Minnesota's Shoreland Rules Update Project (revision to M.R. 6120)
Existing Rules Compared to April 20, 2009, Preliminary Draft

The following table is a summary of existing and proposed rules. For complete regulations and provisions, consult the existing rules and the proposed preliminary draft. The statewide standards and criteria of the Wild & Scenic Rivers Program (M.R. 6105.0010 to 6105.0250) were incorporated into the preliminary draft; a summary table for this merger is also available. A *'Guiding Principles'* table follows this table.

ATTRIBUTE	EXISTING M.R. 6120	PROPOSITION	RATIONALE
Rules Related to Existing Lake and River Lots and Homes [and other shoreland lots of record]	*Conforming lots of record* Remain conforming. *Substandard undeveloped lots of record* These lots may be allowed as building sites without variances from lot size requirements provided (1) the use is permitted in the zoning district, (2) the lot has been in separate ownership from abutting lands at all times since it became substandard, (3) was created compliant with official controls in effect at the time, (4) and sewage treatment and setback requirements of the shoreland controls are met. Necessary variances from setback requirements must be obtained before any use, sewage treatment system, or building permits are issued for the lots. In evaluating all variances, boards of adjustment shall consider sewage treatment and water supply capabilities or constraints of the lots and shall deny the variances if adequate facilities cannot be provided. If, in a group of two or more contiguous lots under the same ownership, any individual lot does not meet the lot size requirements, the lot must not be considered as a separate parcel of land for the purposes of sale or development. The lot must be combined with the one or more contiguous lots so they equal one or more parcels of land, each meeting the lot size requirements as much as possible. Local shoreland controls may set a minimum size for nonconforming lots or impose their restrictions on their development.	**Lots created compliant with official controls that met or exceeded past State standards with regard to lot size can continue to be built on.** *Nonconforming lots of record* Same requirements as existing rule, with the addition that impervious surface coverage will not exceed 25% and mitigation may be used instead of a variance process.	'Grandfathered' in existing conforming development to minimize burdens to citizens and local governments. *Guiding Principles:* New rules should not create additional nonconformity (#11), Respect for private property rights (#10), Flexibility (#1), Correct existing site problems (#3)
Public waters	"Public waters" means any waters as defined in Minnesota Statutes, section 103G.005, subdivisions 15	Shorelands of lakes, ponds, and flowages 10 acres in size or greater within municipalities and within two miles of any	Many have noted problems with annexations. *Guiding Principles:*

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	and 15a. However, no lake, pond, or flowage of less than ten acres in size in municipalities and 25 acres in size in unincorporated areas need be regulated.	municipal boundary, and elsewhere shorelands of lakes, ponds, and flowages 25 acres in size or greater, must be regulated. In situations where the shoreland of public waters overlap due to close proximity of public waters to each other, topographic divides shall be used to determine which shoreland standard would apply, and in those areas where the topographic divide can not be determined, the more restrictive rules for the area shall be used.	Consistency (#7), Protect and Improve water quality (#6), Safeguard sensitive areas (#8)
Adoption Schedule	Amend ordinances to be compliant within 2 years of being notified. Cities were grouped and some groups were not addressed for a long time.	Local governments with existing shoreland controls have 3 years to adopt. Local governments without existing shoreland controls must adopt land use controls to bring them into compliance with these standards and criteria upon notification by the commissioner, except cities without compliant shoreland controls that annex land that include shorelands shall adopt land use controls to bring them into compliance with these standards and criteria within 1 year of the annexation and before any development in shorelands. All local governments shall submit their revised shoreland land use controls for commissioner review before adoption.	To allow time for revision and adoption of new standards by local governments. *Guiding Principles:* Consistency (#7), Protect and Improve water quality (#6)
Definitions	44 terms are defined.	90 terms are defined.	Added clarity provided so that there is more consistency in implementation across the state. Deleted definitions from M.R. 6105.0040 that were unneeded or inconsistent with shoreland definitions. *Guiding Principles:* Consistency (#7)
Variances	Granting must be in accordance with M.S. 394 or 462. No variance may be granted that would allow any use that is prohibited in the zoning district. Conditions may be imposed in the granting of variances.	Added a requirement. A condition of issuance of any variance shall include mitigation. Other conditions may be imposed in the granting of variances to ensure compliance and to protect adjacent properties and the public interest.	Clarified variance requirements and provided tools to mitigate water quality impacts. *Guiding Principles:* Flexibility (#1), Correct existing site problems (#3)
Conditional and Interim Use Permits	Local governments may impose conditions when granting conditional use permits.	Where evaluation and assessment determine the need for additional environmental protections, the issuance of any conditional or interim use permit shall	Mitigation, with such practices as good rainwater management that is proportional to the impact of the project, is necessary to protect water quality.

