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Groundwater and Growth Management in the New West: Evolving Law and Practice

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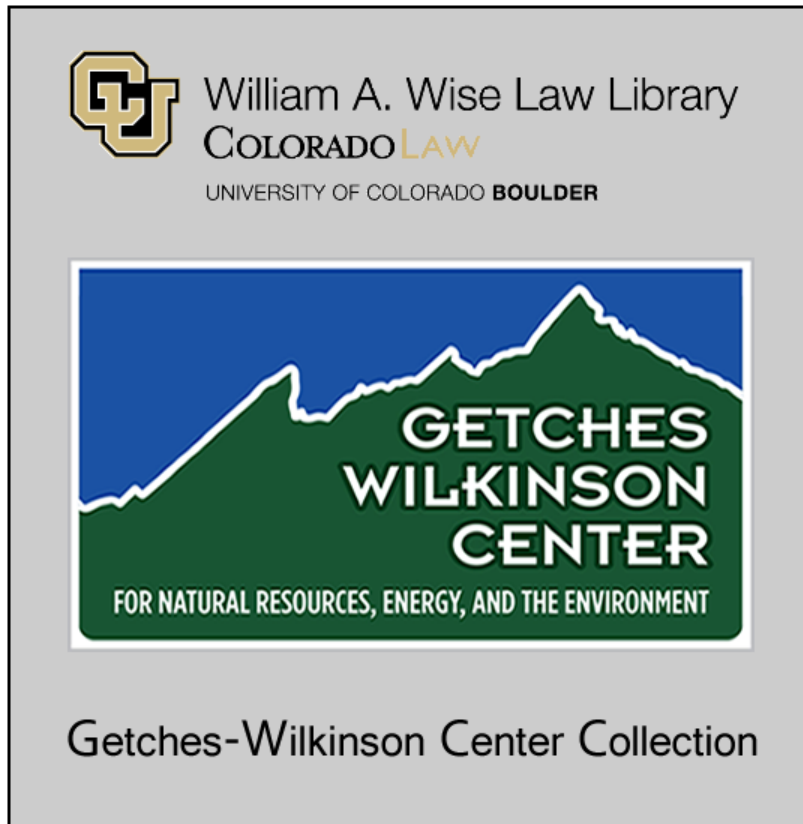


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**GROUNDWATER AND
GROWTH MANAGEMENT IN THE NEW WEST:
EVOLVING LAW AND PRACTICE**

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WATER AND GROWTH IN THE WEST

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Natural Resources law Center
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I. WESTERN GROWTH: THREE TRAGEDIES FOR THE PRICE OF ONE

- A. *The Newest Western Boom Cycle*: The West has been characterized by boom and bust cycles starting with the collapse of the mining and cattle empires in the late 19th century. Today, the West is in another boom cycle, *ATLAS OF THE NEW WEST: PORTRAIT OF A NEW REGION* 96 (William Riebsame ed. 1997), characterized by rapid urban, suburban and exurban growth. All projections indicate that this unique region will continue to capture a substantial share of the country's population growth well into the 21st century. Western states grew by about 32 percent in the past twenty-five years, compared with a 19 percent increase in the rest of the nation. Pamela Case and Gregory Alward, *Patterns of Demographic, Economic and Value Change in the Western United States: Implications for Water Use and Management* 7 (August 1997) (Study Prepared for Western Water Policy Advisory Review Commission). From 1990 to 1995, ten of the nation's fifty fastest growing counties (including the fastest) were in one state, Colorado.
- B. *Why and How the West is Growing*: This settlement or growth cycle is fueled by technology and wealth-creation options which free many people from previous geographical and economic location constraints. Peter Wolf, *HOT TOWNS: THE FUTURE OF THE FASTEST GROWING COMMUNITIES IN AMERICA* (1999) characterizes the current nation-wide boom in many rural areas and selected center cities as the fifth of a series of American migrations that began in the 17th century.¹ The migration patterns are amenity and infrastructure driven and is producing different kinds of growth patterns compared to past cycles because the current explosive growth is *relatively less* dependent on federal support and new infrastructure development, *much less* dependent on raw commodity production and much more broadly distributed geographically compared previous booms.
- C. *The Tragedy of Three Commons*: Growth stresses three commons: (1) available surface and groundwater reserves, (2) community amenity levels and (3) the cultural commons represented by small ranch, farm or raw commodity production communities. Continued growth will require new water supplies, but much of these supplies will most likely be met from *presently developed sources*. e.g. Harold O. Carter, Henry J. Vaux and Ann F. Scuring eds., *SHARING SCARCITY: GAINS AND LOSERS IN WATER MARKETING* 5 (University of California, Agricultural Issues Center, 1994). Domestic use withdrawals more than doubled between 1960 and 1990 while population only increased by 75%. Thus, both domestic use demands and the per capita urban use rate are increasing. The West is growing for the very reasons people were originally deterred from settlement of the region- its harsh climate and rugged,

