“Show me the Water” and Beyond: 
Emerging Strategies to Assure Adequate Water Supply 
for New Development, and Some Suggestions for the Future

Sarah Bates
Center for Natural Resources & Environmental Policy
The University of Montana
sarah@cnrep.org
(406) 207-9071

The following is an excerpt from a working draft of a forthcoming report of the Center for Natural Resources and Environmental Policy. This is an updated and expanded version of Bridging the Governance Gap: Strategies to Integrate Water and Land Use Planning (2007), available at cnrep.org. The full revised report will be posted on the same website in the spring of 2011.

Before approving proposed development, many states and municipalities require assurance that water is available to meet projected demands. In many cases, this is a cursory “check-off” step, but sometimes this evaluation provides an important opportunity for local land use officials to take a hard look at development options and impacts.

A survey conducted by the Western Water Assessment concluded that nine of the eleven western states have some form of assured water supply statute; Utah and Idaho address this issue only through local initiatives.¹ Another study found that only two states outside the West—Vermont and Florida—have such statutes.²

The goals of assured water supply statutes include:
- Protecting homeowners by preventing “high and dry” subdivisions;
- Protecting taxpayers and other water customers by ensuring that developers pay for and obtain reliable water supplies to serve new users; and
- Directing growth to minimize environmental impacts.

The states’ approaches vary a great deal, as do their standards for what constitutes “adequate” water for new development. Although many have written on this subject, University of Utah Law Professor Lincoln Davies provided the most comprehensive

framework of the various approaches. He categorized the laws using the following design elements:

- **Compulsory**: Whether there is a strict requirement for all development defined by the statute or an option for local governments to require such review;
- **Stringency**: Whether the law requires substantial proof of “wet water” rather than paper rights, and whether it defines the scope of hydrological review;
- **Universality**: Whether it applies statewide or just in particular designated areas;
- **Granularity**: Whether the law applies to all development or only those exceeding a threshold size or category;
- **Interconnected with other plans**: Whether the required analysis must explicitly link to existing water planning processes or documents.

No state in the country has enacted an assured water supply law that incorporates all these design elements. The examples here illustrate the widely varying approaches among the states that have enacted some form of legislation to ensure adequate water for new development.

Arizona, which enacted the first such law in 1980, provides the best example of a non-universal approach. There are vastly different requirements for development within or outside of the state’s five major urban areas, which are designated as “Active Management Areas” (AMAs) for groundwater conservation. Within an AMA, development must be conditioned on proof of an “assured water supply” for 100 years. In the many fast-growing communities outside the AMA, development may proceed in the face of a certification from the state engineer’s office that the water source is “not reliable” due to insufficient supplies.

California has pursued an aggressive—but highly decentralized—approach. Legislation enacted in 2001 requires:

- an “early warning” in the form of assessment of water supply reliability for large residential, commercial, and industrial development as part of the environmental impact reports at the initial stage of development approval, prepared under the California Environmental Quality Act (CEQA); and
- later in the process, at the subdivision map stage, written verification of the availability of water for any project meeting these criteria and subject to CEQA.

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California does not prohibit developments from proceeding in the face of uncertain water supplies, but it does require rigorous assessment of water availability and impacts of necessary mitigation measures—essentially mandating a risk assessment as part of the development approval process.\textsuperscript{6} This is a good example of Davies’ “stringency” element, as the statute spells out fairly explicit criteria for assessing the actual availability of water required by the proposed subdivision “during normal, single-dry, and multiple-dry years within a twenty-year projection.”\textsuperscript{7}

The main objection to the state’s approach is that too many projects escape scrutiny; the 500-unit threshold means that it does not incorporate the “granularity” element. The state law also does not apply to such big water users as industrial parks, hotels, or office buildings.

Some states with universal requirements, such as Nevada, require that a developer obtain certification of water availability from the State Engineer’s Office. This is a more centralized approach than in California, but does not necessarily result in more rigorous analysis of water reliability or necessary mitigation. Montana law simply requires that development approval be conditioned on a determination of adequate water supply, but provides no definition of “adequacy,” and allows an essentially self-reported analysis of water supplies.

Colorado’s subdivision regulation statute\textsuperscript{8} provided the authority for El Paso County to enact a stringent regulation requiring developers to secure a 300-year water supply for each proposed subdivision. Colorado municipalities lacked the authority to enact such requirements until 2008, when H.B. 1141 specifically granted municipal governments the same authority as counties to require that developers show an adequate water supply, calling for professional assessment under “various hydrologic conditions.”\textsuperscript{9} H.B. 1141 also only applies to subdivisions exceeding 50 units.

