

Including the Best Available Science in Designating and Protecting Critical Areas

In 1995, the legislature added a new section to the Growth Management Act (GMA) to ensure that counties and cities consider reliable scientific information when adopting policies and development regulations to designate and protect critical areas. This new requirement in RCW 36.70A.172, requires all counties and cities in Washington to include the best available science (BAS) in developing policies and development regulations to protect the functions and values of critical areas. In addition, they must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

In 2000 new Procedural Criteria were adopted in WAC 365-195-900 through -925 that describe the BAS requirement in detail.

While science is not the sole criterion to be used in developing critical areas policies and regulations, science has been singled out for special mention. The articulated purpose of including science is "to protect the functions and values of critical areas." The Legislature has determined that science plays a central role in: Determining the functions of critical areas and assessing their values, Recommending strategies to protect their functions and values, and Identifying the risks associated with alternative approaches to their protection.

Science-based recommendations can not be simply disregarded in favor of competing considerations. Informed decision making requires that decision-makers receive scientific information that has not been filtered through screens of competing interests.

Besides the explicit requirement to include the best available science, there are other GMA requirements affecting how we designate and protect critical areas in fully planning jurisdictions.

These other requirements ensure that protection programs are integrated with all land uses potentially affecting critical areas. They include the requirements to:

Identify open space corridors within and between urban growth areas (UGA) for multiple purposes, RCW 36.70A.160

Identify lands useful for public purposes, RCW 36.70A.150
Protect the quality and quantity of groundwater used for public water supplies, and provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state, RCW 36.70A.070 (1), and
Protect surface and groundwaters in rural areas, RCW 36.70A.070 (5).

All the requirements must be met while balancing the 14 goals of the GMA. Requirements cannot be balanced against goals.

Communities are able to define their own critical areas based upon a series of findings. These findings should describe how the requirements of GMA that relate to critical areas protection are addressed.

Critical areas protection programs are best designed to use both incentive and regulatory measures. Public participation is essential in both the development and implementation of both sets of measures. Educating citizens and encouraging stewardship behavior by sharing information is the foundation of many reasonable programs.

Science used must be peer reviewed, relevant to the area being designated and protected, and the best reasonably available information, and all of it must be considered substantively.

Decisions to depart from BAS must be documented and must be based on other considerations relevant to accomplishing comprehensive growth management as required in GMA. Any program that relies primarily on a voluntary approach to protection must also include an adaptive management and monitoring program or contain regulatory "fall back" provisions that will be asserted if voluntary efforts are inadequate.

If a high degree of uncertainty is involved in the effectiveness of a protection program, an adaptive management program with scientific experimentation and monitoring may be used to guide future program changes.

Based on the original language in the GMA, the requirements to designate and protect critical areas, and to designate and conserve natural resource lands, have a priority in comprehensive land use planning because they must be done FIRST.

To designate and protect critical areas while including the best available science means that we need to first know the answers to many questions:

What are the landscape attributes as a whole, what are its critical areas, and how do they function?
How do we value and manage the landscape to provide critical resources?
How does the landscape pose risks to our health and safety, and how are those risks distributed?
Can we reduce those risks, and how should risk-reduction priorities be set?
How have we altered the landscape already, and how might we alter it in the future?
What mitigation is most needed to restore critical functions?
What is the most cost effective way to provide mitigation for impacts?
Who are our neighbors and partners in sharing these resources and risks?

Numerous studies have been done documenting the valuable services provided by environmental resources: clean water, food, fiber, fresh air, energy, medicine, scenery, sports, recreation, transportation, wildlife, and more. Attempts are made to quantify these benefits, and many of these services are very valuable, some priceless.

Among the western states, Washington is the smallest and second most densely populated. Human population growth is expected to add another 2 million people over the next 20 years, with half those likely to settle in the Puget Sound region. Since statehood in 1889, habitat losses include 70% of estuarine wetlands, 50% of riparian areas, 80% of old growth forest, and 70% of shrub-steppe vegetation. More than half of Puget Sound shorelines have been altered, and more than a thousand dams block rivers and streams. Thousands of road culverts further block fish passage into headwaters' areas. Automobile emissions and the impervious surfaces common in developed areas pollute both air and water, and stormwater management remains one of the most difficult challenges we face. A growing awareness of seismic risks in the Pacific Northwest is increasing the sense of urgency for hazard mitigation planning that includes emergency management and response planning.

Significant infrastructure investment decisions are pending in Washington State, involving every sector of society and almost every place, including choices for transportation and mobility, water storage and conservation, wastewater treatment and reuse, energy production and facility siting, and addressing impacts of sea level rise. The degree of uncertainty over climate change impacts increases the challenges for decision-makers even more.

Positive developments include better scientific data, including

ecoregional assessments produced through collaboration of the Washington Department of Fish and Wildlife and The Nature Conservancy, new and more powerful data processing and analysis tools and models that can visually show future alternatives, alternative mitigation approaches with multiple objectives, even 'plain talk' in government (if not in the media), as well as numerous good examples of critical areas programs adopted by local governments.

Discretion for designating and protecting critical areas is available, IF you have sufficient resources to fully understand your community's critical areas, and the major environmental systems supporting those critical functions, AND craft tailored regulations coupled with smart incentives to protect the critical areas.

Smart land use planning decisions can reduce unavoidable risks, and save money over the long run by using environmental systems to our advantage and by mitigating in strategic ways.

It's not easy and it's not cheap, but it can be done.