Policies and Goals Section for Chapter 2 – Natural Settings

CRITICAL AREAS GENERAL:

PURPOSE STATEMENT 8

Critical Areas are an important part of the natural setting in Yakima County. Their protection is required by the Growth Management Act and important to the quality of life of the residents of this county. Critical Areas include groundwater, fish and wildlife priority species and habitat ~~(which includes surface waters)~~, wetlands, frequently flooded areas, and geologic hazards. The protection of critical areas must include ~~certain general~~ approaches based on Best Available Science, and processes for implementation. ~~which are provided for in the goals and policies below.~~

General

GOAL NS 8	~~Establish critical areas protection measures to protect environmentally sensitive areas, and protect people and property from hazards~~ Establish critical areas protection for environmentally sensitive areas.
POLICIES:	
NS 8.1	Update the 2004 Best Available Science Report. Use the best available science to develop regulations to protect the functions and values of critical areas, including shorelines. Develop resiliency measures for flood, wildfire and drought, air quality and extreme heat hazards. Sustainability will provide benchmark principles and standards. Adaptive Management and High Resolution Change Detection (e.g., imagery and GIS analysis) will provide a monitoring approach.
NS 8.2	Ensure proposed subdivisions, other development, and associated infrastructure are designed at a density, level of site coverage, and occupancy to preserve the structure, values and functions of the natural environment and ~~or~~ to safeguard the public from hazards to health and safety.
NS 8.3	Use a preference-based system of mitigation sequencing for the County's stream, lake, pond, wetland, floodplain and fish and wildlife priority species and habitat critical areas that reduces impacts using approaches ranging from avoidance to replacement. This system, similar to a hierarchy -based system of mitigation, should seek to achieve consistency in application and include methods to detect the measurable effects and adequacy of mitigative actions.
NS 8.4	~~In order to encourage Critical Area protection and restoration~~, T~~t~~he density and lot size limits stipulated in other policies may be adjusted or exceeded to accomplish clustering ~~and bonus provisions~~ adopted under the (Critical Areas Ordinance) CAO. The use of incentive based programs is encouraged. Yakima County will consider amendments to the Reasonable Accommodations provisions in 16C to provide definitions and criterial for specific allowances and or denials.~~.~~
	Low Impact Development Requirements. Require Low Impact Development

Commented [KW1]: 1.Update to current 2. added to reflect integration between and among 16C, 16D and Title 22. GMA and SMA required.

Commented [KW2]: Required for SMP via the SMA. For the VSP and Critical Ordinances, BAS establishes the basis for compliance under GMA for Critical Areas coupled with HRCD to meet Adaptive Management (in the absence or ambiguity of BAS), effectiveness and implementation monitoring and reporting requirements.

Commented [KW3]: Change necessary b/c "bonus provisions" do not exist in ord. Adjustments to increase density, in TBD circumstances, can have protective effects to critical areas (e.g., reduced IS). YCC needs to be amended to better define and clarify how adjustments will be allowed w/in the Reasonable Accomodations section.

	(LID) techniques for all development to: • Minimize impervious surfaces and preserve natural infiltration capacity • Disperse and infiltrate stormwater close to source rather than concentrating flows • Protect natural drainage patterns and surface water connections • Enhance groundwater recharge that maintains summer base flows • Filter pollutants through vegetation and soil rather than direct discharge to streams LID shall be the preferred and presumptive stormwater management approach, with conventional collection and detention systems approved only where site constraints preclude LID implementation.

Resiliency and Sustainability – Climate Change

Building resilience and sustainability is fundamental to Yakima County's ability to thrive under changing climate conditions. Climate resilience planning is required by ESHB 1181 and essential to protecting critical areas, infrastructure, agriculture, and community wellbeing. Resilience encompasses preparedness for extreme weather events, adaptation to changing conditions, protection of vulnerable populations, and sustainable resource management. Resilience strategies must include approaches based on Best Available Science, equitable resource allocation, nature-based solutions, and adaptive management for implementation.

GOAL NS 9:	*Ensure the resilience and sustainability of critical areas, shorelines, property, life, health, and the economy through preparation, survival, and recovery from extreme weather events and cumulative natural hazards.*
POLICIES:	
NS-9.1	*Best Available Science Integration – Require the use of best available climate science, including projections from the University of Washington Climate Impacts Group, NOAA models, USGS data, and other credible sources, to inform all land use planning, development regulations, and critical area protections. Planning decisions shall account for changing precipitation patterns, reduced snowpack, increased wildfire frequency and severity, extended drought periods, and temperature increases affecting water resources and ecosystems.*
NS-9.2	*Climate-Informed Critical Areas Protection – Update critical areas regulations to incorporate climate change impacts across all critical area types, including climate-informed flood projections beyond current FEMA maps and Comprehensive Flood Management Plan from the Ahtanum, Cowiche, and eventually, from the Lower Yakima Valley (planned in 2026) scenarios for shoreline areas, and for post-wildfire debris flow risks in geologically hazardous areas, hydrologic changes and drought impacts to wetlands, and temperature-driven habitat shifts for fish and wildlife. Development in or adjacent to critical*

	areas must demonstrate resilience to projected climate conditions over the expected lifespan of structures and infrastructure.
NS-9.3	*Shoreline Climate Adaptation – Integrate climate resilience into Shoreline Master Program updates by requiring analysis of sea level rise vulnerability, establishing shoreline hazard areas, managing development to reduce risk, protecting channel migration zones, and emphasizing riparian vegetation conservation and restoration. Prioritize nature-based solutions such as soft shore stabilization, living shorelines, and green infrastructure over hard armoring where feasible.*
NS-9.4	*Flood Resilience and Stormwater Management – Adopt the American Society of Civil Engineers and the Washington State Floodplain Managers ASCE 24-24 ordinance language. Expand floodplain mapping and regulation to include 500-year floodplains, incorporate climate-adjusted precipitation projections, and address post-wildfire flood risks and debris flows. Promote low-impact development, green stormwater infrastructure, floodplain reconnection, and natural hydrologic function restoration to increase flood storage capacity and reduce downstream impacts.*
NS-9.5	*Wildfire Risk Reduction – Require wildfire risk assessments for development in high-risk areas and implement wildfire hazard mitigation strategies including defensible space requirements, ignition-resistant construction standards, emergency access and evacuation route planning, and coordination with local fire districts. Support vegetation management, forest health treatments, and community wildfire preparedness programs on both public and private lands. Adopt the Urban Wildfire Interface criteria and the USFS's Wildfire Protection and Response Plan.*
NS 9.6	*Policy Drought Preparedness and Water Resource Protection – Conduct water resource vulnerability assessments that account for reduced summer stream flows, declining snowpack, and increased water demand from higher temperatures. Promote water conservation, irrigation efficiency improvements, drought-resistant landscaping, aquifer recharge protection, and coordinated water resource planning across jurisdictions to ensure reliable water supply for people, farms, ecosystems, and fish. Integrate the policy, goals and Yakima County Code supporting Managed Aquifer Storage for drought resiliency and agricultural sustainability, public health and infrastructure protections. Coordinate with the Yakima Basin Integrated Plan's Groundwater Group, the Yakama Nation, and Yakima County Cities and Towns to incorporate their resiliency and sustainability goals from their Comprehensive and other plans.*
NS 9.7	*Protection of Vulnerable Populations – Identify communities and populations with heightened vulnerability to climate impacts based on factors including age, income, health status, housing conditions, language barriers, and access to resources. Ensure that climate adaptation planning, emergency management, infrastructure investments, and cooling/clean air resources*