Florida incorporates water needs into local planning by requiring each municipality to adopt a ten-year Water Supply Facilities Work Plan, which must project the local government’s needs for the coming decade, identify and prioritize the water supply facilities and source(s) of water that will be needed to meet those needs, and include

\textsuperscript{7} Calif. Govt. Code Sec. 66473.7(a)(2).
\textsuperscript{8} Colo. Rev. Stat. 30-28-133.
capital improvements identified as needed for the first five years.10 This “concurrency” review requirement effectively integrates land use and water supply planning, although it does not impose as strict an evaluation or balancing requirement as the California model.

Evaluating the effectiveness of assured-supply laws is tricky, given all the variations in their design, but Davies11 concluded that these statutes have succeeded in:

- Protecting consumers;
- Improving local planning by requiring consideration of water supplies;
- Encouraging coordination among water and land use planners;
- Providing valuable early warning of legal and other uncertainties that might make water supplies vulnerable in the future; and
- Promoting water conservation, as developers have an incentive to reduce projected demands by incorporating water-saving measures into the new homes.

He strongly cautioned, however, that such laws have little impact on sprawl and do not ensure meaningful consideration of environmental, equity, or economic considerations. If poorly designed, he concluded, these laws could do more harm than good, by encouraging over-estimation of water needs (and thus depletion of natural sources) and by misleading the public into believing that their community’s water use is sustainable.

Importantly, assured-supply laws are not the only approach to assessing water reliability and balancing impacts of obtaining water for projected growth. States could encourage this analysis earlier in the process by strengthening the requirements for a water resources element in comprehensive plans. For example, they might require that such plans:

- Identify the known supplies of water for future development;
- Quantify the demand that would result from projected population growth; and
- Analyze how demand will be met by available supplies (or what additional water will have to be obtained).

This level of analysis at the broader planning stage may prove more useful than asking for assurances that water is immediately available once a particular development is under consideration. It would be particularly useful if land use planners worked in close cooperation with water planners in this exercise in long-term thinking, and if the public were involved in a broad dialogue about the choices inherent in such planning.

**Western States Assured Water Supply Laws**

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| Arizona   | 1980 Groundwater Management Code established Active Management Areas (AMAs) where groundwater use is strictly regulated. In an AMA, the Assured Water Supply program applies. Anyone who offers land for sale or lease generally must demonstrate that “water of sufficient quantity and quality is available to sustain the proposed development for 100 years” before marketing the land. In 1995, the Arizona Department of Water Resources adopted rules that require new developments to be sustained predominantly by renewable supplies such as surface water. Outside of the AMAs the Adequate Water Supply program applies. Developers must obtain a determination from the state concerning the quantity and quality of available water but may still sell lots even if the water is found to be inadequate as long as the inadequacy finding is provided to prospective buyers. In 2007 local governments were granted authority to require a 100-year water adequacy determination before developers could sell lots in new subdivisions.  
  13Arizona Dept. Water Resources (undated). |
| California | 2001 SB 610 amended Cal. Water Code sec. 10910-12, to require that a water supply assessment be included in environmental reviews for projects of over 500 units. 2001 SB 221 amended Cal. Govt. Code sec. 66473 to provide that cities and counties cannot approve a subdivision map of more than 500 units unless a water purveyor provides written verification of a sufficient and reliable water supply.  
| Colorado  | The 1972 Subdivision Act (SB 35) provides that counties must adopt subdivision regulations requiring developers to provide “adequate evidence that a water supply that is sufficient in terms of quality, quantity, and dependable will be available to ensure an adequate supply of water for the type of subdivision proposed.” CRS sec. 30-28-133(3)(d). No subdivision may be approved unless the subdivider provides evidence of a sufficient water supply. CRS sec. 30-28-133(6a). HB 1141, enacted May 2008, created CRS sec. 29-20-301-306 which requires local governments to determine whether an applicant for a development permit for more than 50 units or single-family equivalents has satisfactorily shown an adequate water supply exists.  
| Idaho     | No statutory provisions. Many local governments reportedly require that developers show adequate water rights or an adequate water supply.  
| Montana   | MCA sec. 76-3-601 and 76-3-622 require that applications for new subdivisions include evidence of adequate water availability for new water supply systems, unless cisterns are proposed.  
| Nevada    | Prior to approval, any division of land into five or more lots must show evidence of “the availability of water which…is sufficient in quantity for the reasonably foreseeable needs of the subdivision” as certified by the Nevada State Engineer. NRS sec. 278.349(3), sec. 278.377(1)(b). For division of land into four lots or less, the local body “may” require proof of water supply prior to approval. NRS 278.462.  
| New Mexico| The New Mexico Subdivision Act, NM Stat. Ann. sec. 47-6-9, requires that counties adopt regulations specifying requirements for “quantifying the maximum annual water requirements of subdivisions, including water for indoor and outdoor domestic uses;” “assessing water availability to meet the maximum annual water requirements of subdivisions;” and “water conservation measures.”  

Additional references on assured water supply and related issues:


