

A high-speed photograph of water splashing upwards, creating a dense, textured plume of white water against a light blue background. The water droplets are captured in mid-air, giving the splash a dynamic and energetic appearance.

Volume 2

Chapter 20 Urban Land Use Management



The way in which we use land—the type of use and the level of intensity—has a direct relationship to water supply and quality. (DWR photo)

Chapter 20 *Urban Land Use Management*

Effective urban land use management consists of planning for the housing and economic development needs of a growing population while providing for the efficient use of water and other resources. The way in which we use land — the type of use and the level of intensity — has a direct relationship to water supply and quality.

Urban Land Use Patterns in California

Existing urban development patterns reflect a strong consumer demand for single family homes in suburban locations. Local government and private sector decisions on the placement of offices, industrial sites and retail centers are driven by a combination of workforce availability and state tax policy. Because only 5 percent of California's land area is in urban development, and 50 percent of the state is in public ownership, the result of current development practices is the consumption of farm land, open space, habitat, and other natural resources. Although it comprises a relatively small portion of most watersheds, impervious surfaces such as roads and parking lots result in more rapid and larger amounts of surface runoff. This change in runoff can alter stream flow and watershed hydrology, reduce groundwater recharge, increase stream sedimentation, and increase the need for infrastructure to control storm runoff.

Higher density development and more efficient land use can be encouraged through changes in consumer preferences and public policies to promote more compact development (see Box 20-1 for recent State policies and guidelines). In some of the most densely populated regions of the state, including the San Francisco Bay Area and Los Angeles, headway is being made to grow more compactly, provide jobs closer to housing, and provide transit to connect people with community resources.

Local agency formation commissions (LAFCOs) are regional planning agencies that were established to encourage logical and efficient development patterns. With the recent changes to Government Code § 56000 et. seq., LAFCOs are now required to perform municipal service reviews on a regular basis. This will allow a comprehensive evaluation of how all services, including water, are delivered to developing areas of the state.

Potential Benefits of More Compact Development

There are water-related benefits that accrue from more compact development. It can reduce landscaped areas and therefore reduce landscape water use. Although higher density development may actually increase impervious surfaces and increase traffic congestion in urban areas, it may reduce the total development footprint in the state and reduce urbanization impacts to habitat, watershed functions, and groundwater recharge areas.

Compact, mixed-use development can reduce water demand, even with moderate increases in density. As a rule of thumb, landscaping irrigation accounts for almost half of residential water use. An increase in residential density from four units per acre to five reduces the landscaping area by 20 percent, which should cut water usage by roughly 10 percent compared to the lower density development. A smaller urban footprint reduces impervious surfaces. This generates less surface runoff, and minimizes intrusion into watersheds and groundwater recharge areas which receive the runoff.

The Legislature and Governor Arnold Schwarzenegger via Assembly Bill 2717 (Laird, 2004) asked the California Urban Water Conservation Council to convene a Landscape Task Force with representatives from water suppliers, environmental groups, government agencies, and the landscape and building industries to evaluate landscape water use efficiency and make recommendations for improvements. The AB 2717 Landscape Task Force is currently evaluating in great detail the potential for water savings for both new and existing development. The recommendations of the Task Force may lead to significant improvements in landscape

irrigation through new Model Landscape Ordinance policies, new technologies, changes in rate structures, and new legislation. The Task Force will finish its work and submit a final report to the California Legislature and Governor by December 31, 2005 (See the Urban Water Use Efficiency strategy, Chapter 22, Volume 2 for the draft recommendations by the Landscape Task Force).

Potential Costs

No statewide cost estimates are available for implementing this strategy. The potential state, local and private costs for promoting higher density and more compact development need to be balanced with the need for more housing, economic development and consumer preferences.

There could be significant new costs associated with changing the way local, regional, and State agencies plan urban areas. Among these are costs for increased communication, coordination and information sharing between land use agencies, water suppliers, and agencies which regulate water quality.

However, by implementing this strategy, there will likely be lower long-term costs associated with reduced urban runoff, less infrastructure expansion for water supply, and lower mitigation costs for displaced farm land and/or wildlife habitat.

Major Issues

Disincentives for Change

Local governments make most of the land use decisions in California. There are many reasons why local governments do not use more resource efficient development patterns including: consumer preferences and demands for single family homes with yards, community resistance to infill or higher density development, local zoning ordinances which have not been updated for many years, the added cost to conduct regional planning efforts, the cost and liability associated with pursuing infill projects, and environmental mitigation strategies that encourage lower density development. In addition, landscape, soils, environmental hazards and infrastructure limitations are additional factors that guide local governments in the development of land use policy decisions. Changing land use planning practices and development standards statewide would be a significant and expensive public policy undertaking with as yet unknown water use savings compared to more direct methods of water conservation.