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		include conditions for approval and mitigation. A local government shall not substitute a conditional or interim use permit process for the variance process in situations where a variance is required. Interim use permits require meeting lot standards (size, placement and height requirements).	Sets a minimum standard for interim use permits. *Guiding Principles:* Protect and Improve water quality (#6), Consistency (#7), Safeguard sensitive areas (#8)
Nonconformities	Local governments must require upgrading or replacement of any existing, on-site sewage treatment system identified as nonconformity. All nonconformities other than on-site sewage treatment systems must be managed according to applicable state statutes and local government official controls.	All nonconformities must be managed according to applicable state statutes and local government official controls. [All sewage treatment systems must meet or exceed applicable state and local rules (6120.3600, Water and Sewage Provisions)]. A local government may mitigate impacts on a property with a structure that cannot meet the required setbacks to public waters and use a 'string test', provided the building is not in the shore impact zone.	Reducing nonconformity is a desired outcome and mitigating the consequences of nonconforming structure setbacks to protect water quality is reasonable. *Guiding Principles:* Flexibility (#1), Correct existing site problems (#3)
Mitigation	No provisions.	A two-track mitigation approach is provided. Either use of professional correction of on-site conditions or use of a mitigation system, where a property owner may select from a suite of corrective measures. Criteria for a mitigation system are given for guidance.	Use of mitigation is promoted to provide an additional tool to protect economic and natural resource values. *Guiding Principles:* Flexibility (#1), Correct existing site problems (#3)
DNR Duties	No provisions (except those in statutes).	Specific duties are listed which include: review and approve ordinances, create model ordinances, monitor shoreland zoning decisions, provisions for failure to comply, and the creation of shoreline buffer education material for use by local governments.	Add clarity to DNR responsibilities. *Guiding Principles:* Consistency (#7)
Local Government Duties	Notification procedures.	Local governments must (1) amend a land use ordinance to meet or exceed state minimum standards, (2) submit proposed shoreland ordinances, shoreland ordinance amendments, zoning map, and information on administration and enforcement capabilities to the commissioner for review and approval before adoption, and (3) administer and enforce shoreland ordinances upon adoption.	Add clarity to local government responsibilities. *Guiding Principles:* Consistency (#7)
Classification	3 Lake Classes: General Development (GD) Recreational Development (RD) Natural Environment (NE)	3 Lake Classes: General Development (GD) Recreational Development (RD) Natural Environment (NE)	*Provisions for allowance of multiple lake classes*: Different development standards in bays and areas with critical fish and wildlife habitat are