	prioritize equitable outcomes and address disproportionate risks faced by overburdened communities
NS 9.8	*Emergency Management and Hazard Planning Integration – Coordinate Comprehensive Plan implementation with local emergency management plans under RCW 38.52, ensuring consistency in hazard identification, risk assessment, emergency response protocols, and recovery planning. Update hazard mitigation plans to reflect increasing frequency and severity of climate-driven extreme weather events including heat waves, wildfires, floods, and droughts. Ensure proposed subdivisions, other development, and associated infrastructure are designed at a density, level of site coverage, and occupancy to preserve the structure, values, and functions of the natural environment or to safeguard the public from hazards to health and safety. Encourage mechanisms to restrict or minimize development in high-risk hazard areas to protect public health and safety. Maintain existing infrastructure to reduce the risk of infrastructure failure during a natural disaster. Locate critical facilities and infrastructure outside of high-risk hazard areas. Ensure new developments in high-risk hazard areas include adequate egress from floods and wildfires and have emergency access. Develop processes and procedures for streamlining projects intended to mitigate for natural hazards. Implement Recovery Plan to guide the redevelopment, public participation process, and long-term recovery after a natural disaster. Provide a process and procedure to streamline projects intended to provide relief and recovery from a natural disaster.*
NS-9.9	*Climate-Resilient Infrastructure – Require capital facilities, transportation systems, utilities, and public infrastructure to incorporate climate resilience design standards that account for projected changes in temperature, precipitation, flooding, wildfire, and other hazards over the infrastructure's expected lifespan. Prioritize infrastructure investments that provide co-benefits for habitat restoration, carbon sequestration, flood reduction, and community resilience.*
NS-9.10	*Agricultural Viability and Working Lands Conservation – Support the long-term viability of agriculture and working lands through voluntary conservation programs, technical assistance for climate-smart practices, irrigation modernization, soil health improvements, and economic incentives for landowners. Protect prime agricultural lands, farmland soils, and water rights from conversion while facilitating adaptation to changing climate conditions. Continue support and coordination with the Voluntary Stewardship Program and the Yakama Nation's Climate Action Plan.*
NS-9.11	*Natural Systems and Habitat Connectivity – Protect, restore, and enhance natural systems to provide continued ecological, cultural, social, and economic benefits under changing climate conditions. Maintain and improve habitat connectivity to allow species movement and migration, prioritize restoration of riparian corridors and wetlands, protect cold-water refugia for salmon and other temperature-sensitive species, and support ecosystem-based adaptation strategies.*

NS-9.12	Green Infrastructure and Nature-Based Solutions – Prioritize green infrastructure, nature-based solutions, and natural resource conservation over structural approaches where feasible to address flooding, stormwater management, erosion control, heat island mitigation, and water quality protection. Examples include riparian buffers, urban forests, green roofs, bioswales, floodplain restoration, and wetland creation or enhancement.
NS-9.13	Extreme Heat Preparedness – Address extreme heat risks through urban forestry and tree canopy expansion, cool pavement and roofing materials, building energy efficiency standards, cooling centers in accessible locations, public education campaigns, and coordination with public health agencies. Ensure that vulnerable populations have access to cooling resources during heat events.
NS-9.14	Air Quality and Wildfire Smoke Protection – Improve community resilience to wildfire smoke through indoor air quality improvements in public buildings, schools, and vulnerable populations' housing; public education about smoke health impacts; monitoring and alert systems; and coordination with public health and air quality agencies. Support clean air spaces and filtration resources during smoke events.
NS-9.15	Monitoring, Adaptive Management, and Plan Updates – Establish monitoring systems to track climate change impacts, implementation of adaptation strategies, and effectiveness of resilience measures. Use adaptive management principles to adjust policies and actions based on new scientific information, observed climate impacts, and evaluation of outcomes. Update comprehensive plans and development regulations on a regular cycle to incorporate current climate projections and best practices.

WATER QUALITY AND QUANTITY:

***Critical Areas:* Groundwater And Critical Aquifer Recharge Areas (CARAS)**

PURPOSE STATEMENT NS 9

~~*Groundwater is the primary source of drinking water for many people. Once groundwater is contaminated it is difficult, costly, and may be impossible to clean up.The following goal and policies address these concerns by encouraging the identification of aquifers and taking steps to reduce potential contamination.*~~

Groundwater and Critical Aquifer Recharge Areas (CARAs) are essential for maintaining groundwater quality and quantity that support domestic water supply, agricultural irrigation, industrial uses, flood storage and attenuation, stream base flows, wetland hydrology, and ecosystem functions in Yakima County's semi-arid climate. Designation and protection of CARAs is required by the Growth Management Act under RCW 36.70A.060 and necessary to prevent groundwater contamination that is difficult, costly, or impossible to remediate and to ensure adequate water supply and flood management capacity under increasing drought and extreme precipitation conditions. CARAs include aquifer recharge areas, wellhead protection areas for public water systems, areas of high infiltration providing both groundwater recharge and flood storage, sole source aquifers, groundwater management areas, areas where surface water and

Commented [KW4]: Purpose Statements are expanded to reflect changes in GMA and updates to the natural settings of Yakima County. Relevant RCW's and WAC's are provided as references for utility and definitions.

groundwater are hydraulically connected, and floodplain areas providing infiltration and recharge functions. Protection and management of CARAs must include approaches based on Best Available Science under RCW 36.70A.172, assessment of climate impacts on recharge patterns, groundwater availability, and flood storage capacity as required by ESHB 1181, land use controls preventing contamination from pollution sources, Low Impact Development techniques maximizing infiltration for both recharge and flood reduction, support for Managed Aquifer Recharge projects enhancing drought resilience and capturing winter floodwaters for summer use, wellhead protection standards, preservation of natural infiltration areas providing dual flood storage and aquifer recharge benefits, coordination with groundwater management under the Yakima Basin Integrated Plan and Comprehensive Flood Management Plans, and integration of aquifer protection into the Comprehensive Plan, Shoreline Master Program, and development regulations for implementation.

GOAL	Maintain and manage the quality of the groundwater resources in Yakima County ~~as near as possible to their natural conditions and~~ **in compliance with state water quality** standards and engage opportunities to implement Managed Aquifer Recharge and other actions to protect and enhance the quantity of groundwater resources.
POLICIES:	
NS 10.1	Identify and map important aquifers, critical areas, aquifer recharge zones , and surface waters. Engage with ongoing regional programs to expand managed aquifer recharge.
NS 10.2	Develop performance standards and regulate uses for activities which adversely impact water quantity and quality in aquifers, wetlands, watersheds and surface waters.
NS 10.3	Evaluate the potential impact of development proposals on groundwater quality and require alternative site designs to reduce contaminant loading where site conditions indicate that the proposed action will measurably degrade groundwater quality.
NS 10.4	Continue data collection and evaluation efforts to better understand the County's groundwater system and its vulnerability to contamination.
NS 10.5	Encourage the retention of natural open spaces in development proposals overlying areas highly susceptible for contaminating groundwater resources.
NS 10.6	Conduct and support educational efforts which inform County citizens of measures they can take to reduce contaminant loading of groundwater systems.
NS 10.7	Encourage development and expansion of community public water systems to lessen the reliance on individual wells.
NS 10.8	Ensure that abandoned wells are closed properly.
NS 10.9	Ensure sufficient water quantity exists to support residential development and land use activities.