¹ He characterizes them as (1) the settlement of the coastal eastern seaboard and New Orleans, (2) the settlement of the continent between 1787-1890, (3) the post Civil War eastern and southern European migrations that created the great industrial centers and (4) the automobile age

often bleak, non-European landscape. The New West's "commodities" include its climate, mountain and desert wilderness areas, scenery, free-flowing rivers and open space, combined with the public and private transportation, educational and medical infrastructure to support what millions perceive as a high quality of life. The problem is that these are fragile, scarce resources and the more people who demand access, the faster the rate of amenity degradation. The boom also threatens to destroy the land and water base of many small communities, Thomas Michael Power, *LOST LANDSCAPES AND FAILED ECONOMIES: THE SEARCH FOR A VALUE OF PLACE* (1996) and Lawrence J. MacDonnell, *FROM RECLAMATION TO SUSTAINABILITY: WATER, AGRICULTURE, AND THE ENVIRONMENT IN THE AMERICAN WEST* (1999).

II. WESTERN GROWTH AND GROUND WATER USE

- A. *The Numbers*: Groundwater is an important source of primary and back-up municipal water supply. The two major uses of groundwater are (1) irrigation and (2) municipal and industrial water supply. Groundwater withdrawals constitute 37 percent of all public water supply in the United States. U.S. Geological Survey, *ESTIMATED WATER USE IN THE UNITED STATES IN 1995* 20 (USGS Survey Circular 1200 1998). In the Western United States, M and I groundwater use is consistently closer to 40- 45% of all withdrawals and in Hawai'i, the Rio Grande Basin, the Great Basin and the Lower Colorado is the primary source of supply or is equal to surface withdrawals.
- B. *Ground Water and Urban Growth*: Urban growth stresses water supplies in the four primary ways: (1) it increases the demand for existing municipal supplies, (2) it increases the risk of ground water contamination, thus foreclosing the use of the resource, (3) it increases the pressure to tap unallocated surface and groundwater supplies and thus creates additional environmental- consumptive use tensions, and (4) it increases the pressure to reallocate existing agricultural entitlements to M & I through water marketing. Groundwater is both a renewable and non-renewable resources and municipal water suppliers which rely on aquifer mining to meet demands face more difficult adjustment problems compared to irrigated agriculture as pumping levels decline.

III. THE HISTORIC RELATIONSHIP BETWEEN WATER SUPPLY AND WESTERN URBAN GROWTH

The historic relationship between water supply and urban growth was part of a larger regional strategy to encourage permanent settlement of the West and can be stated simply: water should never be a constraint on growth. Therefore, water supply with seldom a factor in local government land use planning and controls, and the function of water policy was to permit unlimited accommodation to growth. See Robert A. Gottlieb, *A THRIST FOR GROWTH* (1991). In water short areas, state governments and local water suppliers cooperated with the federal government to construct the necessary carry-over storage and conveyance facilities. See A. Dan Tarlock, *From Natural Scarcity to Artificial Abundance: The Legacy of California Water Law and Politics*, 1

West-Northwest J. of Envir. L. & Policy 71 (1994). Water, land use and public utility law supported the policy of unlimited accommodation.

