup>139</sup> Butler discusses Carol Rose's article dealing with public property concepts, noting limitations imposed by Rose and suggesting that they are too narrowing and that this occurs because Rose focuses on economic preconditions when, as Butler believes, "political theory and democratic values" can be used as well to justify public property rights. Butler, *supra* note 119, at 364.

<sup>140</sup> Robert E. Beck, *Introduction, Background, and Trends*, in 5 WATERS AND WATER RIGHTS § 52.06(d)(4) (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>141</sup> As we seemingly have been told forever, the eastern United States is much richer in water than the western United States. Indeed this perceived fact has been used to justify fundamentally different water use allocation schemes in the two regions; riparianism in the East and prior appropriation in the West.

<sup>142</sup> See R. ABELL ET AL., FRESHWATER ECOREGIONS OF NORTH AMERICA: A CONSERVATION ASSESSMENT (1999) (studying variations in ecosystem diversity in the United States).

<sup>143</sup> *Id.* at 15.

<sup>144</sup> *Id.* at 25. See also *id.* at 26, figures 3.1 to 3.3.

<sup>145</sup> A. Dan Tarlock, *Reconnecting Property Rights to Watersheds*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 69; See generally Thompson, *supra* note 138.

<sup>146</sup> Robert E. Beck, *Introduction, Background, and Trends*, in 5 WATERS AND WATER RIGHTS § 52.06(d)(4) (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>147</sup> See *supra* text accompanying notes 35-36.

state's regulatory powers to protect the public interest, the Code clearly recognizes, as it must, both "economic growth" and "preventing excessive degradation of natural environments" as goals in the public interest.<sup>149</sup> So how does the Code draw the line between the tendency of each to undo the other? The formal definition of "the public interest"<sup>150</sup> in the Code imposes only two limitations, which the commentary in the Code characterizes as "minimal restraints."<sup>151</sup> To come within "public interest" an interest is to be "broadly shared" and "capable of protection or regulation by law."<sup>152</sup>

Clearly, environmental or ecological goals are broadly shared.<sup>153</sup> Whether they are capable of protection or regulation by law can be tested by considering how the Code regulates to prevent "excessive degradation of the environment."<sup>154</sup> For a person who needs a permit to withdraw water from a source,<sup>155</sup> the Code requires that before approving any withdrawal of water, the agency must consider the general effects that the proposed withdrawal of water would have<sup>156</sup> on the environment, ecology and aesthetics,<sup>157</sup> and then the specific effects the withdrawal might have on sustainable development, on recharge areas for underground water, on waste assimilation capacity and other water quality aspects, and on wetlands and flood plains.<sup>158</sup> All of the categories relate directly or indirectly to environmental and ecological protection. Of course, with the

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<sup>148</sup> While declared state ownership of water may not insulate a state from having to share the resource with other states, the concept still provides a useable approach to regulation of the resource. For a discussion of state ownership of resources in the interstate context, see Douglas L. Grant, *State Regulation of Interstate Water Export*, in 4 WATERS AND WATER RIGHTS § 48.03(a)(1) (Robert E. Beck ed., 1996 & Supp. 1999).

<sup>149</sup> RRMWC § 1R-1-01. These are two of the seven public interest items the Code recognizes in this section. The remaining five are noted in connection with the sustainable development concept. See *infra* note 179.

<sup>150</sup> RRMWC § 2R-2-18.

<sup>151</sup> *Id.* at 50.

<sup>152</sup> *Id.* § 2R-2-18.

<sup>153</sup> See *supra* note 33.

<sup>154</sup> See *supra* text accompanying note 149.

<sup>155</sup> See *infra* Part IV of this article.

<sup>156</sup> RRMWC § 6R-3-02(e). In the commentary to RRMWC § 2R-2-18, this section (02(e)) is incorrectly identified as 02(c). The agency is not limited to considering just those seven categories or uses. *Id.*

<sup>157</sup> RRMWC § 6R-3-02(e)(1).

<sup>158</sup> *Id.* § 6R-3-02(e)(2), (4)-(7).

economic growth parameter, the agency must also consider the effect on domestic and municipal uses.<sup>159</sup>

The Code also requires that the agency set minimum flows or levels for surface and underground waters<sup>160</sup> that as a general rule will not be subject to allocation under the Code.<sup>161</sup> This minimum is to be the largest amount among those that are necessary for maintaining biological, chemical, and physical integrity of the water source, taking into account seasonal variations in flow and need.<sup>162</sup> These integrities are taken from the goals of the Clean Water Act.<sup>163</sup> Biological integrity refers to supporting wetlands and wildlife insofar as protection of either is required by state or federal laws or regulations.<sup>164</sup> Chemical integrity refers to maintaining the volume necessary to meet the water quality standards prescribed by state or federal law or regulations, taking into account the discharges and other impacts the water source will face.<sup>165</sup> Physical integrity refers to the volume of water necessary to (1) support commercial navigation required by state or federal law or regulation,<sup>166</sup> (2) preserve natural, cultural or historic resources as required under state or federal law or regulations,<sup>167</sup> (3) provide adequate recreational opportunities for the people of the state,<sup>168</sup> and (4) prevent serious depletion or exhaustion of the water source.<sup>169</sup>

All water users who have a water right under the Code have the obligation to protect those minimum flows or levels.<sup>170</sup> The Code prohibits the withdrawal of water where the withdrawal would impair the minimum flow or level of the source without authorization from the agency or from a court.<sup>171</sup> A person proposing to withdraw water has the

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<sup>159</sup> *Id.* § 6R-3-02(e)(3).

<sup>160</sup> *Id.* III, pt. 2.

<sup>161</sup> *Id.* § 3R-2-01(1). See *infra* text accompanying notes 174-175.

<sup>162</sup> RRMWC § 3R-2-02.

<sup>163</sup> 33 U.S.C. §§ 1251-1387. See RRMWC at 48.

<sup>164</sup> RRMWC § 2R-2-02.

<sup>165</sup> *Id.* § 2R-2-03.

<sup>166</sup> *Id.* § 2R-2-16(a).

<sup>167</sup> *Id.* § 2R-2-16(b).

<sup>168</sup> *Id.* § 2R-2-16(c).

<sup>169</sup> *Id.* § 2R-2-16(d).

<sup>170</sup> RRMWC § 3R-2-01(2). Because water right is defined in the Code as a right to withdraw water whether a permit is needed or not, *id.* RRMWC § 2R-2-30, all who could interfere with minimum flows or levels are covered by the obligation.

<sup>171</sup> *Id.* § 3R-2-04(2).

burden of showing that the withdrawal will not impair the minimum flow or level of the source.<sup>172</sup>

When a threat to a minimum flow or level arises, the agency may declare either a water shortage or a water emergency,<sup>173</sup> each involving appropriate action to follow. During an emergency, but not during a shortage, the agency can invade the minimum flow or level and allocate some water, but only "to prevent serious injuries" to other uses and only if the allocation will not "permanently impair" any of the integrities.<sup>174</sup> Furthermore, the agency must determine in advance the emergency minimum flows or levels that can be allocated only "to prevent grave threats to human life or health," but even then those flows are allocated only if water is not available from any other source to cope with these needs.<sup>175</sup>

The agency may also protect flows or levels by seeking additional water for that purpose. The Code authorizes the agency to contract with water use permit holders to provide water for additional flows or levels and to pay for that water out of the State Water Fund.<sup>176</sup>

The protection of ecological and environmental values is furthered also by the adoption of "sustainable development" as an underlying or pervasive theme of the Code.<sup>177</sup> The Code defines sustainable

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<sup>172</sup> *Id.* § 3R-2-04(1).

<sup>173</sup> *Id.* § 3R-2-03(1).

<sup>174</sup> *Id.* § 3R-2-03(2).

<sup>175</sup> *Id.* § 3R-2-03(3).

<sup>176</sup> RRMWC § 3R-2-05. The State Water Fund is established under RRMWC § 4R-1-04(1). There are several possible sources under the Code for monies to be contributed to the Fund. For example, the agency is to establish a schedule of reasonable water use fees based on the value of water used, *id.* RRMWC § 4R-1-08, and all persons who withdraw water under a permit issued under the Code must be charged a water use fee. Professor Abrams discusses the importance of charging for water. Robert H. Abrams, *supra* note 81, at 282.

<sup>177</sup> The phrase or a variant thereof occurs in eighteen discrete sections or subsections of the Code. RRMWC § 1R-1-02 ("in a sustainable manner"); RRMWC § 1R-1-04 ("establishing and maintaining sustainable development"); RRMWC § 2R-2-20 ("consistently with . . . sustainable development"); RRMWC § 2R-2-24 (definition of "sustainable development"); RRMWC § 4R-2-01(2) ("for achieving sustainable development"); RRMWC § 4R-4-01(c) ("the sustainable development of total regional water resources"); RRMWC § 4R-4-02(3)(a) ("the public interest in sustainable development"); RRMWC § 6R-3-02(e) ("the probable effects . . . on . . . (2) sustainable development"); RRMWC § 6R-3-04(1)(c) ("the overall goal of sustainable development"); RRMWC § 6R-3-06(1) ("impair the sustainable development"); RRMWC § 6R-4-03(2)(g) ("any other impact on . . . sustainable development"); RRMWC § 7R-1-01(l) ("to be necessary to protect . . . sustainable development");

development as “the integrated management of resources taking seriously the needs of future generations as well as the current generation,<sup>178</sup> assuring equitable access to resources, optimizing the use of non-renewable resources, and averting the exhaustion of renewable resources.”<sup>179</sup> While this definition does not specifically refer to environmental or ecological values, by treating water as a renewable resource and limiting withdrawal to “safe yield,”<sup>180</sup> while defining safe yield as water that can be withdrawn from a water source without impairing the long-term social utility of the source, including its protected biological, chemical, and physical integrities,<sup>181</sup> the Code reinforces protection of ecological and environmental goals. Safe yield is not a new concept to water resource law and management, as it has been for some time a focus of aquifer management.<sup>182</sup>

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RRMWC § 7R-3-06(3) (“does not unreasonably impair . . . sustainable development”); RRMWC § 7R-3-06(4) (“does not unreasonably impair . . . sustainable development”); RRMWC § 8R-1-01 (“consistent . . . with the sustainable development of the waters”); RRMWC § 8R-1-05(1)(c) (“are not detrimental to the . . . sustainable development of the waters”); RRMWC § 8R-1-06 (“consistent with the sustainable development of the waters”); RRMWC § 9R-1-02(2) (“will not unreasonably injure . . . the sustainable development of the waters.”).

<sup>178</sup> The 1996 President’s Council on Sustainable Development, *infra* note 185, focuses on this aspect in defining sustainable development. Butler discusses the importance of intergenerational equity in the management of the water resource. Butler, *supra* note 123, at 458-79.

<sup>179</sup> RRMWC § 2R-2-24. Furthermore, the sustainable development theme is supported through the public ownership provision in the Code, *see supra* text accompanying notes 35-36, 147-149, where the Code delineates the scope of public interest as including (1) promoting economic growth, (2) mitigating harmful effects of drought, (3) resolving conflict among competing users, (4) achieving balance between consumptive and nonconsumptive uses, (5) encouraging conservation, (6) preventing excessive environmental degradation, and (7) enhancing the productivity of water related activity. RRMWC § 1R-1-01. Resolving conflict among competing users of a common resource was the first basis that the United States Supreme Court recognized to justify regulation of a common resource. *Ohio Oil Co. v. Indiana*, 177 U.S. 190 (1900): “[T]he law . . . is a statute protecting private property and preventing it from being taken by one of the common owners without regard to the enjoyment of others.” *Id.* at 210. The 1996 President’s Council on Sustainable Development, *infra* note 185, focuses on this aspect in defining sustainable development. Butler discusses the importance of intergenerational equity in the management of the water resource. Butler, *supra* note 123, at 458-79.

<sup>180</sup> RRMWC § 6R-3-01(1)(b).

<sup>181</sup> *Id.* § 2R-2-21.