Commented [KW5]: 1.Grammatical precision 2. Inserted to establish groundwater resiliency (water quantity) goal

NS 10.10	Support efforts to develop long-term solutions to prevent contamination of domestic wells.
NS 10.11	Recognize and describe the hydraulic connection between groundwater and surface water systems in CARA designation and regulation. Protect recharge functions that maintain summer base flows, support cold-water refugia, and sustain both agricultural and municipal water supplies during drought periods.
NS 10.1	Support and facilitate Managed Aquifer Recharge (MAR) projects within CARAs as a climate adaptation strategy for drought resilience, agricultural sustainability. Develop streamlined permitting processes for MAR projects that demonstrate net benefit to aquifer storage and water quality and to protect critical area functions connected to groundwater resources.
NS 10.12	Protect the function of CARAs for both aquifer recharge and flood storage. Prohibit development that would reduce infiltration capacity through soil compaction, increased impervious surfaces, or other alterations within CARAs, particularly in areas identified in Comprehensive Flood Management Plans as providing significant flood attenuation benefits.
NS 10.13	Require water availability analysis for development proposals in CARAs that rely on groundwater, evaluating: • Aquifer sustainability under projected increased pumping demand during more frequent drought periods • Potential impacts to nearby wells, springs, streams, and wetlands from new or expanded groundwater withdrawals • Climate-adjusted safe yield calculations accounting for reduced recharge and increased demand • Coordination with Yakima Basin Integrated Plan Groundwater Group recommendation
NS 10.14	Enhance wellhead protection area regulations for public water supply wells to address climate-related vulnerabilities including: • Contamination risks from more intense precipitation events overwhelming infiltration capacity or mobilizing contaminants • Aquifer depletion from increased demand during extended drought periods • Water quality degradation from reduced dilution capacity during low-flow conditions • Poor-quality water intrusion from altered aquifer gradients
NS 10.15	Support Managed Aquifer Recharge (MAR) projects that provide surface water benefits including: • Storage of winter high flows for summer release to streams through groundwater discharge • Temperature moderation through cool groundwater inputs to streams • Maintenance of summer base flows critical for fish survival • Drought resilience for both agricultural and environmental water needs • Floodwater storage reducing downstream flood peaks

Critical Areas: Surface Water

PURPOSE STATEMENT NS 10, 11 & 12

~~*Efforts have been made to improve stream corridors within the County, especially in the areas of water quality and habitat. The following goals and policies should guide decisions related to surface water.*~~

Surface waters and stream corridors are interconnected systems linking mountain snowpack, reservoir storage, river and stream flows, wetlands, riparian corridors, and groundwater aquifers that sustain life, economy, and ecosystems throughout Yakima County. Protection of surface water resources is required by the Growth Management Act under RCW 36.70A.060, the Shoreline Management Act under RCW 90.58, and ESHB 1181's climate planning mandates. Protection is necessary to maintain water quantity, quality, timing, and temperature for agricultural production, municipal and domestic water supply, fish and wildlife habitat, recreation, tribal treaty rights, and cultural resources. Surface waters also include springs, seeps, riparian management corridors, in-stream flows, channel migration zones, hyporheic zones, cold-water sources, and areas where surface water and groundwater are hydraulically connected. Protection and management of surface waters must include approaches based on Best Available Science under RCW 36.70A.172, assessment of altered flow regimes and temperature increases, and protection of base flow sources and cold-water refugia critical for salmonid survival. In-stream flows must be maintained to meet ecological and water right requirements, through coordination with U.S. Bureau of Reclamation Yakima Project operation, the Yakima Basin Integrated Plan implementation, and integration with tribal co-management and treaty-reserved water rights. Low Impact Development stormwater practices that protect water quality, and stream corridor habitat and water quantity should also be implemented.

GOAL NS 10a:	Enhance the quantity and quality of surface water.
POLICIES:	
NS 10.1	Improve water conservation through education and incentives.
NS 10.2	Encourage groundwater detention and storage where the practice benefits stream base flow characteristics and flood-risk reduction.
NS 10.3	Protect water quality from the adverse impacts associated with erosion and sedimentation
NS 10.4	Protect natural and managed flow regimes that are essential to maintaining ecological functions, recognizing that climate change is altering historical patterns. Regulations shall account for: • Declining spring snowmelt and earlier peak flows (shift from late May to February-March in most climate scenarios) • Reduced summer base flows and increased frequency of critically low flow conditions • Increased winter flows from rain-dominant/rain-on-snow rather than snowpack-dominant precipitation and melt • More extreme flow variability with intensified storm events and extended low-flow periods

	• Temperature increases affecting cold-water species survival and reproduction
NS 10.5	Prioritize protection of streams, rivers, and reservoir releases that provide cold-water habitat for temperature-sensitive species, particularly salmonids. Recognize that water temperature is a critical limiting factor that will become increasingly constrained under projected climate warming of +1.18°C to +3.52°C.
NS 10.6	Require stream temperature monitoring for development proposals supporting cold-water species. Where summer maximum temperatures exceed or approach critical thresholds (16°C for juvenile salmonid rearing, 13°C for spawning), require: • Enhanced riparian vegetation management zones (proposed 25% increase over standard management zones – BAS to define) • Retention or restoration of mature conifer trees providing stream shading • Protection or restoration of cold-water refugia including spring seeps, tributary confluences, hyporheic upwelling zones, and deep pools • Stormwater management that infiltrates runoff to maintain cool base flows rather than routing warm surface runoff to streams • Prohibition of activities that would remove riparian vegetation, destabilize banks, or increase sediment delivery
NS 10.7	Protect in-stream flows necessary for fish life, water quality, recreation, and aesthetic values as required under RCW 90.54.020 and the Shoreline Management Act. Development shall not: • Reduce base flows through groundwater withdrawal that depletes hydraulically connected surface waters • Divert or impound surface water in a manner that eliminates or substantially degrades in-stream habitat • Reduce flows below minimum in-stream flow levels established by Washington Department of Ecology or tribal co-management agreements • Create barriers to fish passage or impede sediment transport processes essential to channel formation and habitat maintenance
	Identify and protect channel migration zones (CMZs) for rivers and major streams as required by Washington Department of Ecology Shoreline Master Program guidelines. CMZ protection shall: • Map historical channel locations, avulsion channels, floodplain connectivity, and areas of active channel migration using minimum 100-year assessment period • Expand CMZ boundaries to account for increased channel mobility under climate-driven flow variability and bank erosion • Prohibit structural bank hardening, residential development, and infrastructure within CMZ except for water-dependent uses, bridges, fish habitat enhancement, and floodplain restoration

	• Require management zones for new development sufficient to avoid CMZ hazards over structure lifespan (minimum 100 years) • Restore floodplain connectivity and natural channel processes where feasible
NS 10.8	Protect headwater streams (Type Np and Ns waters) that provide critical hydrologic functions including: • Groundwater recharge and discharge maintaining summer base flows in downstream fish-bearing waters • Filtration and nutrient processing that protect downstream water quality • Sediment storage and gradual release that maintains channel forming processes • Organic matter input supporting aquatic food webs • Hydrologic connectivity between upland forests, wetlands, and fish-bearing streams Prohibit or minimize impacts to headwater streams through avoidance, stream crossing limitations, and enhanced management zones, recognizing their disproportionate importance to watershed hydrology despite small individual size.
NS 10.9	Require water availability analysis for development that relies on surface water diversions, demonstrating: • Legal water right or access to water supply adequate for proposed use • Evaluation of water availability under projected climate scenarios showing declining summer flows and more frequent drought • Analysis of impacts to in-stream flows, water quality, and downstream water users • Conservation measures and drought contingency planning • Coordination with irrigation districts, water purveyors, and Yakima Basin Integrated Plan recommendations
NS 10.10	Agricultural Water Conservation Support voluntary agricultural water conservation through: • Technical assistance for irrigation modernization and efficiency improvements • Incentive programs for conversion from flood/furrow irrigation to drip, micro-spray, or other high-efficiency systems • Soil moisture monitoring and crop water demand scheduling • Drought-resistant crop varieties and climate-adapted agricultural practices • Coordination with Conservation Districts, State Conservation • Commission programs, and Voluntary Stewardship Program • Recognize that agriculture accounts for most of the water use in Yakima County and that agricultural stewardship is essential to maintaining both the economy and environmental flows.

NS 10.11	Coordinate critical areas regulation for agricultural lands with Voluntary Stewardship Program (VSP) implementation as authorized under RCW 36.70A.700-760. Where VSP work plans and practices achieve surface water protection benchmarks, recognize these as failing, meeting or exceeding critical areas protection standards. Support VSP riparian restoration, irrigation efficiency, and livestock management practices that protect surface water quality and quantity.
NS 10.12	Coordinate with the WA. Department of Ecology and others to monitor surface water and track: • Stream temperature trends relative to species tolerance thresholds • Streamflow patterns including timing of peak flows, duration of low flows, and base flow recession rates • Water quality parameters including sediment, nutrients, dissolved oxygen, and pH • Riparian vegetation condition and canopy cover • Channel stability, erosion rates, and morphology changes • Effectiveness of critical areas management zones and protection measures Use monitoring data and Best Available Science to implement adaptive management adjustments to critical areas regulations and to inform Comprehensive Plan and or YCC updates.