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	7 River Classes: Tributary Urban Agricultural Transitional Forested Remote **In M.R. 6105:** Recreational (RR) Scenic (SR) Wild (WR) [total of 10 river classes]	A lake may be assigned multiple classes. 6 River Classes: General Development (GD) Natural Environment (NE) Coldwater (CW) Recreational (RR) Scenic (SR) Wild (WR) CW rivers are designated trout streams; NE are remote, forested, transitional river segments, and tributary river segments that flow into NE lakes; and GD are agricultural, urban and tributary stream segments not included in NE. The WR, SR and RR classes are from M.R. 6105. The statewide standards and criteria from M.R. 6105.0010 to 6105.0250 were incorporated into 6120.	warranted given documented and predicted losses to habitat from development. Incorporating wild, scenic, and recreational river standards into shoreland rules substantially reduces regulation complexity and inconsistency. *Guiding Principles:* Flexibility (#1), Protect and Improve water quality (#6) Consistency (#7), Safeguard sensitive areas (#8)
Reclassification	Rivers were reclassified with these shoreland rules.	River classifications simplified. Sensitive lakes, not already classified as NE, are reclassified to NE. These lakes include trout lakes and designated wildlife lakes. Guidance provided to local governments for creation of two additional classes: Natural Environment – Sensitive for lakes and rivers (NE-S).	*Reduction in river classes:* Many local governments have one or two standards for river classes even where many different river classes exist in their jurisdiction. It is suggested for purposes of rule simplification to reduce the number of river classes. *Guiding Principles:* Flexibility (#1), Consistency (#7)
Overlay Districts	5 Districts: Special Protection Residential High Density Residential Water-Oriented Commercial General Use With land use tables of permitted, conditional use, and prohibited uses.	2 Shoreland Overlay Districts: Fundamental Special Protection Local governments may create land use districts based on the shoreland classification. Eliminated all land use tables, except for a wild, scenic, recreational shorelands table. Elsewhere, the local government's applicable underlying zoning districts shall regulate uses of land, except the following require conditional use permits (1) industrial and extractive uses within coldwater river and natural environment shorelands; (2) controlled access lots; (3) new resorts and expansions of more than 12 dwelling sites for existing resorts.	Use of shoreland overlay districts allows additional flexibility with regard to the local underlying zoning district. The number of districts was reduced to reflect that many local governments have developed their own districts, and the proposal is reliant on the use of the overlay district concept. Additional guidance is provided to local governments on special protection shoreland overlay districts. Sensitive areas especially vulnerable to the consequences of development are listed for local shoreland controls with a special protection shoreland overlay district. *Guiding Principles:* Flexibility (#1), Consistency (#7), Safeguard sensitive areas (#8)
Lot Size	Single Residential Development (riparian): Lot Area (ft^2)	In areas not served by publicly-owned sewer, the buildable area must be at least	The buildable area concept recognizes that marginal lands are now being developed, and

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	GD, no sewer – 20,000 RD, no sewer – 40,000 NE, no sewer – 80,000 Lot Area (ft^2) GD, sewer – 15,000 RD, sewer – 20,000 NE, sewer – 40,000 Lot Width (ft) GD, no sewer – 100 RD, no sewer – 150 NE, no sewer – 200 Lot Width (ft) GD, sewer – 75 RD, sewer – 75 NE, sewer – 125 Single residential minimum lot widths for rivers (ft): Remote – 300 Forested – 200 Transitional – 250 Agricultural – 150 Urban Sewered – 100 Tributary nonsewered - 75 Other rules for non-riparian lots, and lots for duplex, triplex and quad housing. **In M.R. 6105:** Lot Area RR – 2 acres (87,120 ft^2) SR – 4 acres (174,240 ft^2) WR – 6 acres (261,360 ft^2) Lot width (ft) RR – 200 SR – 250 WR – 300	8,500 square feet per lot. New single-family residential lots in a conventional subdivision (riparian and non-riparian): Lot Area (ft^2) GD – 30,000 RD – 40,000 NE – 80,000 NE-S, CW – 90,000 RR – 87,120 SR – 174,240 WR – 261,360 Lot Width (ft) GD – 100 RD – 150 NE – 200 NE-S, CW – 300 RR – 200 SR – 250 WR – 300 New duplex residential lots in a conventional subdivision or commercial lots: Lot Area (ft^2) GD – 40,000 RD – 60,000 NE – 120,000 CW – 135,000 Lot Width (ft) GD – 200 RD – 225 NE – 400 CW – 450 If the underlying zoning district lot dimensional standards are more restrictive, then they shall apply.	that standards should be set such that adequate space exists for proposed and future developments. The elimination of the sewered lot standards reflects recent information on non-point source pollution. *Guiding Principles:* Use good science (#5), Consistency (#7), Protect and improve water quality (#6), Safeguard sensitive areas (#8)
Residential Density	Density is determined by lot dimensional standards for conventional subdivisions.	The density is, in large part, determined by the lot dimensional standards. All subdivisions are required to meet natural area standards. The density shall be the lesser of: (1) the local government's underlying zoning district density; or (2) the project area divided by the single-family residential lot size for the shoreland class or district.	Where local governments have their own standards for PUDs, not consistent with the State's Shoreland Conservation Subdivision standard, density is still regulated. *Guiding Principles:* Flexibility (#1), Consistency (#7), Think long-term (#4)
Exceptions to Lot Size and Density Standards	Planned unit developments that meet specific standards.	Lot sizes may be smaller than those specified for planned unit developments. Density may be greater for planned unit developments and resorts. Where land dedication or a land preservation agreement of the riparian area is elected or required, density and the minimum lot width and lot size may be the same as for the	Additional flexibility is granted to local governments and property developers when riparian areas are permanently protected. In addition, in high density urban areas cities are granted flexibility to address lot sizes based on underlying zoning. *Guiding Principles:* Flexibility (#1), Protect and Improve water quality (#6)