<sup>182</sup> Use of groundwater from an aquifer in excess of recharge is known as groundwater mining; in that context safe yield imports not exceeding aquifer recharge. *See generally*

During the past decade there has been a growing acceptability of sustainable development as a relevant concept in water resource management, both as to allocation of use and as to pollution control.<sup>183</sup> The U.N. embraces the concept from a world-wide perspective.<sup>184</sup> The President's Council on Sustainable Development endorses it,<sup>185</sup> as does the Aspen Institute,<sup>186</sup> and the Western Water Policy Advisory Commission recognizes its relevance.<sup>187</sup> As Professor Thompson shows,<sup>188</sup> it is even a part of New York City's new watershed management plan.<sup>189</sup>

Some of these authorities appear to define sustainable development more broadly than the Code does. For example, the National Commission on the Environment<sup>190</sup> defines sustainable development directly as the cornerstone of both economic and environmental policy.<sup>191</sup> In the Commission's view, economic growth should allow for protection and even restoration of the environment.<sup>192</sup> Similarly, an editorial in *U.S. Water News* defines sustainable development as not using "water resources to the extent they are destroyed or to the extent they destroy the habitat or ecosystem."<sup>193</sup> The Code appears to speak only of preventing unnecessary degradation, but because the Code protects the biological,

Earl Finbar Murphy, *Geology and Hydrology*, in 3 WATERS AND WATER RIGHTS § 18.04 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>183</sup> See generally Symposium, *Sustainable Development*, 12 NATURAL RESOURCES & ENV'T (Fall 1997); Symposium, *Framework Laws—The Key to Sustainable Development in the Americas*, 13 PACE ENVTL. L. REV. 495 (1996).

<sup>184</sup> See UNITED NATIONS, INDICATORS OF SUSTAINABLE DEVELOPMENT FRAMEWORK AND METHODOLOGIES (1996).

<sup>185</sup> PRESIDENT'S COUNCIL ON SUSTAINABLE DEVELOPMENT, SUSTAINABLE AMERICA: A NEW CONSENSUS FOR PROSPERITY, OPPORTUNITY, AND A HEALTHY ENVIRONMENT (1996).

<sup>186</sup> THE ASPEN INSTITUTE, THE ALTERNATIVE PATH: A CLEANER, CHEAPER WAY TO PROTECT AND ENHANCE THE ENVIRONMENT (1996).

<sup>187</sup> WESTERN WATER POLICY REVIEW ADVISORY COMMISSION, WATER IN THE WEST: THE CHALLENGE FOR THE NEXT CENTURY I-xxxix (Public Review Draft, Oct. 1997).

<sup>188</sup> Thompson, *supra* note 138.

<sup>189</sup> *New York Adopts Comprehensive Watershed Plan*, U.S. WATER NEWS, July 1996, at 13, col. 1. See Jayne E. Daly, *The Protection of New York City's Drinking Water*, 1995 PACE L. REV. 63.

<sup>190</sup> CHOOSING A SUSTAINABLE FUTURE: THE REPORT OF THE NATIONAL COMMISSION ON THE ENVIRONMENT (1993).

<sup>191</sup> *Id.* at 1-9.

<sup>192</sup> *Id.*

<sup>193</sup> *Sustainable Development Will Foster Hydro-Solutions*, U.S. WATER NEWS, June 1996, at 6.

chemical, and physical integrities of the water source,<sup>194</sup> the Code supports the broad goals of these other definitions. However, under the Code, the details for sustainable development will be worked out in the planning process. The Code requires a “comprehensive water allocation plan,”<sup>195</sup> the objective of which is specifically to “collect data”<sup>196</sup> and devise strategies for achieving sustainable development of the waters of the State.”<sup>197</sup>

As a necessary part of achieving sustainable development, the Code provides for water conservation as another underlying or pervasive theme.<sup>198</sup> The purpose of conservation is to assist in sustaining the resource. Conserved water may go directly to the ecosystem, or it may simply free water for additional consumptive uses, without having such additional uses inflict more ecological or environmental damage.<sup>199</sup>

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<sup>194</sup> RRMWC § 2R-2-21(1) (by so defining the safe yield to which water source withdrawals are limited). Safe yield is measured by comparing natural and artificial replenishment with existing and planned consumptive and nonconsumptive uses. RRMWC § 2R-2-21(2). See *supra* text accompanying notes 180-182.

<sup>195</sup> See *infra* Part V of this article.

<sup>196</sup> Abrams points out the need for data collection, particularly of water use patterns, of stream flow, of storage, and of recharge. Robert H. Abrams, *Water Allocation by Comprehensive Permit Systems in the East: Considering a Move Away from Orthodoxy*, 9 VA. ENVTL. L.J. 255, 279 (1990). Abrams, *supra* note 81, at 279.

<sup>197</sup> RRMWC § 4R-2-01(2). See also RRMWC § 1R-1-04 (comprehensive planning also includes developing drought management strategies). See also Lawrence J. MacDonnell, *Sustainable Use of Water Resources*, 12 NAT. RESOURCES & ENV'T 97 (1997) (discussing specific ways that a sustainable development concept might be implemented in water resource management, e.g., taking “the minimum amount necessary to accomplish the purpose,” *id.* at 99 (requiring new buildings to have efficient water fixtures and retrofitting old buildings, mandating efficient practices for new irrigation, and charging fees for withdrawal of water).

<sup>198</sup> There is already a considerable effort in the United States on conserving water. See generally Robert E. Beck, *The Uses of and Demands for Water*, in 1 WATERS AND WATER RIGHTS §§ 2.02, 2.03 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>199</sup> There are instances where conservation has allowed a community to forego the greater expense of constructing a new reservoir. For example an Oregon town opted to use conservation measures instead of building a second reservoir at a cost of \$.70 per cubic foot versus \$2.80 per cubic foot for the reservoir. *Oregon Town Kills Dam With Water Conservation*, U.S. WATER NEWS, July 1996, at 17. The four conservation measures relied upon were: (1) leak detection and repair; (2) lower flow showerheads; (3) low flow toilets; and (4) higher rates for gallons used in excess of the base amount. *Id.* See also Robert E. Beck, *The Uses of and Demands for Water*, in 1 WATERS AND WATER RIGHTS § 2.02, at 24 (Robert E. Beck ed., 1991 & Supp. 1999) (discussing Denver and the Two Forks dam).



"The State shall conserve the waters of the State through suitable policies and by encouraging private efforts to conserve water and to avoid waste."<sup>200</sup> First, the Code requires a permittee to have a "reasonable plan for conservation,"<sup>201</sup> which is defined as a detailed plan "describing and quantifying the amount and use of water to be developed by conservation measures in the exercise of a water right."<sup>202</sup> Conservation measures are measures adopted by a water right holder, or a group of holders pursuant to a conservation agreement,<sup>203</sup> to reduce withdrawals or consumptive uses, or both.<sup>204</sup> The Code then provides a list of examples; improving water transmission and water use efficiency, reducing water use, enhancing return flows, and reusing return flows.<sup>205</sup> If the holder applies to modify<sup>206</sup> the permit, the agency can require a new plan for conservation.<sup>207</sup>

Second, the Code puts a duty on the state's allocation agency to encourage voluntary actions to conserve water in two different ways.<sup>208</sup> The first way is to provide as much technical assistance as the agency's resources allow to holders of water rights, to aid them in developing or implementing conservation measures in addition to those required by the Code.<sup>209</sup> The second way is to create an information program, in or out of school, to educate the public about the State's water policies and the steps necessary to respond to a water shortage or water emergency.<sup>210</sup>

As an incentive for additional conservation, the Code provides preferences for a water right holder who puts in place conservation measures beyond those required by the Code or by the permit and that

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<sup>200</sup> RRMWC § 1R-1-10.

<sup>201</sup> While RRMWC § 6R-2-01(1)(p) merely requires a permit application to describe "any plan for conservation the applicant proposes to follow," RRMWC § 6R-3-01(1)(d) provides that the agency can issue a permit "only upon determining that both preexisting withdrawals and uses if there are any" and the proposed withdrawal and use "incorporate a reasonable plan for conservation."

<sup>202</sup> RRMWC § 2R-2-17.

<sup>203</sup> *Id.* § 7R-3-06(3)-(5) (describing such agreements).

<sup>204</sup> *Id.* § 2R-2-05. The reference in the black letter to RRMWC § 7R-3-05 should be to RRMWC § 7R-3-06.

<sup>205</sup> *Id.* § 2R-2-05(a)-(d). See generally Robert E. Beck, *The Uses of and Demands for Water*, in 1 WATERS AND WATER RIGHTS §§ 2.02, 2.03 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>206</sup> See *infra* text accompanying notes 379-393 for a discussion of modification.

<sup>207</sup> RRMWC § 7R-2-02(2).

<sup>208</sup> *Id.* § 9R-1-01.

<sup>209</sup> *Id.* § 9R-1-01(a).

<sup>210</sup> *Id.* § 9R-1-01(b).

meet certain conditions.<sup>211</sup> The measures must result in “significant quantifiable reductions”<sup>212</sup> in water that has been used in times other than during a water shortage or water emergency.<sup>213</sup> The holder is entitled to a modification of the permit to allow the use of the saved water in other locations or for other purposes in preference to others who might apply.<sup>214</sup> Even if the person conserving water has no alternate use for the water conserved and is unable to find a buyer for it, the person conserving should still benefit if the recommendation of the Code has been followed to charge a fair amount for the water itself, for the person conserving could then save the excess that has been paid for that larger amount of water. However, the holder still has the burden to show that the modification will not unreasonably injure other holders of water rights, the public interest or the sustainable development of the waters of the State.<sup>215</sup>

The following simple hypothetical illustrates what appear to be the options under the Code. Suppose that A is using a technique that consumes fifty units of water per day, for which A has a permit. A pays \$1 per unit for the water and \$.25 per unit for delivery of the water. A develops a technique that reduces the requirement to twenty-five units per day. There is no water shortage or emergency. A has not been wasting water as his former technology was the accepted technology. A would appear to have three options: (1) A could reduce withdrawal and consumption to twenty-five units. A would save having to pay for the other twenty-five units plus any associated reduction in delivery costs; (2) A could “sell and assign” the twenty-five now excess units to B for the balance of the permit term assuming that there is a B around. When registered, B would pay the agency directly for the twenty-five units and A would be off the hook for paying the agency and pocket the sales price. B would then have to arrange for delivery. A would also benefit in any associated reduction in delivery price of delivering the remaining twenty-five units; (3) A could double production capacity and use the newly freed

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<sup>211</sup> *Id.* § 9R-1-02.

<sup>212</sup> Measuring water can present a problem. See, e.g., the discussions in Owen L. Anderson and Pauline M. Simmons, *Reallocation*, in 2 WATERS AND WATER RIGHTS § 16.02(c), at 277-282 (Robert E. Beck ed., 1991 & Supp. 1999); e.g., C. Peter Goplerud, *The Permit Process and Colorado's Exception*, in 2 WATERS AND WATER RIGHTS § 14.03(c)(1) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>213</sup> RRMWC § 9R-1-02(1). Abrams points out the importance of rewarding water developers who make water available that otherwise would not be available. See Abrams, *supra* note 81, at 280. 9 VA. ENVTL. L.J. 255, 280 (1990).

<sup>214</sup> RRMWC § 9R-1-02(1).

<sup>215</sup> *Id.* § 9R-1-02(2).

twenty-five units for the new production for the balance of the permit term.