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GOAL NS 11:	~~Identify future needs and promote increased water supplies through coordinated development and conservation efforts~~. The compounding deficits in precipitation, soil moisture, and snowpack from consecutive drought years have created a situation where spring runoff is insufficient to replenish both reservoirs and soil. Identify future needs and promote increased water supplies through coordinated development and conservation efforts.
POLICY:	
NS 11.1	Support local and regional cooperative efforts which help to accomplish this goal, such as the Yakima Basin Integrated Plan.
NS 11.2	Coordination with Yakima Basin Water Management entities and managers for critical areas regulation, and with U.S. Bureau of Reclamation Yakima Project operations and Yakima Basin Integrated Plan implementation. Recognize that: • The five-reservoir system (Bumping Lake, Cle Elum, Kachess, Keechelus, Rimrock) provides managed storage of approximately 30% of mean annual flow—a ratio that makes the system highly sensitive to snowpack decline • The "sixth reservoir," snowpack, is threatened and declining due to climate change.

	• Climate projections indicate water shortage years (prorating to 75% or less for junior water rights) may increase from historical 14% of years to 27-77% by end of century depending on emissions scenario and timeframe • Reservoir storage timing is shifting earlier (peak storage moving from June to April-May) due to earlier snowmelt • Senior water rights may experience continued shortfalls based on modeling scenarios • Agricultural stewardship and water conservation are essential to maintaining economic viability
NS 11.3	Recognize that irrigation return flows and seepage from unlined canals contribute to: • Summer base flows in streams that support fish and riparian ecosystems • Groundwater recharge that sustains domestic wells and municipal supplies • Hydrologic connectivity between agricultural lands, wetlands, and natural waterways Development that converts irrigated agriculture to other uses shall evaluate impacts to these hydrologic functions and mitigate loss of return flows and recharge where necessary to maintain stream flows, wetland hydroperiods, and groundwater levels.
NS 11.4	Regional Surface Water Coordination Coordinate surface water protection with: • Yakama Nation: Co-management of fisheries, water quality standards, climate action plan implementation, and treaty-reserved water rights protection • Yakima Basin Integrated Plan: Implementation of integrated water resource management addressing water supply, fish habitat, flood management, and climate adaptation • Washington Department of Ecology: Water quality standards, in-stream flow rules, stormwater management guidance, and climate resilience programs • Washington Department of Fish and Wildlife: Fish habitat protection, cold-water refugia identification, and habitat connectivity planning • Irrigation Districts and Water Users: Agricultural water conservation, return flow maintenance, and drought preparedness • Cities and Towns: Coordination of development regulations, stormwater management, and water supply planning across jurisdictional boundaries
NS 11.5	Climate Adaptation for Surface Waters Implement adaptive management for surface water protection as climate impacts manifest: • Update management zones, development setbacks, and protection standards based on observed temperature and flow changes

	• Adjust stormwater design standards as precipitation patterns change • Modify in-stream flow protection measures to reflect altered hydrologic regimes • Enhance restoration efforts in areas showing greatest climate stress • Prioritize protection of climate refugia and areas likely to maintain suitable conditions Review and update surface water protection policies during each Comprehensive Plan periodic review cycle (RCW 36.70A.130) using best available science on observed and projected climate impacts.

GOAL NS 12:	Restore, maintain or enhance the quality of the Yakima River Basin's surface water.
POLICIES:	
NS 12.1	Maintain local control over water quality planning by: 1) providing guidance to state and federal agencies regarding water quality issues, priorities and needs; and 2) demonstrating progress in accomplishing the goals and objectives of locally developed water quality plans.~~, thereby pre-empting externally imposed solutions to water quality problems as much as possible.~~
NS 12.2	Make use of local and regional data sources to assess water quality progress.
NS 12.3	~~Participate in water quality improvement planning and implementation efforts by local, regional, state, federal, and tribal agencies, as well as coalitions such as local watershed planning efforts.~~

Critical Areas: Stormwater

PURPOSE STATEMENT NS 13 & 14

~~*When the amount of impervious area in a watershed increases, and provisions are not made for retaining stormwater on-site, development can contribute to the flooding hazards of their down-stream neighbors, and flooding becomes more frequent and more severe. If the natural drainage courses are obstructed with fill material, buildings, or roads that lack adequately sized culverts, storm water can cause localized flooding, with property damage and disruption of services. The following goals and policies should guide decisions related to stormwater*~~ *These policies establish Yakima County's framework for protecting water quality and managing stormwater in compliance with the federal Clean Water Act and Washington State's Eastern Washington Phase II Municipal Stormwater Permit. They describes the County's Stormwater Management Program (SWMP), which implements eight required program elements designed to reduce pollutant discharge from stormwater runoff, protect citizens from drainage damage, and ensure that development activities do not create water quality or quantity problems. Through this comprehensive approach, the County aims to safeguard both surface and groundwater resources while meeting regulatory requirements and addressing current and emerging water quality concerns.*.

GOAL NS 13:	Prevent increased flooding from stormwater runoff.

POLICIES:	
NS 13.1	Require on-site retention of stormwater.
NS 13.2	Preserve natural drainage courses.
NS 13.3	~~Minimize adverse storm water impacts generated by the removal of vegetation and alteration of land forms.~~ *Update processes to include new information on climate change and how to mitigate climate impacts through stormwater management techniques like nature-based solutions, upsizing facilities and conveyances pipes and reducing impervious surfaces, this will ensure that stormwater infrastructure is designed to meet future needs under a changing climate.*
NS 13.4	Stormwater and Surface Water Quality (see CH3) Climate-Adjusted Stormwater Design Require stormwater management systems designed for climate-adjusted precipitation scenarios including: • Increased storm intensity (minimum 20% increase in design storm magnitude by 2050, 40% by 2080) • More frequent exceedance of historical design storms • Greater soil saturation from fall/winter precipitation increases leading to higher runoff coefficients • Post-wildfire conditions where infiltration capacity is severely reduced Design standards shall use forward-looking precipitation data from University of Washington Climate Impacts Group regional projections rather than historical records alone.
NS 13.5	Green Stormwater Infrastructure Prioritize green stormwater infrastructure including: • Bioretention facilities (rain gardens, bioswales, filter strips) • Permeable pavements and porous surfaces • Tree canopy and vegetated areas that intercept precipitation • Rainwater harvesting and reuse systems • Green roofs and rooftop detention • Preservation and restoration of natural depressions, swales, and drainage features Green infrastructure provides multiple benefits including flood reduction, aquifer recharge, water quality improvement, temperature moderation, and habitat enhancement that become increasingly valuable under climate change.
NS 13.6	Post-Wildfire Stormwater Management Require enhanced stormwater management for development in watersheds experiencing wildfire, including: • Increased design storm standards (minimum 50% increase in design flow capacity) • Sediment trapping and erosion control measures sized for post-fire debris loads • Monitoring and maintenance protocols for minimum 5 years following fire

	• Coordination with watershed-scale post-fire recovery planning • Avoidance of development in areas at high risk of post-fire debris flows