IV. URBAN GROWTH IN THE POST RECLAMATION ERA

- A. *Adapting to Aridity- Again?* The question in the settlement of the West has been how humans should adapt to non-humid, non-northern European climate. Scientists and policy makers have long asked whether are there inherent limits to the settlement of the interior West and California because of aridity? John Wesley Powell, *THE LANDS OF THE ARID REGION OF THE UNITED STATES: WITH A MORE DETAILED ACCOUNT OF THE LANDS OF UTAH* (Wallace Stegner ed. 1962), but the prevailing assumption is that the constraints of aridity can be over-come by technology. Irrigation and transbasin diversions, along with raw commodity production, stabilized the West as an oases society until air conditioning made on large-scale settlement possible in the arid southwest. The question is whether this assumption is changing.
- B. *Urban Use Ascendent:* Western growth is occurring in the post-Reclamation era. The era of large federally subsidized water projects ended in the late 1960s. There are four basic categories of water use. Agriculture has historically claimed the largest share of the region's developed supplies, but this use is declining as irrigated agriculture stabilizes in selected areas where the value-added remains high. Agriculture remains the dominant water use category in the West, but total withdrawals, as distinguished from consumptive use, have declined from 86 percent of the total in 1960 to 78 percent today. Reflecting the new landscape of office campi, gated communities and golf courses, domestic demands rose from 5 percent of the total in 1960 to 8 percent in 1990, and water used for thermoelectric power generation rose from 4 percent of the total in 1960 to 9 percent in 1990. The most important water-related conclusion that can be drawn from recent growth studies is that the growth patterns are *relatively less* dependent on the traditional patterns of water use and development because the West's population growth is not accompanied by a proportional rise in total water demand. Water use decreased from 1980- 95 in the face of continued population increases. Total freshwater withdrawals have decreased 10% over the peak year of 1980. ESTIMATED WATER USE IN THE UNITED STATES IN 1995.
- C. *Urban Adaptation:* Urban water suppliers have a comparative adaptation advantage compared to irrigated agriculture. However, they must have long-term reliable supplies since urban land retirement is much more costly than agricultural land retirement. The question is whether western cities wish to consider a switch form unlimited to limited accommodation. Cities have four basic adaptation choices:
1. Freeze the Status Quo
 2. Water supply-Constrained Growth

3. Integration of Water Supply and Land Use Planning to Promote Limited Accommodation

4. Continued Unlimited Accommodation of Market Demand

Option 1 is not on the table. This reflects the assumption in land use law that a community cannot directly isolate itself from the rest of the world. The legality of a community to impose a flat cap on growth has been invalidated, *City of Boca Raton v. Boca Villas Corp.*, 371 So.2d 154 (Fla. Dist. Ct. 1979), but the constitutionality of growth caps has never been fully tested. Courts have suggested that cities are limited to phased growth regulation to protect new residents from developments with inadequate public services. Thus, the primary choice continues to be Option 4. Cities will have to depend on a combination of (1) more efficient use of existing supplies, (2) demand management, (3) the reallocation of existing supplies through water marketing, (4) more limited new storage and distribution facilities, and (5) greater conjunctive ground and surface water use. See e.g., San Diego County Smart Growth Coalition Water Resources Availability Study Team, <http://co.sandiego.ca.us.sgc/water-june-note.html> (last visited May 3, 2000). However, examples of Option 2 and 3 can be found.

V. DE JURE AND DE FACTO MUNICIPAL PREFERENCES

Urban water suppliers enjoy both de jure and de facto preferences against other users under the common law, prior appropriation and statutory conservation regimes.

A. *The Common Law.* The common law is a rule of capture or capture.

1. *Absolute Ownership.* The absolute ownership rule is a rule of capture and gives cities the power to acquire a well field and transport it to a distant city without regard for the impact on other landowners or for the efficiency of the use. *City of Corpus Cristi v. City of Pleasanton*, 276 S.W.2d 798 (Tex. 1955) (water transported by river 118 miles with 63-73% evaporation loss). Maine and Texas have recently reaffirmed the absolute ownership rule. *Maddocks v. Giles*, 728 A.2d 150 (Me. 1999); *Sipriano v. Great Spring Waters of America, Inc.*, 1 S.W.3d 75 (Tex. 1999).
2. *Reasonable Use Rule.* The reasonable use rule is a modified rule of capture; it requires that municipalities compensate injured overlying owners when water is transported to non-overlying land. *Higday v. Nickolaus*, 469 S.W.2d 859 (Mo. 1971); *City of Blue Springs v. Central Development Ass'n*, 831 S.W.2d 655 (Mo. App. W.D. 1992); *Forbell v. City of New York*, 58 N.E. 644 (1900); *Canada v. City of Shawnee*, 64 P.2d 694 (Ok. 1936) (injunction conditioned on city's institution of condemnation action).
3. *California Correlative Rights Rule.* The California correlative rights rule posits that all overlying owners have a correlative right to a proportionate share of the basin

and that any surplus waters are subject to appropriation by non-overlying land owners. *Katz v. Walkinshaw*, 74 P. 766 (Cal. 1902). This rule formally puts non-overlying municipalities at a disadvantage, *Wright v. Goleta Water Dist.*, 219 Cal.Rptr. 740 (Cal.Ct. App 1985), but the courts which have adopted the rule have allowed municipalities to pump. e.g. *Woodsum v. Pemberton*, 412 A.2d 1064 (N.J.Super. 1980) (correlative rights rule does not include a right to lift). California has developed special rules for municipalities:

a. *Mutual Prescription*: *City of Pasadena v. City of Alhambra*, 207 P.2d 17 (1949) held that overlying owners and appropriators have equal rights when they pump in excess of the safe annual yield, and this rule tends to confirm municipal uses or encourage inter-municipal cooperation.