Under the Code, the first option would be implemented essentially mechanically. There are no hitches. Under the second option, there would be a Code issue of the reasonableness of the use that B would put the water to and an issue of any unreasonable effect on any other current user, which could come about by changing the withdrawal point to a location upstream. Under the third option, there may be a Code issue of the reasonableness of using the water to double A's production output, but no other issue. If A is ambivalent, A has in theory up to five years under the forfeiture provision to decide what to do, although the length of the unexpired permit term may affect this time period.<sup>216</sup>

Conservation measures will not save water for a holder that the holder has been wasting<sup>217</sup> or that has become subject to forfeiture.<sup>218</sup> Difficulties have arisen in prior appropriation states because of the failure of those systems to establish in advance the relationship between "salvage" and "waste."<sup>219</sup> Thus it is important for the Code to discuss as it does<sup>220</sup> how conservation measures should be treated in the context of the waste doctrine. The Code explores this relationship at several places in the Commentary and while defining a borderline may still be difficult, this express treatment of the problem should avoid the general confusion that arose in the west.<sup>221</sup>

The Code also promotes conservation by providing for "conservation credits."<sup>222</sup> First, when a water user complies with measures in the plan of conservation, that water user is not to be cut back further

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<sup>216</sup> The question would arise as to whether during this waiting period when A would not be taking the extra twenty-five units, would A be paying either for the water or its delivery. Perhaps this would depend on what the permit says as to the former and any delivery contract A may have as to the latter.

<sup>217</sup> *Id.* § 2R-2-27 defines "waste of water" as "causing, suffering, or permitting the consumption or use of the waters of the State for a purpose or in a manner that is not reasonable."

<sup>218</sup> *Id.* § 9R-1-02(3). Forfeiture is provided for in RRMWC § 7R-1-03. *See infra* text accompanying notes 373-378.

<sup>219</sup> Robert E. Beck, *Prevalence and Definition*, in 2 *WATERS AND WATER RIGHTS* § 12.03(c)(2) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>220</sup> RRMWC at 335-36.

<sup>221</sup> *Id.*

<sup>222</sup> *Id.* § 7R-3-06. Abrams points out that rewarding water developers who make water available that was not otherwise available is important. *See Abrams*, *supra* note 81, at 280.

during a water shortage or water emergency “until other permit holders shall have achieved comparable restrictions.”<sup>223</sup> Second, when a water user undertakes voluntary conservation measures during a shortage or emergency and the measures result in “significant quantifiable reductions” in the amount being used before the crisis began, the user is to have a credit against reductions pursuant to any shortage or emergency scheme imposed by the agency.<sup>224</sup> Third, a written agreement among water users to undertake joint conservation measures will give those users a credit for “any water actually conserved” against reductions adopted by the agency for any shortage or emergency, although the Code distinguishes between agreements entered into before the shortage or emergency arises<sup>225</sup> and agreements entered into after the shortage or emergency arises.<sup>226</sup>

A problem with both environmental and economic consequences arose under prior appropriation doctrine when the use of the water was not limited to the watershed in which it originated. The classic example is the Owens Valley in California, where the water was withdrawn and removed to Los Angeles.<sup>227</sup> The standard response in the West has been to provide for some measure of “area of origin” protection.<sup>228</sup> Butler reviews equitable concerns from three perspectives; (1) water-rich areas, (2) current water users, and (3) water-poor areas.<sup>229</sup> In water-rich areas she finds that people tend to feel the water belongs to them regardless of whether the law recognizes that ownership. After all, they have to live with swamps and other problems of excess water, so they should have the benefits of the excess water, especially since they often chose to live in such areas because of the richness of the water resources.<sup>230</sup> She suggests several possible options to meet their equitable claim; (1) determining priority of water use, (2) requiring consent to transfer water resources, (3) discerning the impact of any such transfer on their future, (4) paying a reasonable fee to the area, and (5) periodically reevaluating any water transfer.<sup>231</sup> As to water-poor areas, she contends that if parts of the state

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<sup>223</sup> RRMWC § 7R-3-06(1).

<sup>224</sup> *Id.* § 7R-3-06(2).

<sup>225</sup> *Id.* § 7R-3-06(3).

<sup>226</sup> *Id.* § 7R-3-06(4).

<sup>227</sup> See Owen L. Anderson and Pauline M. Simmons, *Reallocation*, in 2 WATERS AND WATER RIGHTS § 16.02(c)(2) n.314 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>228</sup> See generally, *id.* § 16.02(c)(2).

<sup>229</sup> Butler, *supra* note 123, at 461-467.

<sup>230</sup> *Id.* at 461-63.

<sup>231</sup> *Id.* at 462-3

differ in richness of water resources, the state should allow some reallocation to the water-poor area;<sup>232</sup> but it is not clear why the people in the area have any equitable claim to it. If we rely on the expectations of persons in water-rich areas of benefiting from the richness, what would the expectations of someone in a water-poor area be? Why would they have an expectation of being provided with water from a water-rich area? Perhaps if we have a situation where water in an area is serving no useful purpose whatever, we could ask what reason would justify denying it to the water-poor area. That might be the one clear case of claim, but otherwise the equitable claims of water-poor areas seems questionable.

The Code allows the removal of water from the watershed<sup>233</sup> but includes protection for "the reasonable needs" of the "water basins"<sup>234</sup> of origin."<sup>235</sup> The protection is to be accomplished through the regulation of interbasin transfers.<sup>236</sup> Two specific points in the regulation of interbasin transfers are (1) special standards for interbasin transfers<sup>237</sup> which include a compensation fee to be paid into an Interbasin Compensation Fund (ICF) to compensate the basin for generalized losses<sup>238</sup> and (2) a requirement that the permit reflect any withdrawal fee to be paid into the ICF.<sup>239</sup>

The Owens Valley problem exists whether transfer from one watershed to another is within a single state or from one state to another. The latter situation is complicated by the decision of the United States Supreme Court in *Sporhase v. Nebraska ex rel. Douglas*,<sup>240</sup> where the court found groundwater to be an article in commerce and state action and therefore subject to the restraints of the negative commerce clause.<sup>241</sup>

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<sup>232</sup> *Id.* at 466.

<sup>233</sup> RRMWC § 2R-1-02.

<sup>234</sup> A water basin is referred to as the area from which all waters drain on or below the ground to a common point. RRMWC § 2R-2-28(1). The applicable basin is to be determined by measuring to "the lowest point relevant to the issue to be determined." *Id.* § 2R-2-28(2).

<sup>235</sup> RRMWC § 1R-1-14.

<sup>236</sup> *Id.* Interbasin transfer is defined in RRMWC § 2R-2-10.

<sup>237</sup> *Id.* § 6R-3-06.

<sup>238</sup> *Id.* § 6R-3-06(3).

<sup>239</sup> *Id.* § 7R-1-01(k).

<sup>240</sup> 458 U.S. 941 (1982). See generally Douglas L. Grant, *State Regulation of Interstate Water Export*, in 4 WATERS AND WATER RIGHTS § 48.03 (Robert E. Beck ed., 1996 & Supp. 1999).

<sup>241</sup> See Grant, *supra* note 240, at § 48.03(a).

Professor Abrams<sup>242</sup> suggests that state statutes are not going to provide guidance on out of state transfers.<sup>243</sup> However, state statutes are free to do so under U.S. Supreme Court decisions,<sup>244</sup> and the Code contains such provisions.<sup>245</sup> The Code recognizes that transport and use of water out of state can be consistent with the source state's public interest and with sustainable development of the waters of the source state.<sup>246</sup> However, the Code requires a permit for transport out of state<sup>247</sup> except when the transport is in closed containers or when the water is for the domestic use of the transporters.<sup>248</sup> Filing of an application for this permit is treated as consenting to comply with the source state's laws governing allocation and use of water.<sup>249</sup> The applicant is required to designate an agent within the source state for service of process and receipt of legal notices.<sup>250</sup> That agent has to be maintained during processing of the application and, if a permit is issued, as long thereafter as the permit remains in effect.<sup>251</sup>

The agency is to issue a permit if six specified findings are made. The first is that the proposed withdrawal, transportation and use are reasonable.<sup>252</sup> The considerations for determining reasonableness fall into two categories; (1) the same considerations that are used to determine reasonableness under an in-state permit application<sup>253</sup> and (2) special

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<sup>242</sup> Abrams, *supra* note 81, at 276.

<sup>243</sup> *Id.* at 276-77. He discusses *North Carolina v. Hudson*, 665 F. Supp. 428 (E.D.N.C. 1987), to illustrate. North Carolina was seeking to stop the transportation of water from Lake Gaston, North Carolina, to City of Virginia Beach, Virginia. North Carolina's statute applies only to designated capacity use areas; the area involved in the case was not so designated so the statute did not apply. Moreover, Abrams points out that there would not have been any guidance in that statute for this type of multi-jurisdictional transfer case anyway.

<sup>244</sup> See generally Douglas L. Grant, *State Regulation of Interstate Water Export*, in 4 WATERS AND WATER RIGHTS § 48.03(a)(2) (Robert E. Beck ed., 1996 & Supp. 1999).

<sup>245</sup> RRMWC ch. VIII.

<sup>246</sup> *Id.* § 8R-1-01. Probably a necessary requirement because of *Sporhase*. See *supra* note 240 and accompanying text.

<sup>247</sup> RRMWC. § 8R-1-02(1), (2).

<sup>248</sup> *Id.* § 8R-1-02(3).

<sup>249</sup> *Id.* § 8R-1-03.

<sup>250</sup> *Id.* § 8R-1-04(1). However in default of appointment, the Code designates the source state's Secretary of State to serve in that capacity. RRMWC § 8R-1-04(2), (3).

<sup>251</sup> RRMWC § 8R-1-04(1).

<sup>252</sup> *Id.* § 8R-1-05(1)(a).

<sup>253</sup> *Id.* § 8R-1-05(2). These are incorporated by reference and located at RRMWC §§ 6R-3-01 to 6R-3-06. See *infra* text accompanying notes 304-323 for discussion of reasonableness.

considerations for out-of-state transfer.<sup>254</sup> There are three special considerations: (1) the supplies of water available to the users of each state within their respective states;<sup>255</sup> (2) the overall water demand in the two states;<sup>256</sup> (3) the probable impact of the transportation and use on existing or foreseeable shortages in either state.<sup>257</sup>

In addition, before approving a permit the agency must find that the withdrawal, transportation, and use of the water: (1) will not impair existing water rights under the Code;<sup>258</sup> (2) is not detrimental to the conservation and sustainable development of waters within the source state;<sup>259</sup> (3) is not otherwise detrimental to the health, safety, or general welfare of the people of the source state;<sup>260</sup> (4) is consistent with the obligations of the source state under federal law, including interstate compacts and international agreements;<sup>261</sup> and (5) is otherwise consistent with the public interest.<sup>262</sup>

The Code requires the agency to include terms and conditions in the permit, in addition to those included in ordinary withdrawal and use permits, that will insure that the use of the water in the other state does not impair existing uses in the source state and is consistent with sustainable development of the waters and with laws and regulations of the state in which the water is going to be used.<sup>263</sup> Finally, the Code provides that nothing in the out-of-state transport chapter impairs the authority of the source state to (1) do comprehensive water planning,<sup>264</sup> (2) itself allocate and/or export large quantities of water,<sup>265</sup> (3) regulate water marketing,<sup>266</sup> (4) enter into water allocation compacts with other states,<sup>267</sup> and (5) restrict interstate water uses in connection with equitable apportionment,

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<sup>254</sup> RRMWC § 8R-1-05(2)(a)-(c).

<sup>255</sup> *Id.* § 8R-1-05(2)(a).

<sup>256</sup> *Id.* § 8R-1-05(2)(b).

<sup>257</sup> *Id.* § 8R-1-05(2)(c).

<sup>258</sup> *Id.* § 8R-1-05(1)(b).

<sup>259</sup> *Id.* § 8R-1-05(1)(c).

<sup>260</sup> RRMWC § 8R-1-05(1)(d).

<sup>261</sup> *Id.* § 8R-1-05(1)(e).

<sup>262</sup> *Id.* § 8R-1-05(1)(f).

<sup>263</sup> *Id.* § 8R-1-06.

<sup>264</sup> *Id.* § 8R-1-07(a). *See infra* Part V of this article.

<sup>265</sup> RRMWC § 8R-1-07(b).

<sup>266</sup> *Id.* § 8R-1-07(c).