GOAL NS 14:	Improve water quality through improved stormwater management.
POLICIES:	
NS 14.1	~~Review the recommendations of locally adopted stormwater management plans and develop an implementation schedule.~~ Use best science available to monitor and mitigate for new and emerging toxics in Stormwater.
NS 14.2	Control stormwater in a manner that has positive or neutral impacts on the quality of both surface and groundwater.
NS 14.3	Monitor the implementation and effectiveness of water quality protection measures and critical areas regulations, and adaptively manage programs based on monitoring results to ensure protection goals are being met."
	Maintain adequate stream flows and groundwater levels to support ecological functions, public water supplies, and existing water rights in the Yakima River Basin
NS 14.4	Control and reduce both point source and nonpoint source pollution that degrades surface water quality, including agricultural runoff, stormwater, and illicit discharges
NS 14.5	Achieve and maintain compliance with state water quality standards for surface waters as established under Chapter 173-201A WAC
NS 14.6	Protect and restore stream temperatures to support beneficial uses, particularly cold-water fish habitat, through riparian shade, flow management, and other cooling strategies
NS 14.7	Prioritize prevention of water quality degradation while also implementing restoration actions in impaired water bodies to achieve water quality standards
NS 14.8	Provide education and outreach to landowners, businesses, and residents about actions they can take to protect and improve surface water quality

Critical Areas: Fish And Wildlife Habitat, Wetlands, And Frequently Flooded Areas

PURPOSE STATEMENT NS 15, 16, 17 & 18

Stream corridors, lakes, ponds, wetlands, flood plains and other areas subject to flooding perform important hydrologic functions including storing and slowly releasing flood waters, reducing floodwater velocities, settling and filtering of sediment and nutrients, shading surface waters, and other functions. These areas also provide natural areas for wildlife and fisheries habitat, upland wildlife habitat, recreation areas, and rich agricultural lands. Development in these areas diminishes their functions and values and can present a risk to persons and property on the development site and/or downstream from the development. Building in frequently flooded areas also results in high costs for installing flood protection measures to protect life and property and to repair flood damages.

The following goals and policies work ~~toward~~ to preserve~~ing~~, protect~~ing~~ and manage~~ing~~ fish and wildlife habitat and wetlands by adopting management zones ~~boundaries~~, and a ~~data~~ Best Available Science and information managment system to track them, and establishing development regulations for their protection. These goals and policies also seek to reduce the hazards and impacts of development through comprehensive flood control planning, directing facility development away from these areas, and developing site development standards.

Critical Areas: Fish and Wildlife Habitat

GOAL NS 15	~~Provide for the~~ Maintain and ~~maintenance and protection of~~ protect fish and wildlife habiat functions and values
POLICIES:	
NS 15.1	Encourage the protection of aquatic, riparian, upland and wetland fish and wildlife habitat. This can be approached from both a region-wide and site specific perspective to ensure that the best representation and distribution of habitats remains to protect the natural values and functions of those habitats. Fish and wildlife habitat protection considerations should include:
1.	The physical and hydrological connections between different habitat types to prevent isolation of those habitats;
2.	Diversity of habitat types both on a local and regional scale;
3.	Large tracts of fish and wildlife habitat
4.	Connectivity between tracts of habitat;
5.	Areas of high species diversity;
6.	Locally or regionally unique and rare habitats; and
NS 15.2	Direct development away from areas containing significant fish and wildlife habitat areas, especially areas which are currently undeveloped or are primarily dominated by low intensity types of land uses such as forestry.
NS 15.3	Encourage the retention of sustainable natural resource based industries such as forestry and agriculture in order to protect important fish and wildlife habitat.
NS 15.4	Coordinate fish and wildlife protection efforts with state and federal agencies and the Yakama Nation to:
1.	Avoid duplication of effort;
2.	Ensure consistency in protecting fish and wildlife habitat which crosses political boundaries;
3.	Facilitate information exchanges concerning development proposals which may impact fish and wildlife habitat; and
4.	Take advantage of any available financial, technical, and project review assistance.
NS 15.5	Protect fish and wildlife habitat for all native species in Yakima County, so as to maintain current population over time. Protect the habitat of Washington State Listed Species of Concern and Priority Habitats and Species in order to maintain their populations within Yakima County.

NS 15.6	Work with the resource agencies to prioritize habitats and provide appropriate measures to protect them according to their relative values.
NS 15.7	Support efforts to enhance fish and wildlife habitat made by local organizations, local agencies, state agencies, federal agencies, and the Yakama Nation.
NS 15.8	Temperature-Sensitive Species Protection Identify and protect cold-water refugia, thermal refugia, and riparian corridors critical for temperature-sensitive species, particularly salmonids. Require stream temperature monitoring and establish enhanced management zones and shade requirements for streams where summer water temperatures approach or exceed species tolerance thresholds (16°C for juvenile salmonid rearing).
NS 15.9	Climate-Driven Habitat Shift Planning Update habitat conservation area designations to account for projected species range shifts, phenological changes, and habitat transitions. Consider criteria for protecting areas that may become suitable habitat under future climate conditions ("climate refugia" and "migration corridors") even if not currently occupied by priority species but can be proven to be suitable under reasonable circumstances.
NS 15.10	Habitat Connectivity Requirements Consider reasonable conditions to development to maintain or enhance habitat connectivity, particularly for wildlife movement corridors, riparian networks, and landscape linkages identified in the Washington Habitat Connectivity Action Plan. Consider restricting development that would sever or substantially degrade connectivity corridors essential for species adaptation to changing climate conditions.
NS 15.11	Riparian Management Zones. Increase floodway, floodplain, channel migration, CARA, wetland and or other critical area setback widths to account for increased extreme weather events and hazards, and or where stream temperatures, altered flow regimes, and greater erosion potential, for example are shown to exist. Minimum management zones should be increased by BAS-validated amounts over current standards for streams supporting cold-water fish species, with greater increases required based on site-specific stream temperature modeling and bank stability analysis.

GOAL NS 16:	Conserve, protect and enhance the functions and values of stream corridors ~~to provide for natural functions~~ and maintain ~~protect~~ hydrologic connections between features.

POLICIES:	
NS 16.1	Flood Development projects should not be authorized if they obstruct fish passage or result in the unmitigated loss or damage of fish and wildlife resources.
NS 16.2	Encourage and support the retention of natural open spaces or land uses which maintain hydrologic functions and are at low risk to property damage from floodwaters within frequently flooded areas.
NS 16.3	Protect public and private properties by limiting development within hazardous areas of the stream corridor.
NS 16.4	Support restoration of floodplain topography and historic drainage features to regain normative stream functioning.
NS 16.5	Give special consideration to conservation and protection measures necessary to preserve or enhance anadromous fisheries.
NS 16.6	Establish a system of vegetative ~~buffer~~management ~~s~~zones landward from the ordinary high water mark of streams, lakes and ponds and the edge of wetlands.
NS 16.7	Develop and implement Riparian Management Zone standards. Establish riparian management zones widths sufficient to: • Maintain stream shading that moderates water temperature increases (target: limit temperature increase to <0.5°C above natural thermal regime) • Filter sediment, nutrients, and contaminants from upland runoff • Provide large woody debris recruitment for in-stream habitat complexity • Stabilize streambanks against increased erosion from altered flow regimes • Create microclimates and movement corridors for terrestrial and aquatic species Minimum management zones shall be based on stream classification, fish presence, channel width, and slope, with the following climate-adjusted standards: See Types 1-5) YCC CAO's ref to Types 1-3) • Type S (shorelines of the state) and Type F (fish-bearing) streams: Minimum 150 feet from ordinary high water mark (OHWM), increased to 200 feet for streams supporting cold-water fish species or designated critical habitat • Type Np (non-fish perennial) streams: Minimum 100 feet from OHWM, increased to 150 feet where streams provide connectivity to fish-bearing waters or wetlands • Type Ns (non-fish seasonal) streams: Minimum 75 feet from OHWM in areas with erodible soils or steep slopes

	• All streams in post-wildfire watersheds: Increase baseline management zones by 50% for minimum 5 years following fire events

Critical Areas: Frequently Flooded Areas

Purpose NS 17 - Frequently flooded areas perform critical functions for flood storage, groundwater recharge, water quality protection, and fish and wildlife habitat in Yakima County. Designation and protection of frequently flooded areas is required by the Growth Management Act under RCW 36.70A.060 and necessary to protect public health, safety, and property. Frequently flooded areas include 100-year and 500-year floodplains, floodways, channel migration zones, alluvial fans, and post-wildfire flood and debris flow hazard areas. Protection and management of frequently flooded areas must include approaches based on Best Available Science under RCW 36.70A.172, climate-informed flood modeling, avoidance of inappropriate development, and restoration of natural floodplain functions.