b. *Pueblo and Other Rights*: The doctrine of mutual prescription is logically flawed because California law prohibits prescription against the municipalities. This doctrine has been limited to overlying- non-overlying conflicts, *Tehachapi-Cummings Water Dist. v. Armstrong*, 122 Cal.Rptr. 918 (Cal.App. 1975). *City of Los Angeles v. City of San Fernando*, 537 P.2d 1250 (Cal. 1975) corrected the error of *City of Pasadena* and held that a non- municipal pumper may not prescribe against the state but a municipal pumper may prescribe against a non-municipal one. The case also confirmed Los Angeles' pueblo rights as successor to the Pueblo of Los Angeles, announced a liberal safe yield test and reaffirmed the right to use natural channels to transport and store groundwater.

4. *The Restatement (Second)*: The Restatement (Second) Section 858 protects small overlying pumpers from large overlying pumpers but this rule is generally neutral with respect to municipal use. Michigan, Ohio and Wisconsin have gone further and adopted the rule proposed by the Restatement of Torts (Second) which imposes a reasonable use or non-injury limitation on large overlying pumpers, usually mines or quarries, who damage small overlying owners. *Maerz v. American Steel Corp.*, 323 N.W.2d 524 (Mich. 1982); *Cline v. American Aggregates Corp.*, 474 N.E.2d 324 (Ohio 1984); and *State v. Michaels Pipeline Construction Co.*, 217 N.W.2d 339 (Wis. 1974).

B. *Prior Appropriation*: The doctrine of prior appropriation should put newer, rapidly growing cities at a disadvantage because (1) newer municipal rights may be foreclosed to protect senior pumping levels and (2) junior municipal groundwater rights may be subordinate to senior surface rights.

1. *No Right to Lift*: Municipalities are protected by the refusal of courts to recognize a right to lift. *Wayman v. Murray Corporation*, 458 P.2d 861 (Utah 1969).

2. *Surface Rights*: Some state such as Arizona and California have refused to integrate ground and surface rights and thus the right to extract groundwater is controlled by the common law rule of capture but surface stream use is controlled by prior appropriation or a mixed regime. Other states such as New Mexico allow the State Engineer to deny a groundwater appropriation that would impair senior

surface rights or to condition a new appropriation on the retirement of senior surface rights. *City of Albuquerque v. Reynolds*, 379 P.2d 73 (N.M. 1962). Integration has now, however, ended groundwater mining in New Mexico. *Water Use in Arizona and New Mexico*, 13, <http://www.ispe.arizona.edu/swclimate/water%20context.htm> (last visited May 8, 2000). The USGS estimates that the groundwater table in the Albuquerque Basin declines by 140 feet between 1960 and 1992 and the basin is still in overdraft.

3. *Plans for Augmentation and Physical Solutions*: California and Colorado have two related devices, the physical solution and plans for augmentation, which allow new municipal suppliers or users to increase the risk of impairment to senior surface users. *Peabody v. City of Vallejo*, 2 Cal.2d 35 (1933); *Cache Le Poudre Water Users Association v. Glacier View Meadows*, 558 P.2d 289 (Colo. 1976). The special rules for the Denver "not nontributary" deep aquifer, Colo.Rev.Stat. § 37-90-103(10.5), provide for minimal augmentation of stream flow and thus promotes use of new subdivisions for overlying land. *Chatfield East Well Co. v. Chatfield East property Owners Ass'n*, 956 P.2d 1260 (Colo. 1998). The Act mentions four aquifers by name but the Colorado Supreme Court has held that the legislative history of the Act supports the conclusion that it applies only to those portions of the four named formations that are located in the Denver basin. *In Re Application of Water Rights of Park County Sportsman's Ranch, LLP.*, 986 P.2d 262 (Colo. 1999).
4. *Conservation Regimes*: A few states with serious overdrafts have imposed substantial limitations on new groundwater use, Arizona Groundwater Management Act, Ariz.Rev.Stat. §§ 45- 411- 637, but these regimes allow mining at a reduced rate and encourage the continued transition of irrigated agriculture to urban use. Arizona is gradually switching from groundwater to CAP water and water has level off even as population continues to increase. But, the Phoenix Active Management Area may exceed safe yield by between 245,308- 419,538 acre feet on the 2025 target date and Tucson may have an overdraft between 34,710- 158, 310 acre feet. *Water Use in Arizona and New Mexico*, 10, <http://www.ispe.arizona.edu/swclimate/water%20context.htm> (last visited May 8, 2000). The USGS estimates that the groundwater table in the Albuquerque Basin declines by 140 feet between 1960 and 1992 and the basin is still in overdraft.