<sup>267</sup> *Id.* § 8R-1-07(d).

requirements of federal law or regulations, interstate compacts, or international agreements.<sup>268</sup>

While the foregoing discussion indicates many ways in which ecological and environmental concerns are taken into account under the Code, Professor Butler nevertheless insists that "the public interest needs to be recognized as a property right."<sup>269</sup> Her discussion of environmental water rights and the idea of public property<sup>270</sup> is in the context of a quest for the appropriate dispute resolution standard to be used when these public interest manifestations come in conflict with private rights acquired under the allocation system established for water resources in the particular jurisdiction.

Certainly the public servitude for navigation has been quite useful in protecting and promoting navigation.<sup>271</sup> How close does the Code come to doing what Butler wants? Although the Code declares public ownership of water, its definition of the public interest that this ownership reflects is broader than promotion of ecological or environmental value, and the power to regulate withdrawal and use is couched in traditional police power terms. Hopefully, however, the Code's establishment of environmental and ecological needs as a baseline below which water cannot be withdrawn (and therefore not allocated) serves the same goal. Certainly the Code contains much more than the vague standards and secondary status that were the primary problems with the previous law.<sup>272</sup> The point of potential conflict between a private user and the public interest can be considered further at the end of Part V of this article which deals with the scope of the private water user's rights under the Code.

Ultimately the status either of the public interest or public property is only as good as the protectors of the status.<sup>273</sup> Many public parks have

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<sup>268</sup> *Id.* § 8R-1-07(e).

<sup>269</sup> Butler, *supra* note 119, at 326. See *supra* text accompanying notes 136-138. See also A. Dan Tarlock, *The Endangered Species Act and Western Water Rights*, 20 LAND & WATER L. REV. 1 (1985) (discussing the concept of "regulatory property rights" and integrating water for endangered species into the western beneficial use concept).

<sup>270</sup> Butler, *supra* note 119 at 351-376.

<sup>271</sup> See Harrison C. Dunning, *Sources of the Public Right*, in 4 WATERS AND WATER RIGHTS § 30.05 (Robert E. Beck ed., 1996 & Supp. 1999).

<sup>272</sup> See *supra* text accompanying notes 129-135.

<sup>273</sup> Butler discusses who this ought to be in terms of the type of the public agency that is in charge. For example, she points out that a two-tiered system would diffuse decision-making and, therefore, help avoid inherent bias, whether urban versus rural or some other. Butler, *supra* note 123, at 446. Further, she points out that policymakers need to be democratically accountable. *Id.* at 459-60.



been invaded with super highways or other intrusions when it was seen as costing fewer dollars to build a road through the park rather than through a developed part of town.<sup>274</sup> Montgomery Ward, while he was alive, brought several lawsuits to protect Grant Park on the Lake Michigan waterfront from encroachment by buildings.<sup>275</sup> To further such protection, the Code contains an optional citizen suit provision<sup>276</sup> which should be adopted in some form.

#### IV. THE SCOPE AND ROLE OF PRIVATE RIGHTS DELINEATED IN THE CODE

Professor Robert Abrams, after reviewing perceived deficiencies in common law and statutory riparianism,<sup>277</sup> put forth as one of his three major goals for any riparian permit system to "add concreteness and predictability to the rights of permit-holding water users without being overly confining and unnecessarily burdensome."<sup>278</sup> If economic growth is a part of the public interest in water,<sup>279</sup> it requires some measure of certainty for those who need to use water in their enterprise. However, to manage water from a watershed perspective requires flexibility and, particularly, the ability to regulate private use.<sup>280</sup> Clearly one major criticism about the common law riparian scheme was the uncertainty associated with what was at most a usufructuary right.<sup>281</sup> Water users are

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<sup>274</sup> See *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971).

<sup>275</sup> *City of Chicago v. Ward*, 48 N.E. 927 (Ill. 1897); *Bliss v. Ward*, 64 N.E. 705 (Ill. 1902); *Ward v. Field Museum* 89 N.E. 731 (Ill. 1909).

<sup>276</sup> RRMWC § 5R-4-09.

<sup>277</sup> Abrams, *supra* note 81, at 257-70. 9 VA. ENVTL. L.J. 255, 257-270 (1990).

<sup>278</sup> *Id.* at 284. See *infra* notes 463, 474 for the other two major goals.

<sup>279</sup> See *supra* text accompanying notes 147-149.

<sup>280</sup> Tarlock, *supra* note 145.

<sup>281</sup> Although the right to flowing water is incident to the title to land, there is no right of property in such water in the sense that it can be the subject of exclusive appropriation and dominion. The only property interest in it is usufructuary. The right of each riparian is to have the natural flow of the stream come to his land and to make a reasonable and just use of the water on its course through his land, subject, however, to the like right of each upper proprietor to make a reasonable and just use of the water in its course through his land and further subject to the obligation to lower proprietors to permit the water to pass away from his estate unaffected except by such consequences as follow from reasonable and just use by him.

*Stratton v. Mount Hermon Boys' School*, 103 N.E. 87, 87-88 (Mass. 1913).

concerned with the certainty of their supplies.<sup>282</sup> Concerns about certainty become very real when projects that would require large amounts of water are under consideration. For example, in the late 1970s and early 1980s, when the idea of a coal slurry pipeline<sup>283</sup> extending from Illinois to Florida was under consideration,<sup>284</sup> legitimate questions included where the water would come from and who would have authority to supply it for the thirty years or whatever period the lending institution would require in order to protect its investment. Additional uncertainty existed regarding municipal water supplies, as municipalities as a whole were generally not considered to be riparian even if the city bordered a body of water.<sup>285</sup>

However, providing certainty raises questions about destroying flexibility. The existence of firm long-lasting private rights can hinder changes in water use necessary to reflect current public interest values. Indeed, Professor Tarlock asks whether private property in water is consistent with a watershed management approach.<sup>286</sup>

The Code seeks to achieve a compromise between certainty and flexibility with two basic provisions. The first provision says that “[i]n order to provide legal security for water rights *within the constraints provided in this Code*, this Code establishes a system of permits<sup>287</sup> that make a water right a matter of legal record entitled to legal protection.”<sup>288</sup> The second provision says that “in order to attain contemporary economic, environmental, and other social goals, the State shall encourage and enable the sale or other voluntary modification of water rights *subject to the protection of third parties and the public interest*.”<sup>289</sup> While these provisions provide a counterpoint to each other, they also contain limitations within themselves. What are the “constraints” on private rights provided in the Code? What is the “protection” for third parties and for the public interest?

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<sup>282</sup> See Abrams, *supra* note 277, at 258-59 (“debilitating unpredictability”).

<sup>283</sup> Coal would be crushed and mixed with water and the slurry would be shipped through a pipeline. See OFFICE OF TECHNOLOGY ASSESSMENT, A TECHNOLOGY ASSESSMENT OF COAL SLURRY PIPELINES 27-29 (1978).

<sup>284</sup> See William F. Webber, *Coal Slurry Pipelines are Ready, Willing, and Unable to Get There*, 11 ST. MARY’S L.J. 765, 766-67 (1980).

<sup>285</sup> See Joseph W. Dellapenna, *The Right to Consume Water Under “Pure” Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.05(c)(1) (Robert E. Beck ed., 1991 & Supp. 1999). See generally Butler, *supra* note 28, at 95.

<sup>286</sup> Tarlock, *supra* note 145.

<sup>287</sup> See *infra* text accompanying notes 290-323 for discussion of this system.

<sup>288</sup> RRMWC § 1R-1-06 (emphasis added).

<sup>289</sup> *Id.* § 1R-1-07 (emphasis added).

The Code affirmatively recognizes that a person who acquires a permit under the Code to withdraw water from waters of the state has a water right<sup>290</sup> which denotes a protected interest.<sup>291</sup> Withdrawal is defined as removal of water from the source or exercise of physical control over the water.<sup>292</sup> While the water right comes subject to many conditions,<sup>293</sup> to acquire the water right in the first instance requires going through a rigorous permit application process<sup>294</sup> that involves a balancing of interests. The agency is to issue a permit only when it determines that the proposed use is reasonable<sup>295</sup> and that the proposed withdrawal and use (1) does not exceed the safe yield<sup>296</sup> of the source when combined with present uses,<sup>297</sup> (2) is consistent with any comprehensive water allocation plan<sup>298</sup> and drought management strategies<sup>299</sup> that exist,<sup>300</sup> (3) does incorporate a reasonable plan for conservation,<sup>301</sup> and (4) is consistent with the Code and any order, term, condition, or regulation promulgated under or pursuant to

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<sup>290</sup> RRMWC ch. VI is entitled "Establishing a Water Right." Water right is defined as "a right to withdraw a certain portion of the waters of the State in compliance with the provisions of this Code, whether subject to a permit or otherwise." RRMWC § 2R-2-30.

<sup>291</sup> While RRMWC § 5R-1-01 declares a right to a hearing to persons "aggrieved" by agency orders or decisions and to persons with an interest in fact "likely to be affected adversely by a regulation," it imposes a strict timetable to activate the process. A written request for a hearing must be made within thirty days of receipt of notice for the order or decision and within sixty days of the publication of the proposed or promulgated rule. *Id.* And the agency must provide the hearing within thirty days of receipt of the request. RRMWC § 5R-1-03 refers to both the county in which the withdrawal occurs and to the county where the water is used. How to choose where to hold the hearing is clarified in the Commentary. RRMWC at 160. Once a hearing is held anyone who has an interest in fact can participate in the hearing. RRMWC § 5R-1-03(2).

<sup>292</sup> See RRMWC § 2R-2-34.

<sup>293</sup> See *infra* text accompanying notes 362-426.

<sup>294</sup> Some withdrawals may not require a permit. See RRMWC § 6R-1-02 ("small withdrawals.") The section as drafted includes a less than 100,000 gal. per day withdrawal exclusion. *Id.* § 6R-1-02(1). See *infra* text accompanying notes 327-329.

<sup>295</sup> RRMWC § 6R-3-01(1)(a). See *infra* text accompanying notes 305-320.

<sup>296</sup> Safe yield is defined in RRMWC § 2R-2-21. See *supra* text accompanying notes 180-182.

<sup>297</sup> RRMWC § 6R-3-01(1)(b).

<sup>298</sup> Defined at RRMWC § 2R-2-04. See *infra* Part V of this article.

<sup>299</sup> Defined at RRMWC § 2R-2-09. See *infra* text accompanying notes 394-426.

<sup>300</sup> RRMWC § 6R-3-01(1)(c).

<sup>301</sup> *Id.* § 6R-3-01(1)(d). See *supra* text accompanying notes 201-207.

the Code or any other water use statute.<sup>302</sup> Any person challenging the agency's determination has the burden of proof.<sup>303</sup>

The approach the Code takes toward determining reasonable use is to list eight specific factors for the agency to consider,<sup>304</sup> followed by a catchall "any other relevant factors."<sup>305</sup> According to the commentary in the Code, these factors reflect both "social utility or value" of the proposed use on its own and the "relative value" of the proposed use in comparison to other existing or planned uses.<sup>306</sup> This, of course, is what many courts have done in determining reasonable use under common law riparianism<sup>307</sup> and what is reflected in the Restatement.<sup>308</sup> Recreation and aesthetic uses do not necessarily involve either removing water from a source or exercising physical control<sup>309</sup> over the water.<sup>310</sup> However, if these uses exist and are reasonable, when someone applies to withdraw or physically control water, the impact of the withdrawal or control on those uses has to be considered by the agency.<sup>311</sup> Thus, the principal effect of regulated riparianism under the Code initially appears to completely shift the initial determination of reasonableness from a court to the agency. A riparian use that would destroy the water source would be unreasonable. Cumulative riparian uses that would destroy the water source similarly would be unreasonable. That these limitations are reflected in legislation and administered through an agency rather than in the common law and through a court should not raise any significant constitutional issues.<sup>312</sup>

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<sup>302</sup> RRMWC § 6R-3-01(1)(e).