GOAL NS 17:	~~Prevent the loss of life or property and minimize public and private costs associated with repairing or preventing flood damages from development in frequently flooded areas.~~Protect life and property from flood hazards and reduce public and private repair costs by preventing development in high-risk flood areas
POLICIES:	
NS 17.1	Support comprehensive flood control planning (i.e. Comprehensive Flood Hazard Management Plans).
NS 17.2	Conduct additional analysis and mapping of frequently flooded areas in cases where the 100-year, and 500-year floodplain maps prepared by the Federal Emergency Management Agency, or BAS, do not adequately reflect the levels of risk or the geographic extent of flooding.
NS 17.3	Direct new critical facility development away from areas subject to catastrophic, life-threatening flood hazards where the hazards cannot be mitigated.
NS 17.4	Where the effects of flood hazards can be mitigated, require appropriate standards for subdivisions, parcel reconfigurations, site developments and for the design of structures.
NS 17.5	Plan for and facilitate returning Shoreline rivers to more natural hydrological conditions and recognize that seasonal flooding is an essential natural process.
NS 17.6	E~~When e~~valuating alternate flood control measures on Shoreline rivers: Consider the removal or relocation of structures in the FEMA 100-year floodplain; and modification to structural and location standards in the FEMA 500-year floodplain.
NS 17.6	MOVED TO ABOVE
NS 17.6	Where feasible, give preference to nonstructural flood hazard reduction measures over structural measures;

NS 17.6	Structural flood hazard reductions measures should be consistent with the County's comprehensive flood hazard management plan.
NS 17.6	Climate-Informed Floodplain Mapping Expand the definition and mapping of frequently flooded areas beyond current FEMA Flood Insurance Rate Maps to include: • Modeled 500-year floodplain boundaries • Climate-adjusted flood projections using precipitation scenarios that account for projected increases in storm intensity (minimum 20% increase over historical 100-year storm events by 2050) • Comprehensive Flood Management Plans for Ahtanum Creek, Cowiche Creek, and Lower Yakima Valley watersheds incorporating climate projections – TBD 2027 8? • Post-wildfire flood and debris flow hazard areas in watersheds with high or moderate wildfire risk • Channel migration zones expanded to account for increased flow variability and bank erosion potential
NS 17.6	Flood Standards Adoption Adopt and implement American Society of Civil Engineers ASCE 24-24 flood-resistant design standards and Washington State Floodplain Managers Association model ordinance language, with additional requirements for climate resilience including: • Increased freeboard requirements (minimum 2 feet above base flood elevation, 3 feet for critical facilities) • Evaluation of flood risk over structure lifespan using climate-adjusted flood frequency curves • Prohibition of new critical facilities and infrastructure in climate-adjusted 100-year and 500-year floodplains
NS 17.6	Floodplain Connectivity and Function Protect and restore floodplain connectivity to rivers and streams, recognizing that intact floodplains: • Store floodwaters reducing downstream peak flows and flood damages • Recharge groundwater aquifers that sustain summer base flows • Provide slow-water habitat for juvenile fish during high flows • Trap sediment and nutrients maintaining water quality • Support riparian forests that provide large woody debris, shade, and organic matter Prohibit fill, structures, and vegetation removal in floodplains except for restoration activities, water-dependent uses, and fish habitat enhancement. Require floodplain compensation at minimum 1.5:1 ratio (acres restored: acres impacted) for unavoidable floodplain impacts.
NS 17.6	Comprehensive Flood Management Plan Integration Incorporate Comprehensive Flood Management Plans for Ahtanum Creek, Cowiche Creek, and Lower Yakima Valley (anticipated 2026) into critical areas regulation. These plans provide: • Climate-adjusted flood modeling and mapping • Identification of priority areas for floodplain restoration and protection

	• Nature-based flood risk reduction strategies • Coordination between flood management, habitat restoration, and agricultural sustainability • Multi-benefit projects addressing flooding, water supply, water quality, and ecosystem health
NS 17.6	Natural Flood Storage Protection Identify and protect natural flood storage areas including: • Off-channel floodplain depressions and alcoves • Beaver pond complexes and beaver dam analog installations • Distributary channels and historical overflow pathways • Forested floodplains with high roughness and water retention • Wetland-floodplain complexes providing connected storage These features provide flood attenuation benefits that become increasingly valuable as climate change drives more extreme flow variability.

Critical Areas: Wetlands

Purpose Statement NS-18. Wetlands perform critical functions for water quality protection, flood storage, groundwater recharge and discharge, fish and wildlife habitat, and drought resilience in Yakima County's semi-arid landscape. Designation and protection of wetlands is required by the Growth Management Act under RCW 36.70A.060 and necessary to maintain ecological processes and public benefits in a water-limited region. Wetlands include all areas meeting federal wetland delineation criteria, seasonal and permanent wetlands, riparian wetlands, depressional wetlands, and wetland management zones areas. Protection and management of wetlands must include approaches based on Best Available Science under RCW 36.70A.172, assessment of climate impacts on wetland hydrology, avoidance and minimization of impacts, compensatory mitigation achieving no net loss of functions, and adaptive management ensuring long-term wetland persistence for implementation

GOAL NS 18:	Provide for long-~~-~~term protection and no net loss of wetland functions and values.
POLICIES:	
NS 18.1	Preserve, protect, manage, and regulate wetlands for purposes of promoting public health, safety and general welfare by:
1.	Conserving fish, wildlife, and other natural resources of Yakima County;
2.	Regulating property use and development to maintain the natural and economic benefits provided by wetlands, consistent with the general welfare of the County;
3.	Protecting private property rights consistent with the public interest; and
4.	Require wetland ~~buffer~~management ~~s~~zones and building setbacks around ~~regulated~~ wetlands to preserve vital wetland functions and values.
NS 18.2	Adopt a clear definition of a regulated wetland and a method for delineating regulatory wetland boundaries.

Commented [KW6]: This is very general and could be a p/g everywhere. Why state this here, if we have an overarching policy already to do this.

Commented [KW7]: Yes, but this should not imply that YC will develop definitions. We will use the BAS def. and or best regulatory defs. from DOE, EPA etc. "Adopt" is the right term. No change.

NS 18.3	Classify regulated wetland areas to reflect their relative function, value and uniqueness.
NS 18.4	Develop a wetlands data base using BAS and other modeling techniques where existing geographical data are lacking in detail, contemporary data, accuracy, or are absent~~.~~
NS 18.5	Manage and mitigate human activities or actions which would have probable adverse impacts on the existing conditions of regulated wetlands or their ~~buffer~~management ~~s~~zones.
NS 18.6	Require mitigation for any regulated activity which alters regulated wetlands and their ~~buffer~~management ~~s~~zones. Develop ratios, performance standards, monitoring, and long-term protection.
NS 18.7	Encourage long-term hydroperiod monitoring for compensatory mitigation wetlands to verify that created or enhanced wetlands maintain intended functions despite changing precipitation patterns and temperature regimes. Establish adaptive management triggers for corrective action if mitigation wetlands fail to meet performance standards due to climate-driven hydrologic changes.
NS 18.8	Develop and implement protection for wetlands that demonstrate drought resilience, serve as drought refugia for wildlife, or provide critical water storage and aquifer recharge functions during dry periods. Prohibit impacts to Category I and II wetlands in areas identified as high drought vulnerability.
NS 18.9	Update the National Wetland Inventory and update potential and delineated wetland GIS layers in Yakima County.
NS 18.10	Climate-Informed Wetland Mitigation Require compensatory wetland mitigation to account for climate uncertainty by: • Locating mitigation wetlands in areas with hydrogeologic conditions likely to remain suitable under projected climate scenarios • Selecting native plant species adapted to projected future temperature and moisture conditions • Including climate change contingency planning in mitigation monitoring and adaptive management plans
NS 18.11	Wetland-Stream Connectivity. Protect hydrologic and biological connectivity between wetlands and streams, recognizing that wetlands: • Provide flood storage that attenuates storm peaks and reduces downstream flooding • Release stored water gradually to maintain base flows during dry periods • Filter sediment and nutrients protecting downstream water quality • Provide thermal refugia and rearing habitat for fish and amphibians • Support riparian vegetation that shades and stabilizes stream corridors Require enhanced management zones (minimum 150 feet) for wetlands with surface water connections to fish-bearing streams.