Coordination

Recent changes to the Government Code and the Water Code requires local governments to determine whether there will be enough water to supply a proposed development project before it can be approved. This will require land use agencies and water agencies to improve their communication and

Box 20-1 Recent State Policy and Guidelines

Statute AB 857 (Stats. 2002; ch. 1016) establishes three planning priorities and requires that all State strategic plans and capital improvement plans—including the next update of the Governor’s Environmental Goals and Policy Report and the California Water Plan—be consistent with them.

- Promote infill development and equity,
- Protect environmental and agricultural resources, and
- Encourage efficient development patterns.

The State of California General Plan Guidelines, updated in 2003 (OPR), recommends that local governments consider preparing an optional Water Element in their general plans.

Three bills, SB 221, SB 610 and AB 901, were enacted by the Legislature to improve the coordination between water supply and land use planning processes at the local level and became effective January 1, 2002. The new laws are intended to improve the assessment of water supplies during the local planning process before approval of land use projects that depend on water. They require verification of sufficient water supplies as a condition for approving developments, compel urban water suppliers to provide more information on groundwater reliability if used as a supply, and require average and drought year conditions be addressed.

coordination on project-level development decisions that have been made independently in the past. Many of the water supply coordination issues for new development are now addressed in the state's Water Code through existing requirements for the preparation and approval of Urban Water Management Plans every five years and the implementation of SB 610 (Costa) and SB 221 (Kuehl) enacted in 2001. Increased coordination will also be necessary among all levels of government to coordinate inter-agency planning, to develop databases, and to interpret and share data and information.

Recommendations

State

1. Provide incentives to developers and local governments to plan and build using more resource efficient development patterns. This can be done through CEQA exemptions for infill development, reductions in brownfield liability for innocent land purchasers, prioritizing planning grants and other incentives to increase consumer interest in urban living and to encourage infill and compact development forms.
2. Encourage local governments to review the Urban Water Management Plans adopted by water agencies within their jurisdiction; and to work with these water agencies to show compliance with Water Code sections that require local governments to consider water supply availability when making land use decisions for significant (500 homes or more) new development projects, and to prepare the water resource section of their general plans as described in the State's General Plan Guidelines Update (OPR, 2003).
3. Provide technical assistance to local governments on how to incorporate resource efficient development into their local general plan, related zoning ordinances, and specific plans; and how to prepare required water supply assessments before approving major new development projects.
4. Develop and publicize accurate and relevant data on water supply and water quality to help local agencies plan.
5. Encourage more research on the impacts of resource efficient development patterns and best practices.

Local Government

6. Recognize regional needs and resources when developing local general plans and designing and building neighborhoods and communities. Improve communication, coordination and information-sharing with other local agencies, regional planning agencies, and local water agencies and watershed managers.

7. Promote the rehabilitation of aging or inadequate infrastructure to help infill development.
8. Evaluate the potential environmental impacts of new development on prime agricultural land, open space, floodplains, recharge areas and wetlands and consider the water supply impacts when developing appropriate mitigation measures.
9. Update landscape irrigation ordinances to promote consumer choices for more water-efficient landscaping in existing and new developments.
10. Look for opportunities to reduce impervious surfaces, especially near waterways.

Regional Government

11. LAFCOs should consider water supply issues in the context of their charge to encourage logical and efficient development patterns that minimize impacts on agricultural land and maximize meeting housing needs and affordability.

Water Suppliers

12. Develop and make available water resource information, such as water supply and water quality in Urban Water Management Plans, to local governments that can be used in local and regional land use decisions, including general plan formulation and municipal service reviews.
13. Collaborate with local land use agencies to assess water supply availability for new development.

Selected References

Governor's Office of Planning and Research, Environmental Goals and Policy Report, November 2003.

Statutes of 2001 (California), ch 642. (Senate Bill 221), an act to amend § 11010 of the Business and Professions Code, and to amend § 65867.5 of, and to add §§ 66455.3 and 66473.7 to the Government Code, relating to land use.

info.sen.ca.gov/cgi-bin/waisgate?WALSdocID=78704329921+8+0+0&WALSaction=retrieve

Statutes of 2001 (California), ch. 643. (Senate Bill 610), an act to amend § 21151.9 of the Public Resources Code, and to amend §§ 10631, 10656, 10910, 10911, 10912, and 10915 of, to repeal § 10913 of, and to add and repeal Section 10657 of the Water Code, relating to water. info.sen.ca.gov/pub/01-02/bill/sen/sb_0601-0650/sb_610_bill_20011009_chaptered.html

Statutes of 2002 (California), ch. 1016. (Assembly Bill 857), an act to amend §§ 13102, 13103, 65041, 65042, 65048, 65049, and 66037 of, and to add §§ 65041.1 and 65404 to, the Government Code, relating to state planning. info.sen.ca.gov/cgi-bin/waisgate?WAISdocID=78698629691+3+0+0&WALSaction=retrieve