<sup>303</sup> *Id.* § 6R-3-01(2). The Code provides for hearings and judicial review. RRMWC §§ 5R-1-01 to 5R-1-05 (hearings); RRMWC §§ 5R-3-01 to 5R-3-03 (judicial review). The Code also contains provisions on dispute resolution designed to "encourage a wider range of informal dispute resolution for all disputes involving the waters of the State and requires arbitration for disputes between permit holders." RRMWC at 164. RRMWC § 5R-2-03 on arbitration applies, therefore, only to situations where all disputants are permit holders. Thus a dispute between a permit holder and a nonpermit holder, or between two nonpermit holders, would not come under the section.

<sup>304</sup> RRMWC § 6R-3-02(a)-(h).

<sup>305</sup> *Id.* § 6R-3-02(i).

<sup>306</sup> *Id.* at 241. See the definition of unreasonable injury in RRMWC § 2R-2-26.

<sup>307</sup> Joseph W. Dellapenna, *The Right to Consume Water Under 'Pure' Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.02(d)(2), (d)(3) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>308</sup> RESTATEMENT SECOND OF TORTS § 850A (1977).

<sup>309</sup> See *supra* text accompanying note 302.

<sup>310</sup> See *Harris v. Brooks*, 283 S.W.2d 129 (Ark. 1955).

<sup>311</sup> RRMWC § 6R-3-02(a)-(i).

<sup>312</sup> See *infra* text accompanying notes 475-483.

A new riparian user may have an expectation of being able to use at least some of the water. A nonriparian who applies may not have any such expectation. Because of the protection that the Code accords a prior permittee, and because the availability of any water is a factor to be taken into account in granting a permit,<sup>313</sup> not all riparians will necessarily be able to make a consumptive use of the water. When a new application comes in, it may request an amount that would exceed safe yield, thus requiring that the agency deny the application in part or in whole. The denial protects users at the time of the application<sup>314</sup> and the public interest in minimum flows or levels, because neither would appear to have to yield to accommodate even a new riparian user. Under this analysis the riparian might argue that the riparian right to future use has been taken.<sup>315</sup>

The Code makes it clear that in measuring the impact of a proposed new use on an existing permittee, the agency is to apply the reasonable use rule and determine whether the new use would "unreasonably" interfere with the existing use.<sup>316</sup> Unreasonable injury is defined in terms of balancing "social utility" and "costs imposed."<sup>317</sup> Thus, under the Code a prior permittee would not have absolute protection any more than a prior riparian user under common law riparian doctrine would get absolute protection against a subsequent riparian user. This definition appears to preserve the basic substantive common law approach to riparian doctrine.<sup>318</sup> This potential conflict between, and perhaps excess withdrawal by, two riparians would require vigilance to protect the minimum flow or level. There could be a tendency for both to continue

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<sup>313</sup> RRMWC § 6R-3-02(b).

<sup>314</sup> When there is a permit application, the Code calls for notice and a hearing and persons who claim that their pre-existing use will be affected can develop that point in comments or at a hearing. RRMWC §§ 6R-2-02, 6R-2-04.

<sup>315</sup> See *Franco-American Charolaise, Ltd. v. Okla. Water Resources Bd.*, 855 P.2d 568 (Okla. 1993). Most courts considering the issue have classified any right to make a future use as inchoate rather than vested with the result that there is no taking. See Joseph W. Dellapenna, *Dual Systems*, in 1 *WATERS AND WATER RIGHTS* § 8.03(b)(1) (Robert E. Beck ed., 1991 & Supp. 1999). Butler points out that regardless of legal doctrine, there can still be an issue of fairness. See Butler, *supra* note 123, at 463-64.

<sup>316</sup> RRMWC § 6R-3-02(d). A permit can only be issued for a reasonable use which means "without unreasonable injury to other water rights holders." RRMWC § 2R-2-20.

<sup>317</sup> RRMWC § 2R-2-26.

<sup>318</sup> In contrast with the technical limitation that limits use of water to abutting land, which is specifically eliminated by the Code. RRMWC § 2R-1-02 See *supra* text accompanying notes 233-239.

withdrawing water to the extent permitted as long as there is any water left in the source.

Under common law riparianism, all riparians have a correlative right and, in theory, if all existing users have been using all of the water, when a new user comes on line, the old users will need to accommodate the new user. However, there were exceptions. The common law recognized prescriptive rights which might limit a new user,<sup>319</sup> and some scholars suggest that courts gave preference to earlier users over later users,<sup>320</sup> causing the Restatement to list it as an element.<sup>321</sup> Early statutes intervened in terms of preferences for certain uses,<sup>322</sup> and finally, the common law favored domestic (natural) users over "artificial" users.<sup>323</sup> Perhaps under the Code, preference for an earlier permittee will be analogous to one or more of these doctrines and not considered violative of a right to make a future use, assuming the state has recognized such a right.

Under the Code it is unlawful for anyone who is not specifically exempted to withdraw water from waters of the state without a permit.<sup>324</sup> As noted earlier,<sup>325</sup> withdrawal is defined as removal of water from the source or exercise of physical control over the water.<sup>326</sup> The Code exempts withdrawals of less than 100,000 gallons per day from the permit requirement<sup>327</sup> but points out in the commentary that the particular figure is not sacrosanct.<sup>328</sup> Persons who are exempted from the requirement of

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<sup>319</sup> Dellapenna, *supra* note 319. 1 WATERS AND WATER RIGHTS § 7.04(c) (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>320</sup> See generally Carol M. Rose, *Energy and Efficiency in the Realignment of Common-Law Water Rights*, 19 J. LEGAL STUD. 261 (1990).

<sup>321</sup> "[T]he protection for existing values of water uses, land, investments and enterprises." Restatement [Second] Torts § 850A(h).

<sup>322</sup> See Joseph W. Dellapenna, *The Right to Consume Water Under "Pure" Riparian Rights*, in 1 WATERS AND WATER RIGHTS § 7.04(c) (Robert E. Beck ed., 1991 & Supp. 1999). See also Joseph W. Dellapenna, *Regulated Riparianism*, in 1 WATERS AND WATER RIGHTS § 9.02 (Robert E. Beck ed., 1991 & Supp. 1999).

<sup>323</sup> *Evans v. Merriweather*, 4 Ill. 492, 495 (1842).

<sup>324</sup> RRMWC § 6R-1-01.

<sup>325</sup> See *supra* text accompanying note 292.

<sup>326</sup> RRMWC § 2R-2-34.

<sup>327</sup> *Id.* § 6R-1-02(1).

<sup>328</sup> *Id.* at 207. The impact of the cumulative small withdrawals cannot be overemphasized. New Mexico had to put new domestic well permits on hold because of the total amount of water for 60,000 to 80,000 such wells with each being able to take up to three acre-feet. The 1,000,000 gallons so being withdrawn was having an undue effect on fully

having a permit can nonetheless apply for and obtain a permit like anyone else.<sup>329</sup>

Richard Ausness,<sup>330</sup> after identifying and describing the then existent legislation in fourteen eastern states, concludes that "water legislation should create no exempted use category."<sup>331</sup> Instead, he recommends giving the agency criteria with which to grant exemptions based on water quantity rather than class of use, together with the authority to revise the criteria and regulate all users during an emergency.<sup>332</sup> The Code follows this advice. It does not exclude any class of use from application of the Code.<sup>333</sup> With the 100,000 gallon limit<sup>334</sup> the Code recognizes in the commentary that the legislature could use the approach of giving authority to the agency to define the exemptions.<sup>335</sup>

Nor does the Code exempt users who are using water at the time that the Code takes effect from the permit requirement. The Code will only protect existing users,<sup>336</sup> and even they must apply for a permit within one year from the effective date of the Code.<sup>337</sup> They are allowed to continue the existing withdrawal until the agency acts on the permit application.<sup>338</sup> The agency is to approve the permit application for the

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appropriated streams. *Domestic Well Permits on Hold in New Mexico*, U.S. WATER NEWS, July 1996, at 16.

<sup>329</sup> RRMWC § 6R-1-02(3). The advantage of doing this is that their "water right" will be a matter of record.

<sup>330</sup> Ausness, *supra* note 45, at 578.

<sup>331</sup> *Id.* at 579. Ausness calls for one state agency to be in charge of planning. Because the Code recognizes the option in the state not to adopt a statewide permit system, it does provide for the possibility of a local or regional agency to issue permits when no statewide permit system is in place. RRMWC ch. IV, pt. 4. Abrams considers state-wide permits as unnecessary in at least some states. *See Abrams, supra* note 81, at 257 (there are ways to advance desired objectives outside of a comprehensive permit system "some of which are at variance with the standard comprehensive permit systems that have thus far emerged as the models. In this way, the article advocates a move away from orthodoxy."). General planning for water resource management and use could still take place on the state level.

<sup>332</sup> Ausness, *supra* note 330, at 578-79.

<sup>333</sup> RRMWC § 1R-1-02.

<sup>334</sup> *See supra* text accompanying notes 324-329.

<sup>335</sup> RRMWC at 209.

<sup>336</sup> Those withdrawals being made on the effective date of the Code or made on a regular basis within the 12 months immediately before the effective date of the Code. RRMWC § 6R-1-03(1).

<sup>337</sup> *Id.* § 6R-1-03(2). Failure to apply constitutes abandonment of the right. RRMWC § 6R-1-03(6).

<sup>338</sup> RRMWC § 6R-1-03(3).

amount "reasonably necessary" for the purpose for which the withdrawal was being made.<sup>339</sup> If all existing withdrawals taken together exceed safe yield, the agency has to allocate the safe yield among those users based on the standards set out for new permits.<sup>340</sup> An allocation where a pre-existing use does not get the entire pre-Code amount may lead to a takings claim.<sup>341</sup> Butler discusses the equity of current user claims, noting that even though legal doctrine may not entitle them to compensation, there are still fairness concerns.<sup>342</sup> Water right holders' concerns that they will be deprived of valuable rights may lead them to oppose reforms to the water management system.<sup>343</sup> Therefore she recommends considering (1) giving permits of equal value even if standards need to be eased, (2) paying for any loss in value, or (3) grand-fathering existing uses.<sup>344</sup> She finds the first two recommendations preferable because they will integrate the water into the new system.<sup>345</sup>

Professor Robert Abrams, in examining common law riparian doctrine and existing statutory schemes, concluded that a state-wide permit system was not necessarily the optimum approach to dealing with existent problems.<sup>346</sup> If, for example, there are areas with ample water resources, it would save both time and money not to regulate or at least not to regulate through a permit system in those areas.<sup>347</sup> However, if these ample resources are to be shared with other parts of the state, as Professor Butler suggests,<sup>348</sup> having both areas under the system may make better sense. Abrams identified and discussed two cases about which he concluded that a permit system would not have served well in either case,

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<sup>339</sup> *Id.* § 6R-1-03(4).

<sup>340</sup> *Id.* § 6R-1-03(5).

<sup>341</sup> See *infra* text accompanying notes 477-483.

<sup>342</sup> See Butler, *supra* note 123, at 464.

<sup>343</sup> *Id.* at 463.

<sup>344</sup> *Id.* at 464.

<sup>345</sup> *Id.*

<sup>346</sup> See Robert H. Abrams, *supra* note 277, at 255. He discusses the pros and cons of a comprehensive permit system. The pros include: (1) preventing overuse, to extent first come is there; (2) quantification of the extent of the right, to the extent permits are not issued unless water is available; and (3) allows acting before a crisis arises. *Id.* at 262-64. The cons include the (1) monetary cost of system and (2) resulting inefficiencies. *Id.* at 264-65. The conclusion that a state-wide permit system is not necessarily the optimal approach is the result of a balancing between these pros and cons.

<sup>347</sup> Cost may be a significant factor in deciding whether to enact reform legislation. *Id.* at 261-265.

<sup>348</sup> Butler, *supra* note 123, at 466-467.



because it either would have been too cumbersome or would not have provided any guidance to the agency.<sup>349</sup>

In the first case,<sup>350</sup> numerous small farmers sued a big well owner/operator for an injunction and damages.<sup>351</sup> The statute had been enacted solely to deal with well interference problems; it allowed the state agency to order cessation of pumping when the withdrawal caused qualifying wells to cease functioning. The state had set the qualifications in terms of "generally accepted standards of well construction in the industry."<sup>352</sup> The complainants' wells did not qualify and, therefore, the statute did not help them. Abrams sees this type of problem as being dealt with effectively without the expense of a permit system. The expense would be borne both by the state, from running the system, and by water users, from having to comply with it.<sup>353</sup>

Even though some water users will be exempt from having to apply for a permit under the Code, they are covered by several general principles in the Code that apply to all who withdraw or physically control water. First, "[n]o person shall make any use of the waters of the state except in so far as the use is reasonable as determined pursuant to this Code."<sup>354</sup> Second, "[n]o person using the waters of the State shall cause unreasonable injury to other water uses made pursuant to valid water rights, regardless of whether the injury relates to the quality or the quantity impacts of the activity causing the injury."<sup>355</sup> Third, "[e]very person exercising a water right pursuant to this Code is required to protect the prescribed minimum flows or levels when exercising such right."<sup>356</sup> Fourth, all who withdraw water from a source are subject to water shortage and emergency orders.<sup>357</sup>

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<sup>349</sup> See Abrams, *supra* note 277, at 265.

<sup>350</sup> See *supra* note 243 for a discussion of the second case.

<sup>351</sup> Prohosky v. Prudential Insurance Co. of America, 584 F. Supp. 1337 (N.D. Ind. 1984). The discussion begins at Abrams, *supra* note 277, at 271.

<sup>352</sup> Abrams, *supra* note 277, at 272.

<sup>353</sup> *Id.* at 274.

<sup>354</sup> RRMWC § 2R-2-01. The Commentary to RRMWC § 2R-1-01 reads: "All uses of water, including those not required to have a permit or an allocation, must be 'reasonable' as defined in this Code." *Id.* at 26.

<sup>355</sup> RRMWC § 2R-1-03.

<sup>356</sup> *Id.* § 3R-2-01(2).

<sup>357</sup> *Id.* § 7R-3-05(1). RMMWC § 6R-1-02(2) refers only to emergencies but this appears to be a typo because of the clear reference in the commentary to both shortages and emergencies. RRMWC at 209. Furthermore, RRMWC § 7R-3-05(1) makes application to both shortages and emergencies clear.

Once a water user has acquired a water right and the public interest has been established, the two principal threats are new users coming on line and a drought. Therefore, the consequence to the existing user in each case is important. The problem of new users coming on line has already been explored.<sup>358</sup> To explore further the scope of the basic right acquired by permit under the Code and to consider the drought aspect, I will divide the following discussion into three aspects; permit terms, modification of the water right, and drought management.<sup>359</sup> It may be that in some watersheds, perhaps many, the result should be as Professor Tarlock discusses with reference to the Great Lakes,<sup>360</sup> that no further withdrawals should be allowed. Then the important provisions of the Code would be those dealing with modification of existing uses of withdrawn water.<sup>361</sup>

#### A. Permit Terms

Richard Ausness in *Water Rights Legislation in the East: A Program for Reform*,<sup>362</sup> after identifying and describing the then existent legislation in fourteen eastern states, discussed permit terms in the context of reallocation, viewing short-term<sup>363</sup> and variable-term permits<sup>364</sup> as devices for reallocation. He noted Iowa legislation that provided for ten year terms and Florida legislation that provided for twenty year terms.<sup>365</sup> He concluded that such short terms would present problems for making investments in water-related facilities if it is for some sort of capital intensive use. Under his scheme, variable term permits would be for the duration of the plant or enterprise. His examples are from North and South Carolina legislation, which provide a base of ten years but longer if necessary to amortize the facilities.<sup>366</sup> However, he noted that even long term permits present an investment problem toward the end of the term if a facility breaks down; the question is whether to spend a lot of money in

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<sup>358</sup> See *supra* text accompanying notes 293-323.

<sup>359</sup> These are the basic limitations on the private right that are contemplated by the Code in ch. 7 and correspond to the three subparts in ch. 7. RRMWC ch. 7.

<sup>360</sup> Tarlock, *supra* note 145.

<sup>361</sup> See *infra* text accompanying notes 378-392.

<sup>362</sup> Ausness, *supra* note 330.

<sup>363</sup> *Id.* at 584-86.

<sup>364</sup> *Id.* at 586-87.

<sup>365</sup> *Id.* at 584.

<sup>366</sup> This he appears to view as running from forty to sixty years. *Id.* at 587.

repairs if the term is about to expire and renewal is uncertain. He also noted that while renewal might be possible under then existing statutes, many of the statutes failed to set out any criteria for either renewal or non-renewal. He suggested a scheme under which the new user would pay compensation to the old user as a possible solution. Finally he noted that if long term or perpetual permits are issued it would be necessary to provide for transfer of the water right.<sup>367</sup>

The Code accomplishes essentially all that Ausness advocates. First, the Code does not contemplate a perpetual right. Instead, it establishes a permit term with the basic concept for limiting duration being "the economic life of any necessary investments" and for which it sets a maximum term of twenty years.<sup>368</sup> However, the term can be up to fifty years when a debt is incurred that is associated with the construction of facilities related to the use of the water by a government or other public body or by a public service corporation.<sup>369</sup> The Code also provides for a renewal preference to the current holder of the permit.<sup>370</sup> Renewals are favored if a competing application for a new use serves the public interest only equally to or less than the renewed use would.<sup>371</sup> The prior investment in the associated facilities is to be considered in determining public interest.<sup>372</sup>

On the other hand, under the Code a permit may not last the full term. It is subject to forfeiture as to all or part<sup>373</sup> of the water right<sup>374</sup> under three different circumstances; (1) the holder wastes<sup>375</sup> water,<sup>376</sup> (2) the holder fails to withdraw or use water for "consecutive five (5) years,"<sup>377</sup>

<sup>367</sup> *Id.* at 587-589. Abrams also discusses the desirability of allowing permits to be transferred. See Abrams, *supra* note 277, at 281.

<sup>368</sup> RRMWC § 7R-1-02(1).

<sup>369</sup> *Id.*

<sup>370</sup> RRMWC § 6R-3-04(4). RRMWC § 7R-1-02(2) erroneously lists the preference as being in RRMWC § 6R-3-04(3). The permit holder must apply before the permit expires but cannot apply more than six months before expiration. RRMWC § 7R-1-02(2).

<sup>371</sup> RRMWC § 6R-3-04(4).

<sup>372</sup> *Id.*

<sup>373</sup> *Id.* § 7R-1-03(3).

<sup>374</sup> *Id.* § 7R-1-03.

<sup>375</sup> *Id.* § 2R-2-27 defines waste.

<sup>376</sup> RRMWC § 7R-1-03(1).

<sup>377</sup> *Id.* Years during which water is either physically or legally unavailable do not count. *Id.* According to the commentary this would mean that in a sequence of three years nonuse, six years of unavailability, two years of nonuse, the five years would be met. It would not be met if there were three years of nonuse, six years of use, two years of nonuse.

and (3) the agency determines that the holder will be unable to comply with the requirements or conditions for using the water.<sup>378</sup> Forfeiture can be viewed as one form of modification.

### B. Modification

The Code in the introductory commentary to the segment on modification states: "[t]he Code . . . adopts a policy of favoring the modification of water rights in order to promote the highest or best use of the resource."<sup>379</sup> To further this policy, the Code allows the permit holder to apply for a modification "of any term or condition of the permit, including the name of the person holding the permit,"<sup>380</sup> but the modification does not become effective until approved by the agency.<sup>381</sup> The standards by which the agency is to evaluate the modification are the

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<sup>378</sup> RRMWC § 7R-1-03(2).

<sup>379</sup> RRMWC at 279. See also RRMWC § 1R-1-07, quoted *supra* in text accompanying note 289. There is a current focus, particularly in the western United States, on transferring water from one use to another, supposedly a higher or better use. See generally Owen L. Anderson and Pauline M. Simmons, *Reallocation*, in 2 WATERS AND WATER RIGHTS § 16.04 (Robert E. Beck ed., 1991 & Supp. 1999). While there are proponents of a free-market or just plain market model for these efforts, e.g., TERRY L. ANDERSON, *WATER CRISIS: ENDING THE POLICY DROUGHT* (1983), others simply include market approaches as a significant element, e.g., Barton H. Thompson, *Markets for Nature*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 261, while still others find the market concept not very useful at all, e.g., Joseph W. Dellapenna, *The Importance of Getting Names Right: The Myths of Markets for Water*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 317. Lynda L. Butler, *Defining a Water Ethic through Comprehensive Reform: A Suggested Framework for Analysis*, 1986 U. ILL. L. REV. 439, explained why efficiency should not be the only consideration in water law reform. *Id.* at 449-458. However, she also found three primary problems with reform efforts at achieving efficiency: (1) efforts to prescribe efficiency were vague, *id.* at 451; (2) prescribing efficiency assumed the availability of lots of data that was not likely to be available, *id.* at 451-52 (and if it was available how would it be translated into a plan, *id.* at 452); and (3) a plan based on lack of data would magnify the probability and consequences of wrong decisions, *id.* at 453. She pointed out that where there is an existing market these defects are more important but where there is no market these defects are much less critical, and a market has not existed for water. *Id.* at 454-58. What she calls for is more flexibility, doing essentially two things: (1) allowing transfers and (2) recognizing return flow as an asset of the water holder. *Id.* at 456-57. But when there are no common law rules to govern, such as for interbasin transfers, then a statute needs to supply them. *Id.* at 457. In other words, to accomplish any approach, a prerequisite is an appropriate legal framework.

<sup>380</sup> RRMWC § 7R-2-01(1).

<sup>381</sup> *Id.* § 7R-2-01(2).

same standards used to evaluate a permit application in the first instance.<sup>382</sup> The Code assumes that water rights holders who would be adversely affected by the modification have a protectable interest but not one sufficient to veto the modification.<sup>383</sup> If an adversely affected user refuses to consent to the modification, the agency can still approve the modification by conditioning the approval upon the payment of "adequate compensation" to the adversely affected user.<sup>384</sup> The commentary likens this to "a private eminent domain power."<sup>385</sup> The agency becomes the "arbiter of such disputes."<sup>386</sup>

The Code provides a streamlined method of approval for what it labels "non-injurious modifications."<sup>387</sup> Where a permittee meets the test,<sup>388</sup> the assignee need only file notice of the assignment within thirty days of the assignment.<sup>389</sup> A failure to provide the notice results in voiding the permit.<sup>390</sup> Complying with the requirement results in a new permit to the assignee, although only for the unexpired term of the assigned permit.<sup>391</sup> The Code gives the agency authority to create other classes of modification that would not require specific review and approval.<sup>392</sup> These modification provisions may well meet Professor Thompson's "market for nature" prerequisites.<sup>393</sup>

### C. Drought

In his 1983 review of existing regulated riparian statutes,<sup>394</sup> Richard Ausness found that temporary water shortages provided "[a] serious weakness in most" existing statutes as they failed to provide an

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<sup>382</sup> *Id.* § 7R-2-02(1).

<sup>383</sup> *Id.* § 7R-2-02(3).

<sup>384</sup> *Id.* § 7R-2-02(3).

<sup>385</sup> RRMWC at 289.

<sup>386</sup> *Id.*

<sup>387</sup> *Id.* § 7R-2-03.

<sup>388</sup> "[D]oes not alter the place, time, or manner or [sic] use." RRMWC § 7R-2-03(1).

<sup>389</sup> RRMWC § 7R-2-03(1).

<sup>390</sup> *Id.* § 7R-2-03(2).

<sup>391</sup> *Id.* § 7R-2-03(3).

<sup>392</sup> *Id.* § 7R-2-03(4).

<sup>393</sup> Thompson, *supra* note 138.