VI. POWER OR DUTY TO SERVE

Water law gives urban water suppliers the power to plan for anticipated future growth, and public utility law may give them the duty to acquire the necessary supplies to accommodate market-demand growth. Cities control their own rights but not overlying and adjacent basins. The allocation of water rights is presumed to be a statewide function and thus local controls are preempted.

- A. *Think Big* The Progressive Growth doctrine posits that a claimant can perfect a water right based on expected future growth. e.g. state ex rel. Crider, 431 P.2d 45 (N.M. 1967); St. Onge v. Blakeley, 245 P. 532 (Mont. 1925)
- B. *Civic Boosterism: Its The Law: The Growing Cities Doctrine* posits that a city may perfect a water right to the amount of water that it needs to meet reasonably anticipated future demand and subjects municipal appropriation to lighter anti-speculative control compared to other appropriations. e.g. City and County of Denver v. Sheriff, 96 P.2d 836 (Colo. 1939); City and County of Denver v. Northern Colorado Water Conservancy Dist., 276 P.2d 992 (Colo. 1954); Thornton v. Bijou Irrigation Co., 926 P.2d 1, 29- 30 (Colo. 1996). Reynolds v. City of Roswell, 654 P.2d 537 (1982). See State, Department of Ecology v. Theodoratus, 135 Wash.2d 582, 957 P.2d 1241, 1257- 58 (1998)(Sanders, J. dissenting). See Carpenter, *Water for Growing Communities: Refining Tradition in the Pacific Northwest*, 27 *Envtl. L.* 127 (1997); Note, *Sometimes There is Nothing Left to Give: The Justification for Denying Water Service to New Customers to Control Growth*, 44 *Stan. L. Rev.* 429 (1992). A. Dan Tarlock and Sarah B. Van de Wetering, *Growth Management and Western Water Law: From Urban Oases to Archipelagos*, 5 *Hastings West-Northwest J. of Env'tl. L. & Policy* 163 (1999).
- C. *The Duty to Anticipate:* The growing cities doctrine was supported by the doctrine that water provider had a duty to anticipate future growth and acquire the necessary supplies. Lukrawka v. Spring Valley Water Co., 146 P.2d 640 (Cal. 1915). But cf. County of Del Norte v. City of Crescent City, 84 Cal.Rptr.2d 179 (CalApp. 1 Dist. 1999). This doctrine explains why courts do not demand that cities consider non-growth alternatives or more risky shortage scenarios. See e.g., North Carolina v. FERC, 112 F.3d 1175 (D.C. Cir. 1997). North Carolina contested FERC's determination of the need for a pipeline from lake Gaston, North Carolina to Virginia Beach, Virginia. North Carolina argued that Virginia Beach's conceded that water use declined in the area between 1990- 1994, the use of a projected growth in excess of Virginia Beach's actual per capita use, and that it excluded alternative sources of supply such as aquifers and reservoir modifications, from safe yield growth projections. North Carolina specifically challenged the need for a drought margin because safe yield was calculated on a worst case scenario and emergency wells and demand management would see the city through a short-term drought. The Court concluded that it was reasonable for FERC to assume "per capita use rates in Virginia Beach and the other municipalities would likely increase as those areas become more urbanized," and the drought augments were rejected assistant with 'sound water supply planning,' given that: (1) especially severe droughts might occur, (2) water sharing within the five-city region was not guaranteed, (3) water restrictions create public health and safety risks; and (4) future water demand might exceed projections." The Court's decision is probably correct as a standard arbitrary and capricious review of an expert administrative agency. However, the rhetoric of the opinion it illustrates that water suppliers have a duty to acquire sufficient supplies to accommodate high end growth projections under worst case drought scenarios and that those who challenge this orthodoxy have a high, if not impossible, burden of persuasion.