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		underlying zoning district. The lot size and density may be the same as for the underlying zoning district for cities in areas (1) served by sewer; (2) the area is not within a wild, scenic, or recreational river shoreland; (3) the stormwater facilities within the area have adequate maintenance standards and the city has identified the responsible parties for such maintenance; and (4) the area is within an existing residential area having at least 3 dwelling units per acre, a downtown area, a brownfield area, or a previous industrial area; and elsewhere the following is required (a) the comprehensive land use plan has identified the area for higher density development, such as downtown areas and high density residential areas; (b) Minnesota licensed Professional Engineer, with expertise in stormwater management and appropriate training, and certified personnel in Design of Stormwater Pollution Prevention Plans are on staff or contract, and they review development plans and implementation of stormwater management best management practices to meet or exceed performance standards; (c) a comprehensive stormwater management plan and a stormwater ordinance have been adopted and effectively implemented; and (d) a natural resource priority map for their jurisdiction.	
Natural Areas	For residential and commercial planned unit developments, at least 50% of the total project area must be preserved as open space.	Natural areas are to be integrated into residential and commercial developments. Developments and redevelopments have natural areas dedicated to and maintained by the local government or held as private natural areas to be maintained by the community or landowners. Additional detail on page 13 below.	The purpose of natural area standards is to conserve natural and recreational areas, including those areas containing unique and sensitive natural features such as prime agricultural soils, woodlands, steep slopes, waters, floodplains, critical fish and wildlife habitats, and wetlands. *Guiding Principles:* Think long-term (#4)
Min. Structure Setbacks from ordinary high water level (OHW; ft)	GD, no sewer – 75 RD, no sewer – 100 NE, no sewer – 150 GD, sewer – 50 RD, sewer – 75	GD – 75 RD, RR – 100 NE, SR – 150 CW, WR, NE-S – 200	The elimination of the sewered lot standards reflects recent information on non-point source pollution. *Guiding Principles:*

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	NE, sewer – 150 **In M.R. 6105:** RR – 100 SR – 150 WR – 200		Use good science (#5), Consistency (#7), Protect and improve water quality (#6)
Height of Structures	All structures in residential districts in cities, except churches and nonresidential agricultural structures, must not exceed 25 feet in height.	For areas outside of a city, no structures, except churches, telecommunication towers and antenna, power generating towers, and nonresidential agricultural structures, shall exceed 35 ft in height of structure. For cities, the maximum height of building shall follow the requirements of the underlying zoning district, except for wild, scenic and recreational rivers shorelands, the structure height shall not exceed 35 ft.	Additional flexibility for cities. *Guiding Principles:* Flexibility (#1)
Accessory Structures	All accessory structures and facilities, except those that are water-oriented, must meet or exceed structure setback standards. If allowed by local government controls, each residential lot may have one water-oriented accessory structure or facility located closer to public waters than the structure setback if all of the following standards are met: (1) less than 10 ft in height, (2) less than 250 sq ft, (3) 10 ft setback from OHW, (4) screened from view, (5) not for human habitation, (6) on GD and RD lakes boat storage facilities 400 sq ft and less are allowed.	Reduction in structure size to 120 sq ft. No new boathouses allowed.	Reduce impervious surface coverage near lakes and rivers. *Guiding Principles:* Protect and improve water quality (#6), Consistency (#7), Think long-term (#4)
Shoreline Recreational Facilities	No limit specified. Docks must comply with 6115.021 rules: (1) Placement of structures can't obstruct navigation, create hazard, be detrimental to significant fish and wildlife habitat, in posted fish spawning areas, or take threatened or endangered species; (2) Structures can't be intended for human habitation; and (3) No permit needed if it is safe, allows free flow of water beneath, not a marina, consistent with local land use controls, the length is limited to that which is needed to reach navigable water, or does not exceed 8 ft in width.	Shoreline facilities must comply with rules in part 6115.0210.	Similar rules across developments. *Guiding Principles:* Consistency (#7), Think long-term (#4), Safeguard sensitive areas (#8)
Roads and Parking Lots	General standards on placement and design of roads, driveways, and parking lots. Roads, driveways, and parking areas must meet structure setbacks and must not be placed within bluff and	Similar to existing with additional provisions. Private roads, driveways, and parking areas: Low-volume private road or privately maintained roads must have pavement widths 22 ft or less.	The need is to reduce the possibility of runoff from the parking surfaces reaching public waters. Runoff carries pollutants, such as oil, dissolved metals, suspended solids, and nutrients. However, if the water infiltrates into the ground, the