<sup>394</sup> Ausness, *supra* note 45, at 547 (reviewing legislation in fourteen states).

allocation scheme for periods of water shortage.<sup>395</sup> His view was that the advantages of a fixed plan outweighed the advantages of flexibility.<sup>396</sup> Ausness reviewed three approaches toward allocation during shortages; (1) preferential use, (2) straight rationing, and (3) temporal priority. He concluded that including all three in the emergency allocation plan may be the fairest approach.<sup>397</sup> While the Code does not select the approach to be taken during a drought, it does require the adoption of drought management strategies<sup>398</sup> that are to anticipate “reasonably foreseeable” water shortages and emergencies. The Code specifies seven factors that any drought management strategies must include.<sup>399</sup>

The Code distinguishes between a water shortage<sup>400</sup> and a water emergency.<sup>401</sup> The agency must formally declare that either a shortage or an emergency exists before the drought management strategies could apply to the drought.<sup>402</sup> However, there is a duty to declare one or the other when specified conditions are present.<sup>403</sup> A shortage arises when “available water falls so far below normally occurring quantities that substantial conflict among water users or injury to water resources are expected to occur.”<sup>404</sup> If restrictions that would be imposed under a shortage “are insufficient to protect public health, safety, and welfare,” the conditions for an emergency exist.<sup>405</sup>

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<sup>395</sup> *Id.* at 581-84. While some statutes gave authority to react to drought, *id.* at 581-82, only New Jersey and Florida required it at the time. *Id.* Abrams also discussed the need for having priorities set for times of shortage. Abrams, *supra* note 81, at 267-68, 279.

<sup>396</sup> Ausness, *supra* note 45, at 582.

<sup>397</sup> *Id.* at 584.

<sup>398</sup> RRMWC § 4R-2-02(1).

<sup>399</sup> *Id.* § 4R-2-02(2)(a)-(g). These are (1) criteria with which to identify the onset and severity of a shortage or emergency; (2) specification of water use classes and their priorities based on their relationship to public interest; (3) measures for auditing use and detecting leaks; (4) measures for overall system rehabilitation; (5) a registry of conservation measures for public and private buildings; (6) registered private agreements to curtail uses in times of shortage or emergency; and (7) possible bans or restrictions on certain water uses. *Id.* RRMWC § 4R-2-02(2)(h) authorizes “other necessary contingency plans.”

<sup>400</sup> RRMWC § 7R-3-02(1).

<sup>401</sup> *Id.* § 7R-3-03(1).

<sup>402</sup> *Id.* §§ 2R-2-31(2), 2R-2-29(2). In declaring either, the agency must “clearly delineate the area of the State and the water sources included.” RRMWC § 7R-3-04.

<sup>403</sup> RRMWC §§ 7R-3-02(1), 7R-3-03(1).

<sup>404</sup> *Id.* § 2R-2-31(1).

<sup>405</sup> *Id.* § 2R-2-29(1).

When a shortage is declared to exist, the holder of a permit is entitled to notice and a contested hearing before being restricted.<sup>406</sup> In a declared emergency, a restriction can go forward under an immediate order,<sup>407</sup> although the order does not take effect until the person to be restricted is served with the order.<sup>408</sup> The agency can also restrict water withdrawals that do not require a permit during either a water shortage or a water emergency,<sup>409</sup> but notice and hearing requirements and opportunities exist just as with the permittees.<sup>410</sup> That all users should be regulated during such a period was another aspect Ausness found was crucial to drought management.<sup>411</sup>

If an affected permittee requests a hearing, that hearing must commence within ten days after the agency receives the request for the hearing,<sup>412</sup> with the burden of proof on the party requesting the hearing.<sup>413</sup> The order remains in effect pending the result of the hearing.<sup>414</sup>

Any permit term or condition can be restricted as set out in the drought management strategies<sup>415</sup> unless the agency finds that they are inappropriate to the situation at hand.<sup>416</sup> The agency is required, however, to comply with the preferences provided for in the Code.<sup>417</sup> These preferences are direct human consumption and sanitation necessary for human survival and health,<sup>418</sup> survival or health of livestock and crops, preserving physical plants, and equipment from physical damage or loss;<sup>419</sup> and uses that maximize employment and economic benefits within the sustainable development goal set forth in the comprehensive water plan.<sup>420</sup> Within each of these preferences, the uses that maximize reasonable use of

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<sup>406</sup> *Id.* § 7R-3-02(2).

<sup>407</sup> *Id.* § 7R-3-03(2).

<sup>408</sup> *Id.* § 7R-3-04. The order has to be "precise" as to date and time that the withdrawal or use must stop or change. RRMWC § 7R-3-03(3).

<sup>409</sup> RRMWC § 7R-3-05(1). *See supra* note 357 & accompanying text.

<sup>410</sup> RRMWC § 7R-3-05(2).

<sup>411</sup> Ausness, *supra* note 45, at 579.

<sup>412</sup> RRMWC § 7R-3-03(5).

<sup>413</sup> *Id.* § 7R-3-03(6).

<sup>414</sup> *Id.* § 7R-3-03(7).

<sup>415</sup> Defined in RRMWC § 2R-2-09 and developed by the state agency under RRMWC § 4R-2-02. *See infra* text accompanying notes 398-399.

<sup>416</sup> RRMWC § 7R-3-01(1)&(2).

<sup>417</sup> *Id.* § 7R-3-01(3).

<sup>418</sup> *Id.* § 6R-3-04(1)(a).

<sup>419</sup> *Id.* § 6R-3-04(1)(b).

<sup>420</sup> *Id.* § 6R-3-04(1)(c).

water are preferred.<sup>421</sup> Abrams puts as his top preference choice supporting concentrated populations.<sup>422</sup> He notes that although domestic use requires substantial withdrawals from water sources, particularly for sewage disposal, very little of that water is consumed. His second choice is instream flow protection, which he identifies as even less consumptive a use than municipal needs. But he recognizes that it does not fit into the permit system with the same facility as uses that have specific sponsors. "[H]ow protection can be coordinated with the preference system is the first order of business in ensuring that instream flow protection does not compromise the sewage and drinking water needs of concentrated populations."<sup>423</sup> The Code appears to solve this problem by making minimum flows or levels in effect the top preference, so that permits for withdrawal of water can be issued only as long as the minimum flow or level is maintained.<sup>424</sup> Abrams then explores the question of ascertaining the quantity of water for which a preference permit would be issued. He examines the experiences of use quantification under the prior appropriation and the reserved rights systems and notes that the same scarcity and competition issues behind those systems are the issues important to those eastern states that are moving away from common law riparian doctrine.<sup>425</sup> Among other issues that Abrams considers are to what extent permits should be transferable to other priority level uses and what the priority should be within each use level. The Code does provide that within a use preference category, uses that maximize the reasonable use of water are to be preferred.<sup>426</sup>

## V. COMPREHENSIVE PLANNING UNDER THE CODE

As noted earlier,<sup>427</sup> the Code does not select the watershed management approach for the state; rather, such an approach would

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<sup>421</sup> *Id.* § 6R-3-04(3).

<sup>422</sup> Robert H. Abrams, *Replacing Riparianism in the Twenty-First Century*, 36 WAYNE L. REV. 93, 100-101 (1989).

<sup>423</sup> *Id.* at 102.

<sup>424</sup> See *supra* text accompanying notes 170-172. The only exception is during a water emergency when it might be possible to invade minimum flow in some limited circumstances. See *supra* text accompanying notes 174-175.

<sup>425</sup> Abrams, *supra* note 422, at 106.

<sup>426</sup> RRMWC § 6R-3-04(3).

<sup>427</sup> See *supra* Part I of this article.



emerge from the comprehensive planning required by the Code. Therefore, this section explores the Code provisions on planning.

After analyzing legislation in fourteen eastern states, Richard Ausness<sup>428</sup> identified water resources planning to be a weak area.<sup>429</sup> He found planning to be fragmented among several agencies.<sup>430</sup> To Ausness, a comprehensive plan is essential. It would allow the public interest to be dealt with, such as through the institution of instream flows. He also identified a necessity for coordination between the plan and permit issuance.<sup>431</sup>

The Code clearly identifies a policy in favor of comprehensive planning.<sup>432</sup> The planning responsibility sections deal with two elements of planning, the comprehensive water allocation plan<sup>433</sup> and drought management strategies,<sup>434</sup> and two aids to planning, a statewide data system<sup>435</sup> and planning advisory committees.<sup>436</sup>

The agency is to develop and adopt a comprehensive water allocation plan<sup>437</sup> within five years of the date the Code becomes effective.<sup>438</sup> The objective of the plan is to "collect data and devise strategies for achieving sustainable development of the waters of the State."<sup>439</sup> The plan is to (1) identify existing uses of waters within the state,<sup>440</sup> (2) estimate future trends in water uses in the state, including the current and future capability of public water supply systems to provide water for their service areas and the development choices necessary for attaining optimum reasonable use of water,<sup>441</sup> (3) identify boundaries of the basins of major water sources within the state,<sup>442</sup> (4) estimate the safe

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<sup>428</sup> Ausness, *supra* note 45.

<sup>429</sup> *Id.* at 579-581.

<sup>430</sup> See *supra* text accompanying notes 69-102 for a discussion of the water allocation versus water quality agency roles.

<sup>431</sup> Ausness, *supra* note 45, at 579.

<sup>432</sup> RRMWC § 1R-1-04.

<sup>433</sup> *Id.* § 4R-2-01.

<sup>434</sup> *Id.* § 4R-2-02. The drought management strategies have already been discussed. See *supra* text accompanying notes 394-426.

<sup>435</sup> RRMWC § 4R-2-03.

<sup>436</sup> *Id.* § 4R-2-04.

<sup>437</sup> Defined in RRMWC § 2R-2-04.

<sup>438</sup> RRMWC § 4R-2-01(1).

<sup>439</sup> *Id.* § 4R-2-01(2).

<sup>440</sup> *Id.* § 4R-2-01(2)(a).

<sup>441</sup> *Id.* § 4R-2-01(2)(b).

<sup>442</sup> *Id.* § 4R-2-01(2)(c).

yield<sup>443</sup> for each major source and, where applicable, the necessary minimum flows and levels and recharge areas for groundwater,<sup>444</sup> (5) evaluate the reasonableness of various classes of water use,<sup>445</sup> (6) describe the systems for allocating water during a water shortage or water emergency,<sup>446</sup> and (7) set out the goals for the use, management, and protection of the water of the state and related land resources and evaluate alternative recommendations according to economic, environmental, hydrologic, jurisdictional, legal, social, and other relevant parameters.<sup>447</sup>

Because of the importance of data to comprehensive planning,<sup>448</sup> the Code provides that the agency can require the registration of water uses that are not required to have a permit under the Code<sup>449</sup> and provides for the protection of confidential business information.<sup>450</sup>

The Code also provides for planning advisory committees whose purpose it is to assist the agency in formulating plans, programs, and strategies.<sup>451</sup> It is up to the agency to determine by regulation how the committees should be constituted and function.<sup>452</sup> The Code only provides that the committees may include representatives not only from various government agencies but also from "all persons or groups interested in or directly affected by any proposed or existing plan or strategies."<sup>453</sup>

Once the plan is finalized, the agency can approve a permit only if the withdrawal and use "are consistent with" the plan and/or the drought management strategies.<sup>454</sup>

As noted earlier,<sup>455</sup> the watershed management approach contemplates management of both land and water. Clearly the Code focuses on the water management side. Where does the Code leave the

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<sup>443</sup> RRMWC § 2R-2-21 defines safe yield as the amount of water that can be withdrawn from a water source without impairing the long-term social utility of the source including maintaining its protected biological, chemical, and physical integrity, *id.*, and identifies its determination as a comparison of natural and artificial replenishment with existing and planned consumptive and nonconsumptive uses. RRMWC § 2R-2-21(2).

<sup>444</sup> RRMWC § 4R-2-01(d).

<sup>445</sup> *Id.* § 4R-2-01(e).

<sup>446</sup> *Id.* § 4R-2-01(f).

<sup>447</sup> *Id.* § 4R-2-01(g).