- D. *The Duty to Serve*: Municipal water suppliers are either public utilities under state law or subject to public utility duties. *Reid Development Co. v. Township of Parsipanny Troy Hills*, 89 A.2d 498 (N.J. 1952) The primary duty which drives growth accommodation is the duty to serve. A city must serve all people within its service area or to whom service has been promised if there is an available supply and no water shortage or emergency exists. e.g., *Perchel v. Village of Monroe*, 641 N.Y.S.2d 89 (A.D. 2 Dept. 1996). The duty to serve is the basis for the argument that a growing community cannot subordinate its utility service duties to land use planning policies. The leading case is *Robinson v. City of Boulder*, 547 P.2d 228 (Colo. 1976), but this appears to have been overruled in *Board of County Commissioners v. Denver Board of Water Commissioners*, 718 P.2d 235 (Colo. 1986). Accord: *Delmarva Enterprises, Inc. v. Mayor and Council of City of Dover*, 282 A.2d 601 (Del. 1971). Cf. *City of Texarkana v. Wiggins*, 246 S.W.2d 622 (Tex. 1952)(extraterritorial rates discriminatory).

VII. WATER SUPPLY LINKED GROWTH MANAGEMENT

- A. *Old Fashioned Growth Management*: Many communities have been interested in controlling their growth to prevent "urban sprawl." Growth managing takes two basic forms: (1) the division of an area in to growth and non-growth areas and (2) regulation of the timing of the growth through the coordination of public services and growth, e.g. *Golden v. Planning Board of the Town of Ramapo*, 285 N.E.2d (N.Y. 1972) or the use of annual construction quotas, e.g. *Construction Industry Association of Sonoma County v. Petaluma*, 522 F.2d 897 (9th Cir. 1975)(new residential construction unit quota allocated by a point system), or (3) the use of exactions and fees to force new residents to finance in whole or in part the costs of new public services. See Daniel R, Mandelker, *Managing Space to Manage Growth*, 23 William and Mary Envir. L. and Policy Rev. 801 (1999). Growth management does not alter the tradition assumption between water supply and urban growth. Traditional growth management strategies assume that market-driven growth levels are a given and seek only to accommodate it by channeling it within urban growth boundaries and by "taxing" it to the maximum extent possible. A recent analysis of their use concluded that "growth management efforts remain acceptable only if they are limited to programs designed to channel growth to appropriate locations or minimize negative impacts associated with on-going growth." Gabor Zovany, *GROWTH MANAGEMENT FOR A SUSTAINABLE FUTURE* 37 (1998).
- B. *Smart Growth is Still Growth*: Smart Growth is the post-1980s growth management management strategy, but the objectives, such as they are, are the same, encourage denser, less automobile dependent communities within urban growth boundaries. The term encompasses almost any land use initiative including water-related initiatives. Water conservation is a minor element. Water conservation is an element in Utah's emerging Envision Utah process. For Example, there is no dumb growth movement, but there is a substantial strain of writing which argues that our current preoccupation with sprawl is economically inefficient and reflects a

misunderstanding of modern suburban growth which is tightening the distance between job and home. See Clint Bollock, Subverting The American Dream: Government Dictated "Smart Growth: is Unwise and Unconstitutional, 148 U. Pa. L. Rev. 869 (2000) and Michael Lowrey and Jonathan C. Jordan, Smart Growth Myths and Realities, The John Locke Foundation, http;www.johnlocke.org/Policy-Reports/PR_29_growth/partthree.html (last visited.

VIII. SEVEN MODELS OF WATER SUPPLY LINKED LAND USE PLANNING

By necessity or (occasionally) by choice, western water suppliers are linking available supplies to growth and are using water rights and land use law to prevent groundwater contamination. Demand management remains the accommodation strategy of choice, see Amy Vickers, *The Emerging Demand-Side Era in Water Management*, Journal of American water Works Association, <http://www.sustainable.doe.gov/articles/emerging.htm> (last visited April 11, 2000).

- A. *Environmental Impact Assessment*: States with little NEPAs can link growth to water supply through the EIS process. The EIS can be a mechanism to assess the impacts of rural to urban water transfers in the area of origin or to assess the availability of reliable supplies for new urban development. An intermediate appellate court has interpreted the California Environmental Quality Act to reinforce the duty to match growth to availability of water supplies, The court held that a county cannot defer the consideration of water supply issues in a phased commercial-residential project when a permanent supply is not available unless a subsequent EIS is prepared for the specific residential phase. *Stanilaus Heritage Project v. County of Stanilaus*, 48 Cal.App.4th 182, 55 Cal.App.2d 625, 635 (5th Dist. 1996), *reh'g denied*, 49 Cal.App.4th 727 (1996), *review denied*, ___ Cal.4th ___ (1996). See also *Serpa v. County of Washoe*, 901 P.2d 690 (Nev. 1995). The second opinion in Inyo County's challenge to Los Angeles' EIR assessing expanded groundwater extraction stated that "[i]t is doubtful whether an EIR can fulfill CEQA's demands without proposing so obvious a solution" as "water conservation goals within Los Angeles' service area." *County of Inyo v. City of Los Angeles*, 71 Cal.App.3d 185, 139 Cal.Rptr. 396 (1977). The Inyo-Los Angeles litigation was finally settled in 1997, *County of Inyo v. City of Los Angeles*, C004068, ___ Cal.App.3d ___ (3rd Dist. 1997)(unpublished order discharging preemptory writ of mandate issued August 6, 1993). and the settlement indicates that the EIS process is more effective at protecting areas of origin than in stimulating "downstream" demand management. Under the settlement, *City of Los Angeles v. County of Inyo*, Case No. 12908, Superior Court of the State of California, County of Inyo which was stimulated by the Superior Court of Inyo's invalidation of a groundwater export ban, Los Angeles and Inyo counties formed a standing committee and technical group to monitor the vegetation and groundwater conditions around Los Angeles' well fields. All existing fields are designated management areas, and the vegetation within each area has been classified and mapped. The goal of settlement is to manage pumping so that withdrawals will not exceed total recharge over a 20 year period and to avoid the adverse environmental