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	shore impact zones, when other reasonable and feasible placement alternatives exist. If no alternatives exist, they may be placed within these areas, and must be designed to minimize adverse impacts.	Parking areas with 10 or more spaces or in excess of 3000 sq ft must be designed to permanently treat 1" of runoff from the impervious surfaces created. This can be accomplished through use of soil amendments, infiltration, bioretention, pervious pavement, rain gardens, enhanced swales, disconnected impervious surfaces or other locally approved volume reduction techniques. If the runoff reduction standard is not physically possible to meet due to the size of the site or high impervious surface coverage, mitigation would be required. For public roads, rail lines, trails and watercraft access facilities, best management practices must be designed, installed and maintained to reduce runoff.	soil and plants can purify the rainwater and runoff. Streets should not be wider than is necessary to meet projected traffic demands and to provide emergency vehicle access. Wider streets not only create more impervious surface cover, which increases runoff and reduces water quality, but because traffic tends to move faster they can also be less safe for both motorists and pedestrians. *Guiding Principles:* Use good science (#5), Protect and improve water quality (#6)
Agricultural Use	A 50-ft shore impact zone for a shoreline buffer, and use of best management practices.	A 50-ft shore impact zone for a shoreline buffer, and use of best management practices. Added a reference to PCA rules on feedlots. Local governments with 30% or greater land cover in cultivation shall establish by resolution the framework whereby use of best management practices can be achieved.	The only change in this subpart was to make it consistent with M.R. 7020, which does not allow new feedlots in the shoreland and any expansions must meet the standards or rules of the Pollution Control Agency. Riparian buffers are critical in protecting lakes and rivers. *Guiding Principles:* Use good science (#5), Consistency (#7), Protect and improve water quality (#6), Safeguard sensitive areas (#8)
Forest Management Standards	Use of best management practices.	Use of best management practices.	The forest industry has developed science-based standards and they have developed an infrastructure to promote water quality and riparian habitat protection. *Guiding Principles:* Flexibility (#1)
Shoreland Buffers in Shore Impact Zone (SIZ; i.e., the land near the water) and Bluff and Steep Slope Areas	Intensive cutting is not allowed.	<u>For an existing lot with a home, no changes in shoreline buffer standards (i.e., intensive cutting is not allowed).</u> Local governments implement incentive, marketing or educational programs to encourage existing riparian property owners to protect or restore natural shoreline buffers. Specific program provisions are provided.	The conversion of forest shoreline to 'lawn-to-lake' shoreline results in 7 to 9 times more phosphorus entering the lake. Vegetation condition is critical for reducing pollutant runoffs and to provide wildlife habitat. *Guiding Principles:* Use good science (#5), Protect and improve water quality (#6), Safeguard sensitive areas (#8), Flexibility