Commented [KW8]: In this case, this implies that YC will "classify" We will adopt a classification system based on the best available classification available. Reword. "Adopt classification standards for regulated wetlands....."

NS 18.12	Wetland Hydroperiod Protection Protect wetland hydroperiods (timing, duration, and depth of inundation) essential to wetland functions. Development shall not: • Alter surface water or shallow groundwater inflows that sustain wetland hydrology • Block or divert overland sheet flow to wetlands • Increase erosion or sedimentation that degrades wetland basins • Remove vegetation that intercepts and slowly releases precipitation to wetlands • Compact soils in contributing areas reducing infiltration and runoff to wetlands Climate change is altering wetland hydroperiods through changes in precipitation timing and snowmelt, making protection of existing hydrologic inputs increasingly critical.

Critical Areas: Geologic Hazards

PURPOSE STATEMENT NS 19

~~*Geologic hazards pose a threat to the health and safety of County citizens when incompatible commercial, residential, or industrial development and associated infrastructure is sited in areas of significant hazard. The following goal and policies address the risk associated with these areas by encouraging engineering designs or modified construction practices that will mitigate problems and prohibiting building where problems cannot be mitigated.*~~

Geologically hazardous areas present significant risks to public health, safety, and property when incompatible development is sited in areas of slope instability, erosion, or seismic activity. Designation and protection of geologically hazardous areas is required by the Growth Management Act under RCW 36.70A.060 and necessary to prevent loss of life, property damage, and infrastructure failure. Geologically hazardous areas include landslide hazard areas, erosion hazard areas, drainage, seismic hazard areas, mine hazard areas, volcanic hazard areas, post-wildfire slope instability areas, unstable slopes, and alluvial fan hazard areas. Protection and management of geologically hazardous areas must include approaches based on Best Available Science under RCW 36.70A.172, climate considerations affecting slope stability and erosion, site-specific geotechnical analysis, avoidance of high-hazard areas, engineering designs and modified construction practices that mitigate identified risks, and prohibition of development where hazards cannot be adequately mitigated for implementation

GOAL NS 19:	Protect the public from personal injury, loss of life or property damage from geologic hazards.
POLICIES:	
NS 19.1	Ensure that land use practices in geologically hazardous areas do not cause or exacerbate natural processes which endanger lives, property, or resources.

NS 19.2	Locate development within the most environmentally suitable and naturally stable portions of the site.
NS 19.3	Classify and designate areas on which development should be prohibited, conditioned, or otherwise controlled because of danger from geological hazards. IN: YCC–22 (3)(4)(2)
NS 19.4	Prevent the subdividing and development of known or suspected landslide hazard areas, side slopes of stream ravines, or slopes 40 percent or greater for development purposes or as BAS indicates..
NS 19.5	Climate-Intensified Geologic Hazard Assessment Require geotechnical reports for development in or adjacent to geologically hazardous areas to evaluate climate-intensified risks including: • Landslide and debris flow potential under intensified precipitation scenarios (precipitation events 20-40% more intense than historical records) • Post-wildfire slope stability in areas with moderate to high wildfire risk • Altered groundwater conditions and pore pressure from changing precipitation patterns and snowmelt timing • Cumulative effects of repeated freeze-thaw cycles in transitional elevation zones
NS 19.6	Post-Wildfire Geologic Hazard Areas Automatically designate burned areas with slopes greater than 15%, or as BAS indicates, as geologically hazardous areas for a minimum of 5 years following fire events. Require comprehensive geotechnical analysis and slope stabilization measures for any development proposed in post-wildfire geologic hazard areas. Increase management zones from geologically hazardous areas by a minimum of 25%, or as BAS indicates, baseline standards to account for increased landslide runout distances and debris flow travel distances under intensified precipitation scenarios and post-wildfire conditions.
NS 19.7	Increased Management Zones Increase zone boundaries from geologically hazardous areas by a minimum of 25%, or as BAS indicates, over baseline standards to account for increased landslide runout distances and debris flow travel distances under intensified precipitation scenarios and post-wildfire conditions.

Critical Areas: Resiliency and Sustainability – General Policies and CAO Focal Areas. Chapter 3, Natural Hazards, includes additional detail.

PURPOSE STATEMENT NS 20- Resiliency and Sustainability

Building resilience and sustainability is fundamental to Yakima County's ability to thrive under changing climate conditions. Climate resilience planning is required by ESHB 1181 and is essential to protecting critical areas, infrastructure, agriculture, the regional economy, and community wellbeing. Resilience encompasses preparedness for extreme weather events, adaptation to changing conditions, protection of vulnerable populations, critical areas, and sustainable resource management. Resilience strategies must include approaches based on Best Available Science, equitable resource allocation, nature-based and or geoengineered solutions, and monitoring and adaptive management for implementation.

GOAL NS 20:	Protect life and property in rural Yakima County from fire hazards.
POLICIES:	
NS 20.1	Best Available Climate Science Requirement: All critical areas designations, regulations, and permit decisions shall incorporate best available science on climate change impacts, including guidance and projections from the University of Washington Climate Impacts Group, NOAA models, USGS stream temperature and flow data, Washington Department of Fish and Wildlife climate-informed habitat assessments, and peer-reviewed scientific literature addressing climate impacts to Eastern Washington/Pacific Northwest ecosystems and hydrology.
NS 20.2	Climate-Adjusted Critical Area Mapping Update critical area maps and inventories on a regular cycle (not to exceed 10 years) to reflect observed and projected climate change impacts, including altered flood boundaries, shifting habitat conditions, changed wetland hydroperiods, increased geologic hazard risks, and modified aquifer recharge patterns.
NS 20.3	No Net Loss Under Changing Environmental Conditions: Apply the no net loss standard required under RCW 36.70A.172 in a manner that accounts for climate change impacts, ensuring that critical area protection measures, management zones, and mitigation requirements are sufficient to maintain ecological functions over the expected lifespan of development (typically 50-100 years) despite reasonably foreseeable climate-driven changes to critical area extent and function.
NS 20.4	Cumulative Climate Impact Assessment. Require cumulative impact analysis for development proposals in or adjacent to critical areas that evaluates not only direct project impacts but also the interaction between project effects and climate-driven stressors including temperature increases, altered hydrology, increased wildfire risk, and more frequent extreme weather events.
NS 20.5	Green Infrastructure for Flood Management. Require low-impact development techniques, green stormwater infrastructure, and preservation of natural

	floodplain storage capacity for all development in or adjacent to frequently flooded areas. Prioritize floodplain reconnection, setback requirements, and natural hydrologic function restoration over structural flood control measures.
NS 20.6	Climate-Resilient Development Standards: Establish development standards for activities in or adjacent to critical areas that enhance climate resilience including: • Native vegetation requirements using species adapted to projected future climate conditions • Soil amendments and organic matter incorporation to increase water retention and infiltration • Retention of large woody debris and natural roughness elements for flood attenuation and habitat complexity • Prohibition of invasive species that may proliferate under warmer, drier conditions
	Coordination with Tribal and Regional Partners: Coordinate critical areas regulation and resiliency, sustainability and adaptation planning with: • Yakama Nation Climate Action Plan and natural resource management programs • Yakima Basin Integrated Plan implementation • Conservation districts and Voluntary Stewardship Program • Adjacent jurisdictions' critical areas protection programs • State agencies (Ecology, Fish and Wildlife, Natural Resources, Conservation Commission)
NS 20.6	Establish criteria for critical area exceptions, variances, and reasonable use determinations that account for climate change by: • Prohibiting variances that would increase vulnerability to climate hazards or compromise long-term critical area function • Requiring demonstration that proposed development can withstand projected climate conditions without requiring future modifications that would further impact critical areas • Prioritizing clustered development and conservation design approaches that minimize critical area impacts while accommodating reasonable economic use
NS 20.6	Require qualified professionals preparing critical area reports, geotechnical analyses, habitat assessments, wetland delineations, and other technical studies to demonstrate knowledge of climate change impacts relevant to their discipline and to explicitly address resiliency and sustainability considerations in their analysis and recommendations.
NS 20.6	Develop and maintain public education materials and technical assistance programs that: • Explain resiliency and sustainability impacts to critical areas and rationale for updated regulations

