EVALUATING CAOs:
MAPPING RIPARIAN AREAS

In this project, the Washington Department of Fish and Wildlife will evaluate the on-the-ground effectiveness of Critical Area Ordinances (CAOs) in steering habitat disturbances away from riparian (streamside) areas. We will do this by mapping riparian areas and reporting how much clearing and development occurred in these areas since 2006.

What we’re doing

We will create an online map showing

- Riparian ecosystems (as defined by WDFW)
- Riparian buffers (as defined by local CAOs)
- Land cover changes within those areas

We will report the change rate in each county and city.

How we’re doing it

We will use GIS to create two map layers of riparian areas—one based on how tall trees grow and one based on CAOs buffers. We will then use our High Resolution Change Detection dataset to determine how much change occurred in each jurisdiction’s riparian areas.

WHY IS THIS ISSUE IMPORTANT?

County and city CAOs are a primary tool used to conserve riparian areas as the region grows, a key piece of sustaining and recovering Puget Sound and salmon relies on.

WHAT YOU CAN DO

When your local CAO is updated, work with elected officials and planners to create strong protections for riparian areas, including ongoing evaluations of how well the CAO works and ways it could work better.

Volunteer with your local Stream Team. Remove invasive species and plant native trees in riparian areas.

ABOUT WA DEPT OF FISH & WILDLIFE

Fish and wildlife are property of the state; WDFW is charged by the Legislature with perpetuating fish and wildlife on behalf of the people of Washington.

WDFW advises local governments on land use matters through the Priority Habitats and Species (PHS) program and 25 Habitat Biologists in the Puget Sound region. PHS recently released a summary of science and management recommendations regarding riparian areas. WDFW scientists created the High Resolution Change Detection dataset to help local planners evaluate habitat changes caused by development.

FOR MORE INFORMATION

https://wdfw.wa.gov/conservation/phs/

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In this proof-of-concept project, the Washington Department of Fish and Wildlife identified performance indicators regarding the effectiveness of Critical Area Ordinances (CAOs) in steering habitat disturbances away from riparian (streamside) areas.

Riparian Performance Indicators

This project produced maps of (a) riparian buffers as specified in 22 jurisdictions’ CAOs, and (b) riparian ecosystems as defined by WDFW-assemble science. It also identified and evaluated five quantitative performance indicators that describe how effectively riparian areas are being conserved.

Indicators Give Us a Clearer Picture

Thanks to this project, we know that an estimated 73% of CAO buffers soundwide have tree canopy cover.

We were encouraged to learn that in a decade (at current rates), we expect to lose only 1% of existing riparian tree cover (although the average for urban area is about three times higher). This tells us that CAOs are largely effective in their efforts to minimize riparian tree losses.

FUTURE OPPORTUNITIES

With the successful completion of this proof-of-concept project, counties and cities can now use this project’s methods to calculate these five performance indicators for their jurisdiction. Contact WDFW for assistance.

LINKS

WDFW point of contact: Keith Folkerts, keith.folkerts@dfw.wa.gov
Data at https://hrcd-wdfw.hub.arcgis.com/
Project based on NTA 2016-0368