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		A buffer consisting of trees, shrubs, and ground cover of plants and understory in a natural state, is required in bluff impact zones and on very steep slopes. No impervious surfaces within the shore impact zone (SIZ), except where allowed by permit a boat launch, a single water-oriented accessory structure, and stairways or lifts and their associated landings. <u>For new development on previously undeveloped parcels,</u> a 50 ft shoreline buffer consisting of trees, shrubs, and ground cover of plants and understory in a natural state, is required. Removal of trees and shrubs necessary to accommodate stairways, landings, chairlifts, access paths, and recreational use areas can occur. Except for the access path and recreational use area, a natural ground cover must be preserved or established in the 50 ft area near shore. Opening and lawns in the shoreline buffer that are not allowed must be replanted or left unmowed.	(#1)
Land Disturbing Provisions	Before grading or filling on steep slopes or within shore or bluff impact zones involving the movement of more than 10 yd^3 of material or anywhere else in a shoreland area involving movement of more than 50 yd^3 of material, it must be established by local official permit issuance that a set of conditions will be met. The conditions must also be considered during subdivision, variance, building permit, and other conditional use permit reviews. Excavations where the intended purpose is connection to a public water, such as boat slips, canals, lagoons, and harbors, must be controlled by local shoreland controls. Permission for excavations may be given only after the commissioner has approved the proposed connection to public waters.	Erosion and sediment control technologies shall be required for any land disturbing activity that disturbs a total land surface area of 3,000 sq ft or more. All technologies deployed shall be consistent with the latest Protecting Water Quality in Urban Areas Manual. Development must be planned and conducted in a manner that will minimize the extent of disturbed areas, runoff velocities, erosion potential, and reduce and delay runoff volumes. Grading and filling of more than 250 sq ft or placement of more than 10 yd^3 of material within shore impact zone shall only be permitted provided that a plan for erosion control, stormwater management, and shoreline buffer restoration is approved by the local government and effectively implemented. Fill, excavations, grading, and other land disturbing activities shall be prohibited in bluff	Land disturbing activities, like grading or filling of even small amounts of material, generally have a serious potential for causing negative impacts to shoreland area natural resources. Some of these impacts are: sedimentation to receiving water bodies; soil deposition on adjacent properties or into wetlands; and significant erosion or soil slumping problems on steeper slopes or on highly erosive soils. Sediment delivery from construction site erosion can be a major source of pollution. Small construction sites are potential sources of large amounts of sediment erosion. The shoreline buffer is not usually adequate to prevent serious sediment delivery to lakes and rivers. However, sediment delivery from construction sites can be controlled through proper erosion and sediment control practices.

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		impact zones. Construction and land disturbing activities shall avoid wetlands. Per existing state rule, construction activities that result in land disturbance of equal to or greater than 1 acre, including the disturbance of less than 1 acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than 1 acre shall require a stormwater permit from the Pollution Control Agency. Rock riprap and retaining walls shall only be used for the correction of an established erosion problem that cannot be controlled through the use of vegetation, slope stabilization using mulch, biomat, or similar bioengineered means. Riprap and retaining walls used for ornamental purposes or for terracing natural slopes shall be prohibited within the shore and bluff impact zones. A permit shall be required for rock riprap that address a verified erosion problem that can not be controlled through the use of other means. Placement of sand, riprap, and retaining walls associated with the ordinary high water level shall comply with DNR regulations.	*Guiding Principles:* Use good science (#5), Protect and improve water quality (#6)
Stormwater Provisions	Local governments must consider proper stormwater management in all reviews, approvals, and permits. General standards are provided; however, no performance standards are given. Impervious surface coverage of lots can't exceed 25%. Constructed stormwater facilities for stormwater management must use best management practices.	Similar general standards. Two options exist for specific standards. The first option relies on the use of impervious surface coverage caps. The second option is for local governments with technical expertise to manage stormwater based on performance standards. With this option, local governments use the following permanent stormwater management requirements based on the impervious surfaces located on the project site: Permanent treatment of 1" of runoff from the impervious surfaces created by development or redevelopment is required. Preference must be given to volume reduction techniques that include infiltration basins,	Stormwater runoff is considered a major source of water pollution. The single greatest threat to Minnesota lakes and rivers is unmanaged or poorly managed rainwater runoff. It is important to manage our rainwater to reduce pollutants and excessive nutrients entering our lakes. Rainwater that does not infiltrate into the ground or evaporate runs down hill to our lakes or lake inlets. Runoff carries pollutants, such as oil, dissolved metals, pesticides, suspended solids, pet waste, and nutrients. However, if the water infiltrates into the ground, the soil and plants can purify the rainwater and runoff. The new way of managing rainwater is to get the water into the ground near where it falls (i.e., treatment of