	• Provide guidance on climate-resilient site design and development practices • Identify incentive programs and funding sources for voluntary critical area enhancement • Support agricultural and rural landowners in implementing climate-smart stewardship practices
NS 20.6	Conduct High Resolution Change Detection (HRCD) monitoring to track: • Critical area function and condition trends relative to climate change indicators • Effectiveness of protection measures and mitigation under observed climate conditions • Need for regulatory updates as climate impacts manifest • Success in maintaining no net loss of ecological function
NS 20.7	Map habitat connectivity corridors and priority areas for conservation and restoration
NS 20.8	Participate in regional habitat connectivity planning with Washington Department of Fish and Wildlife
	Establish baseline environmental monitoring including temperature, precipitation, flooding, drought, snowpack, streamflow, and other environmental factors and ecosystem effects of changing environmental conditions.
	Prepare progress reports on implementation of Resiliency and Sustainability Element policies and actions
	Update Comprehensive Plan during periodic reviews required under RCW 36.70A.130 to incorporate new climate projections and lessons learned

~~***Critical Areas: Fire Hazards and Wildfire***~~

~~**PURPOSE STATEMENT NS 21**~~ **In Chapter 3 and expanded – under review by Yakima County Fire Marshal.**

~~**GOAL NS 21:**~~	~~Protect life and property in rural Yakima County from fire hazards.~~
~~**POLICIES:**~~	
~~**NS 21.1**~~	~~Encourage the development of adequate water supply/storage for new development which is not connected to a community water/hydrant system. A storage facility/fire well should be accessible by standard firefighting equipment and adequate for the needs of the structure(s) and people being protected.~~
~~**NS 21.2**~~	~~Roofing used in the construction of residential development shall be of a Class "A" fire retardant material when located outside of 5 road miles of a full service fire station.~~
~~**NS 21.3**~~	~~Encourage, where feasible, the undergrounding of electrical utilities to reduce their exposure to fire.~~

~~NS 21.4~~	~~Require new residential construction to provide for a fuel break around structures.~~
~~NS 21.5~~	~~Require proposed developments to provide sufficient access for heavy-duty firefighting equipment.~~
~~NS 21.6~~	~~Bridges, culverts, road drains and other structures shall be constructed and maintained in a manner to accommodate firefighting apparatus on a year around basis.~~
~~NS 21.7~~	~~Residences and driveways shall be clearly marked and visible with the appropriate address assigned by Yakima County.~~

~~***Critical Areas: Drought***~~

In Chapter 3 (Natural Hazards) and expanded

~~**PURPOSE STATEMENT NS 22**~~

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~~***Critical Areas: Extreme Heat***~~

~~**PURPOSE STATEMENT NS 23**~~

~~*Areas of Yakima County are highly susceptible to…..*~~

In Chapter 3 (Natural Hazards) and expanded

~~**GOAL NS 23:**~~	
~~**POLICIES:**~~	

PURPOSE STATEMENT NS 24 Best Available Science

Best Available Science (BAS) is a statutory requirement under Washington State's Growth Management Act (GMA) that mandates local governments to use current, scientifically valid information when designating and protecting critical areas. This requirement, codified in RCW 36.70A.172, ensures that environmental regulations are grounded in empirical evidence rather than speculation, protecting ecological functions while allowing for informed policy decisions that balance environmental protection with economic viability. BAS requirements must be coordinated with shoreline management under the Shoreline Management Act (RCW 90.58), which specifically requires BAS for shoreline master programs through WAC 173-26-201(3)(d)(i). Integration is required with the State Environmental Policy Act (SEPA) to ensure environmental impacts are properly assessed and mitigated based on sound scientific information.

GOAL NS 24	Update the 2004 Best Available Science Report. Use the update to ensure that Critical Areas Ordinances, Shoreline, Resilience, Sustainability and Hazard Management actions meet defined standards and incorporate significant scientific advances since the 2004 baseline report.
POLICIES:	
NS 24.1	Tribal treaty rights must be considered and protected in all BAS applications, requiring coordination and consultation with the Yakama Nation and other treaty tribes.
NS 24.2	Integrate BAS requirements with flood control districts, federal regulations under the Code of Federal Regulations (CFR), and the National Flood Insurance Program standards.
NS 24.3	State House Bill 1181 and other mandates, which must be integrated into BAS applications and will:. • Use valid, current scientific information from qualified sources • Document the scientific information used and the reasoning process • Consider competing scientific viewpoints through a reasoned process • If departing from BAS recommendations, provide clear justification and identify other GMA goals • Balance critical areas protection with agricultural viability following Swinomish principles • Establish monitoring and adaptive management when less precautionary approaches are adopted
NS 24.4	The BAS update will develop a process to ensure scientific principles are used in the Update. This process will establish, at a minimum, a Science Advisory Group consisting of: • Environmental experts from Yakima County Planning • The Washington Department of Fish and Wildlife • The Washington State Department of Ecology • The Yakama Nation • The US Fish and Wildlife Service • NOAA Fisheries • The US Bureau of Reclamation • The US Forest Service • Members of the Voluntary Stewardship Program • Members of the Yakima Basin Integrated Plan and its subcommittees
NS 24.5	The BAS update will develop a process to ensure scientific principles are used in the Update. This process will identify and invite subject matter experts endorsed by the SAG, to participate in the update.
NS 24.6	The BAS update will develop a process to ensure Yakima Basin stakeholders are invited to participate in the update. This should include, at a minimum: • Yakima Basin Irrigation Districts • Conservation Districts

	• Cities and Towns • The Yakima Valley Conference of Governments
NS 24.7	The BAS will utilize a Source Quality Hierarchy to validate and prioritize information. The following shall apply: Tier 1: Peer-Reviewed Sources (Highest Quality) • Academic journals with rigorous editorial review process • Government peer-reviewed reports (USGS, NOAA, EPA) • University research publications and dissertations Tier 2: Professional/Technical Sources (High Quality) • Professional association publications and standards • Government technical reports and guidance documents • Certified professional consultant studies following standard methods Tier 3: Grey Literature (Variable Quality - Requires Evaluation) • Conference proceedings and presentations • Technical white papers and position statements • Thesis and dissertation research (pre-publication) Tier 4: Local/Regional Sources (Context-Specific Value) • Local monitoring data and observational records • Regional studies and technical analyses • Historical records and documentation • Traditional ecological knowledge from tribes and long-term land managers
NS 24.8	The BAS update shall, at a minimum, address the following areas: • perennial, ephemeral and intermittent streams, lakes, ponds, and flood zones • shorelines and channel migration zones • riparian management zones • wetland delineation, ratings and protection • groundwater quantity and quality • fish and wildlife habitat • anadromous fish and fisheries and their habitat • hydrologically related critical areas • climate change adaptation, sustainability, and resilience, • geologically hazardous areas, • natural resource areas • monitoring and adaptive management frameworks. • geographical data sets and analytical frameworks • expert models • traditional knowledge

	• ecological functions and values • criteria and threshold systems and values • statistical analysis • natural and other environmental hazards • data management, maintenance, updates and reporting • outreach and accessibility to BAS by interested parties • GMA, SMA and other state, federal and local legislation, and their updates, requiring BAS and or other analysis

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