impacts of vegetation changes in the five different classifications such as crop land, riparian and marshlands and meadows. "Significant" is not defined, but the Settlement provides a process and set of factors which include the size, location and use of the affected area, the permanency of the change and a comparison of the change in the affected area with the conditions of other areas impacted by groundwater pumping. *Id.* at 19. Water balances for each field will be established by the first day of each month, and these balances plus other hydrologic data will be the basis for the County to prepare a yearly operations and pumping program.

B. *Trimming Future Rights to Match Actual Demand:* The Washington Supreme Court has held that actual application to beneficial use rather than capacity of a private municipal water system is the measure of the water right. *State, Department of Ecology v. Theodoratus*, 135 Wash.2d 582, 957 P.2d 1241 (1998). The court left open the issue of whether the "pumps and pipes" rule still applies to municipal water suppliers. *County of Del Norte v. City of Crescent City*, 84 Cal.Rptr.2d 179 (Cal.App. 1 Dist. 1999) holds that a municipal appropriation limits the holder to beneficial uses but it does not include a duty to serve the "entire territory so designated." of the service area.

C. *The Subordination of Utility Service to Land Use Plans:* Courts have upheld the power of cities to subordinate utility service to land plans both within, *Dateline Builders, Inc. v. City of Santa Rosa*, 194 Cal.Rptr. 258 (Cal.App. 1983); *Moore v. City Council of Harrodsburg*, 105 S.W.2d 926 (Ky. 1907) ("In the absence of fraud, corruption, or arbitrary action, the action of city official as . . ." to extension of water service is "beyond judicial control), and without the territorial limits of the city. *County of Del Norte v. City of Crescent City*, 84 Cal.Rptr.2d 179 (Cal.App. 1 Dist. 1999)(municipal supplier is not held to the same duty as a private utility to serve the present and prospective needs of the service area.

1. *The Denial of New Subdivisions for Lack of Adequate Water Service:* *Serpa v. County of Washoe*, 111 Nev. 1081, 901 P.2d 690 (1995) holds that Washoe County (Reno) can prohibit five acre or less subdivisions "until a new water source is available," and the county's action did not impair state water rights because the power to define rational growth "includes the ability of county government to determine water availability for itself." Accord: *Schfield v. Spokane County*, 980 P.2d 277 (Wash.App.1999)(County has power to deny rezoning for riparian land because no central sewer system existed to serve proposed ranchettes). Cf. *Wilson v. Hidden Valley Municipal Water Dist.*, 63 Cal.Rptr. 989 (Cal.Ct.App. 1967)(water district may be formed to preserve agriculture community).

2. *The Power to Time:* Courts allow rapidly growing cities the discretion to time the rate of growth through water and sewer-connection permits. *San Mateo Coastal Landowner's Ass'n v. County of San Mateo*, 45 Cal.Rptr.2d 117 (Cal.App. 1st Dist. 1995); *First Peoples Bank of New Jersey v. Township of Medford*, 599 A.2d 1248 (N.J. 1991).

3. *Emergency Moratoria*, Moratoria are a long established land use planning device to freeze development for a limited period of time to allow a city to formulate a permanent land use plan for an area. Cities may impose water service moratoria, *Swanson v. Marin Municipal Water Water Dist.*, 128 Cal.Rptr.485 (Cal.App. 1976); *McMillan v. Goleta Water Dist.*, 792 F.2d 1453 (9th Cir. 1986), *cert. denied*, 450 U.S. 906 (1987), but if they a de facto permanent freeze, they may be unconstitutional taking of property. *Lockery v. Kayfetz*, 917 P.2d 1150 (9th Cir. 1992). See Dennis J. Hermann, Note, *Sometimes There is Nothing Left to Give: The Justification for Denying Water Service to New Consumers to Control Growth*, 44 Stan. L. Rev. 429 (1992).