<sup>448</sup> See *supra* notes 81 and 196 and accompanying text.

<sup>449</sup> RRMWC § 6R-1-06.

<sup>450</sup> *Id.* § 4R-1-09.

<sup>451</sup> *Id.* § 4R-2-04.

<sup>452</sup> *Id.* § 4R-2-04(1).

<sup>453</sup> RRMWC § 4R-2-04(2).

<sup>454</sup> *Id.* § 6R-3-01(1)(c).

<sup>455</sup> See *supra* text accompanying notes 140-146.

agency as far as land management is concerned? While the comprehensive water allocation plan must include "recommended goals for the use, management, and protection of the waters of the State *and related land resources*,"<sup>456</sup> the most significant points of control seem to be in determining reasonable uses for water<sup>457</sup> and in determining the adequacy of a conservation plan.<sup>458</sup> However, with the coordination of water quantity and water quality under the Code,<sup>459</sup> the agency will have to consider the pollution control focal point to consider such as nonpoint source controls. In that context, the TMDL program,<sup>460</sup> for example, is directly concerned with land use issues.

## VI. CONCLUSION

The Code contains elements that are necessary for a successful watershed management approach to the water resource. It provides for applying the same rules to all naturally occurring waters, coordinating water allocation and water pollution control, integrating environmental and ecological concerns and values with efficiency and social values, and delineating the scope and susceptibility to regulation of private rights in water. However, the Code does not opt for the watershed management approach; instead that choice would be delineated in the comprehensive water allocation plan.

This article identifies four interrelated themes underlying the Code that support management of the water resource within the context of both human consumptive use and environmental and ecological perspectives. These four themes are (1) public ownership and interest, (2) sustainable development, (3) conservation, and (4) comprehensive water allocation planning, all with a view to getting maximum utilization out of the water resource. Public ownership of, and interest in, the water resource is declared paramount. However, public interest will be reflected largely through the concept of sustainable development,<sup>461</sup> a necessary element of

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<sup>456</sup> RRMWC § 4R-2-01(g) (emphasis added).

<sup>457</sup> See *supra* text accompanying notes 305-318.

<sup>458</sup> See *supra* text accompanying notes 200-207.

<sup>459</sup> See *supra* text accompanying notes 69-102.

<sup>460</sup> See Robert E. Beck & C. Peter Goplerud, *The Water Quality Approach*, in 5 WATERS AND WATER RIGHTS § 54.02(b)(1) (Robert E. Beck ed., 1998 & Supp. 1999).

<sup>461</sup> The comment to RRMWC § 1R-1-01 states "in major part." *Id.* at 2. The comment to RRMWC § 2R-2-18 states "will center on." *Id.* at 50.

which is water resource conservation, with comprehensive planning as the principal tool used to delineate how to achieve sustainable development.<sup>462</sup>

While the Code contains important prerequisites that relate directly to water management, it does not contain as significant a focus on the other aspect of watershed management, regulation of water-related land resources, although, as previously pointed out,<sup>463</sup> there are several important land-related aspects to the Code. Perhaps the best observation to this aspect is the observation made in the ecosystem study,<sup>464</sup> that while freshwater and terrestrial biodiversity should be conserved together because of their interconnection, the manager has to use the best tools that are available for managing each one.<sup>465</sup>

Furthermore, the Code almost totally meets the criticisms<sup>466</sup> that have been leveled against common law riparian doctrine and existing regulated riparianism statutes by thoughtful critics. Abram's concern with the uncertainty of the scope of the common law riparian right, the failure of the common law to deal with environmental and ecological issues, and that regulated riparianism statutes may be rigid, fail to articulate policy objectives, and tend to overregulate, are all addressed in the Code. It provides set term water permits and for their transfer,<sup>467</sup> develops extensive policy objectives, including environmental and ecological objectives,<sup>468</sup> and includes an option for use of local or regional water management districts.<sup>469</sup> Ausness's concern about regulated riparianism statutes failing to provide for (1) water resource planning, (2) integration of groundwater and surface water, (3) drought management, (4) reallocation and transfer, and (5) regulation of all categories of use, are similarly dealt with in the Code. It requires both a water allocation plan and the development of

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<sup>462</sup> RRMWC § 1R-1-04 comes the closest in the Code to articulating this interrelationship in one thought.

<sup>463</sup> See *supra* text accompanying notes 455-460.

<sup>464</sup> See *supra* text accompanying notes 142-144.

<sup>465</sup> ABELL, *supra* note 142, at 3.

<sup>466</sup> Because of the focus on watershed management in this symposium, several aspects of the Code are not developed in this article. For example, municipal use of water and storage of water are important in Abram's writings. As pointed out, *supra* text accompanying note 422, he makes municipal use the number one priority for his proposed approach to water resource management. Storage, he observes, is intimately related to municipal use. Abrams, *supra* note 422, at 103.

<sup>467</sup> RRMWC § 7R-1-01; RRMWC 7R-1-02.

<sup>468</sup> See, e.g., *supra* notes 147-181 and accompanying text.

<sup>469</sup> RRMWC at 128-154.

drought management strategies.<sup>470</sup> It integrates surface water with groundwater and provides for reallocation and transfer of water permits.<sup>471</sup> Although the Code would establish a quantity limit on the permit requirement,<sup>472</sup> it otherwise regulates all categories of withdrawers of water and consumptive users.<sup>473</sup> Butler's primary concern with failure to address environmental and ecological concerns and with the lack of fairness to both future users and existing users are to a large extent also dealt with in the Code. The protection accorded minimum flow goes a long way, while the provision for compensation in a number of instances and the sustainable development approach both speak to fairness elements.

Of course the critics are not in full agreement on their criticisms, and the Code often contains a compromise; for example, between Abrams' uncertainty about how to make instream flow a high level of preference in an allocation scheme and Butler's concept of the public interest being translated into property. The Code meets the market aspects of Abram's and Butler's criticisms only by making the permit transferable and subject to involuntary modification by the payment of compensation, but not by focusing any further on developing a market<sup>474</sup> or by making return flow a part of the water right.

Because the Code would change common law riparian doctrine and even statutory provisions in existing regulated riparianism statutes, the potential for successful constitutional challenges needs to be considered.<sup>475</sup> Any new water use rights created under the Code will come subject to the conditions provided for in the Code and thus without any significant constitutional issues.<sup>476</sup> However, under the Code there are six possible impacts on existing water rights that need to be noted and considered for any constitutional complications that they might raise. Most do not appear

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<sup>470</sup> *Id.* at 109-12, 294-310.

<sup>471</sup> RRMWC § 2R-2-32; RRMWC § 6R-3-06.

<sup>472</sup> RRMWC § 6R-3-01.

<sup>473</sup> RRMWC § 2R-2-06; RRMWC § 2R-2-13; RRMWC § 2R-2-34.

<sup>474</sup> See Abrams's second goal to "lend guidance to the administrative bodies charged with permitting water uses and encourage them to go forward and, where possible, incorporate additional strategies that reflect market values and thereby insure efficient resource utilization." Abrams, *supra* note 81, at 284.

<sup>475</sup> Commentary in the Code does discuss constitutional issues in several instances. See, e.g., RRMWC at 213-14, 311-16.

<sup>476</sup> See *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992) (holding that when limitations on property existed when the owner took title to the property, the government may apply those limitations to the property without providing compensation).

to raise serious concerns. However, only the most obvious responses are noted in each instance below.

First, the Code limits the riparian usufructuary right to withdraw or consume water to a term, although the opportunity for renewal exists.<sup>477</sup> This resembles zoning law where the city or town deals with nonconforming uses and puts limitations on their continuance.<sup>478</sup> Second, the Code adds nonriparians to the group of potential water users by eliminating the riparian land requirement (and the overlying land requirement as to groundwater) thereby diluting the opportunities for water use by riparian (or overlying) owners. However, in many states this has already been accomplished through evolution in the common law.<sup>479</sup> Third, under the Code's allocation scheme existing riparians may not be able to obtain water for a future consumptive use when they want it. However, most courts have viewed claims to a right to make a use of water at some time in the future to be inchoate and not vested.<sup>480</sup> Fourth, even some existing riparian water users may have their use restricted in the process of converting from an existing system to the Code. This may be the strongest case for compensation, particularly if the result occurs because of the imposition of a minimum flow or level requirement and would not occur otherwise. However, it is important to keep in mind that minimum flow prescription is necessary only because the state has undertaken to alter the common law scheme which was protecting the

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<sup>477</sup> RRMWC § 7R-1-02.

<sup>478</sup> J. JUERGENSMEYER AND T. ROBERTS, LAND USE PLANNING AND CONTROL LAW §§ 4.31-4.40 (1998).

<sup>479</sup> All riparian jurisdictions have always recognized as the outer limit of the riparian property the watershed boundary. The Code maintains that outer limit, albeit in a different format, by providing protection for the basin from out-of-basin transfers. Clearly had all land in the basin been in single ownership, the single owner would have had a riparian right for the entire acreage. Thus the only aspect being affected by the Code is the artificial, arbitrary boundary line created by the division of the riparian land into tracts that abut and tracts that do not abut on the water source. Furthermore, all land within the basin contributes runoff to the water source. Thus there is nothing inequitable in saying that all land in the basin can benefit from the water once it reaches the body in question. Indeed a strong argument can be made that equity demands sharing of the water throughout the basin. Finally, it is not clear from a historical perspective whether the aspect of the riparian definition limiting the water right to contiguous ownership had to do with anything other than the issue of access. The Code specifically provides that the abolition of the rule does not give a right of access to the body of water across private property. RRMWC § 2R-1-02(2).

<sup>480</sup> See, e.g., *Loosle v. First Federal Sav. & Loan Ass'n of Logan*, 858 P.2d 999, 1002 (Utah 1993).

public interest through its inefficiency. Fifth, the Code imposes a conservation duty.<sup>481</sup> However, requiring common owners to conserve their common resource was validated by the courts a long time ago in the oil and gas field.<sup>482</sup> Finally, the Code allocates cutbacks during periods of drought.<sup>483</sup> However, credits are provided for meeting conservation plans and the drought management strategies will have been adopted in advance of the crisis.

Whether the possible impacts have constitutional implications should be considered fully. In addition, fairness, as discussed by Butler, may call for compensation even if the Constitution does not require it. The Code does provide for some forms of compensation in connection with involuntary modification of a water permit, when undertaking conservation of water that has not previously been wasted, and in transferring water from one basin to another.

Hopefully the discussion in this article will stimulate others to review the Code and still others to make use of it. Clearly the Code should be in the hands of anyone and everyone who has anything to do with developing or implementing water resource legislation, even if their involvement is limited to only one isolated instance. The Code should be looked to for concepts, suggested language and important legal analysis. For example, if a state wants to consider integrating water quantity allocation and water quality control, the Code has a suggested way of doing it, thus avoiding the necessity of reinventing the wheel. The end product is summarized in the editor notes in the preface to the Code:

"Probably each person who contributed to this project could pick at least a few points where he or she thinks the end products could be improved—the end products are not any single person's efforts, interests, or conclusions. Those involved in the project agree that overall the end products are carefully balanced to represent a coherent body of law that would markedly improve the law of water allocation as presently found in many States."<sup>484</sup>

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<sup>481</sup> RRMWC § 6R-3-01(1)(d)

<sup>482</sup> See, e.g., *Hartman v. State Corp.* Comm'n, 529 P.2d 134, 143 (Kansas 1974).

<sup>483</sup> RRMWC § 7R-3-01; RRMWC § 7R-3-05.

<sup>484</sup> *Id.* at ii.

The first sentence is likely true. The second sentence is clearly true and focuses, therefore, on the most important contribution of the Code. I would think it an important contribution even for a state that has a pre-existing regulated riparianism statute. The quote speaks directly to the third major goal that Abrams posited for changing then existing riparianism: to “achieve an overall coherence that fulfills the public’s expectation of rational, purposeful water allocation.”<sup>485</sup>

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<sup>485</sup> Abrams, *supra* note 474, at 284.