D. *Just Say No To Groundwater Exports*. California has no statewide regulation of groundwater use and state law allows local agencies to adopt groundwater management plans. Cal.WaterCode §§ 10750- 10753.9. An intermediate appellate court opinion holds that a county ordinance which prohibits withdrawals in excess of a safe yield or to protect preexisting and reasonable foreseeable overlying beneficial uses is not preempted by state law. The court dismissed the argument that the ordinance was intended to "hoard" water by protecting projected agricultural growth invoking the principle courts do not probe lawmaker motivation. *Baldwin v. County of Tehama*, 36 Cal.Rptr.ed 886 (Cal.App. 3d Dist. 1994).

E. *Assured Water Supply*: Arizona and California limit new growth to the long term availability of water, and the duty to secure an adequate advance water supply can support either unlimited or limited accommodation.

1. *Arizona*: Arizona's Groundwater Management Act, Ariz.Rev.Stat. 576, imposes a duty on all new developments, and thus on municipalities and counties, to establish that there will be "a sufficient water which will be physically available to satisfy the applicant's 100 year projected water demand." Department of Water Resources, R12-15-703(b) (February 7, 1995).

2. *California* In 1993 the then "Green" Board the East Bay Municipal Utility District (EBMUD) opposed an 11,000 unit development in Contra Costa County, California. EBMUD obtained a trial court verdict that the county had to consider the availability of an adequate water supply but the case was settled on appeal. Water Education Issues, California Water Issues, <http://water-ed.org/briefing.html> (last visited May 3, 2000). In 1995, California enacted legislation, primarily in response to the rapid and dispersed urban growth and conversion of prime agricultural land in northern California and the San Joaquin Valley. Cal.WaterCode §§ 10910- 10915. The legislation requires cities to develop water management plans with a twenty (20) year projection and assess the impact of large-scale new development on the ability of a public water system to serve the new development in "normal, single-dry, and multiple dry water years" in light of its present and "planned future uses." § 10910. Large developments include 500 plus residential developments, shopping centers or commercial office campi that employ more than 1,0000 people or have 250,000 or more square feet of floor space and hotels with more than 500 rooms. §10913. If the

assessment concludes that water supplies will be inadequate, the supplier must develop a plan to acquire additional water supplies taking into account the estimate costs, all government approvals, the estimated time frame to acquire the water large, new developments are approved. Unlike Arizona, the statute does not impose a de facto duty on city to acquire sufficient water rights, compare Cal.WaterCode §10914 (a) with § 10635(d), but it does limit the power of cities to approve new growth and defer the issue of actually providing an adequate water supply until a later date.

- F. *Slouching Toward Marginal Cost Pricing*: El Paso, Texas. El Paso, Texas estimates the recoverable ground water in the Hueco Bolson will be depleted by 2025 but the cities El Paso and Ciudad Juarez will grow to 5 million people. Albuquerque Journal, September 19, . El Paso has implemented an aggressive conservation strategy including a seasonable excess use rate structure. This inverted rate structure charges users a charge based on the customers percentage use above their average winter consumption.
- G. *Resource Constrained Growth*: Groundwater conservation regimes may limit the use of defined basins to safe yield or recharge levels. In severely over-drafted basins, it may many decades to restore the basin to safe yield and urban growth may be constrained. This may be occurring in the Prescott area. The Prescott Active Management Area is still in overdraft, but water public and private water providers have continued to issue assured water supply commitments for subdivision. The net result is that "committed demand in the AMA ultimately could result in more than doubling the current municipal groundwater use of 11,600 acre feet, significantly exacerbating groundwater overdraft conditions," and thus the "Prescott AMA must join the Phoenix and Tucson region . . . where new subdivisions must rely primarily on water sources other than mined groundwater from within their areas to meet future water needs." Arizona Department of Water Resources, Preliminary Determination Report on the Safe Yield Status of the Prescott Active Management Area, www.adwr.state.az.us/pubs/prescott2.html. (last visited May 8, 2000). This is a great problem for Prescott which has less available surface supply. As Phoenix and Tucson have used more surface (CAP) water, municipal water use has started to decline in part because of a wetter than average cycle, ground water conservation and the increasingly reliance on grey water for turf irrigation.