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		rain gardens, enhanced infiltration swales, filter strips, disconnected impervious areas, and other conservation designs. For those areas of a project where there is no feasible way to meet the treatment requirements, other treatment, such as grassed swales, grit chambers, vegetated filter strips, bioretention areas, off-line retention areas, and natural depressions for infiltration, is required prior to the runoff leaving the project site or entering surface waters.	rainwater as a resource). This approach, often called low-impact development (LID), uses infiltration basins, rain gardens, grass overflow parking areas, grass swales, porous or pervious pavers, parking lot infiltration islands, and overall less imperviousness. The key principle of this new way to deal with rainwater is to get back to infiltrating most of the rainwater where it falls. This approach reduces pollutants and nutrients entering into our lakes, thus protecting the lake water quality, and it mitigates the consequences of increased imperviousness in a watershed. *Guiding Principles:* Use good science (#5), Protect and improve water quality (#6)
Impervious Surface Coverage (ISC) Limits	25%	*For local government jurisdictions that use the option that relies on the use of impervious surface coverage caps:* New residential lots – 15% (20% with stormwater management plan and conformance with shoreline buffer standards) PUDs – 25% Residential lots of record – 25% Commercial – 25% Resort – 25% (for total project area and any tier; 30% with approved stormwater management plan) Only half the area covered by porous pavers or other porous material would be counted as pervious surface if the porous system is designed and certified by a licensed engineer and best management practices were followed in design, installation, and maintenance as found in the latest Minnesota Stormwater Manual. Local shoreland controls must include specific standards for use of this credit. *For local governments with technical expertise to manage stormwater based on performance standards:* Residential lots – 25%, except for cities within areas meeting	Scientific research on the amount of impervious surface coverage has found that it is a key indicator of the quality of water flowing into our lakes. Research consistently shows that as the amount of impervious surface increases in the watershed, water quality decreases. More than 12% imperviousness has been shown to consistently result in a degradation of water quality. *Guiding Principles:* Use good science (#5), Protect and improve water quality (#6), Safeguard sensitive areas (#8)

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		the specific requirements (see 'Exceptions to Lot Size and Density Standards') the impervious surface coverage limit for non-riparian residential lots may be the same as for the underlying zoning district.	
Sewage System Standards (setbacks from ordinary high water level [OHW] in ft)	Sewage system setbacks: GD – 50 RD – 75 NE – 150 Local governments must develop and implement programs to identify and upgrade sewage treatment systems that are inconsistent with the sewage treatment system design criteria. **In M.R. 6105:** RR – 75 SR – 100 WR - 150	Subsurface sewage treatment system setbacks: *Absorption Area, Unsealed Privy* GD – 75* RR – 75 RD, SR – 100 NE, CW, WR – 150 * this distance may be reduced to 50 ft if a state approved phosphorus best management practice is employed. *Sewage Tank, Holding Tank, Sealed Privy* – 50 ft (150 ft for WR, 100 ft for SR, and 75 ft for RR) On-site subsurface sewage treatment systems must be set back 50 ft from small streams. All subsurface sewage treatment systems must meet or exceed Minnesota Rules, chapters 7080 to 7083, and any applicable local government standards. Local governments shall require obtaining a valid certificate of compliance for the subsurface sewage treatment system with conveyance of the lot or issuance of a permit or variance. Vacation home rental properties must meet or exceed applicable standards or rules of the Minnesota Department of Health and the Minnesota Pollution Control Agency.	Nitrate plumes from septic systems can be a problem, and phosphorus migrations can be a serious concern, especially in calcareous sandy soils. Research has found phosphorus plumes extending 66 to 98 ft, thus there is data to suggest that 100 ft may minimize the risk of phosphorus loading. *Guiding Principles:* Use good science (#5), Protect and improve water quality (#6)
Subdivision Options	Conventional lot and block subdivisions, residential planned unit developments, and commercial planned unit developments	Conventional lot and block subdivisions, planned unit developments, shoreland conservation subdivisions (a type of PUD), and resorts, In addition, a public values-driven collaborative development track is provided within the PUD options to give local governments flexibility in development standards. Provisions on the process and	Allowance of an alternative track for collaboration in the design of communities may provide a simple means to get subdivisions that protect sensitive areas and provide additional public benefits. *Guiding Principles:* Flexibility (#1)

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		the review requirements exist. Flexibility in development standards may be allowed when the development proposes and will provide additional tangible public benefits and advanced environmental and natural resource protections.	
Natural Areas (Open Space Standards)	For residential and commercial planned unit developments, at least 50% of the total project area must be preserved as open space.	For planned unit developments and redevelopments, natural area requirements are: (1) for cities within areas meeting specific standards (see 'Exceptions to Lot Size and Density Standards'), development and redevelopment shall meet the requirements of the underlying zoning district; and (2) in other areas, natural areas shall be at least 50% of the total project area, and the shore and bluff impact zones shall be included. Shoreland conservation subdivision developments (a specific state's standard) must have at least 50% of the total project area preserved as natural areas and there are clear natural area provisions. Natural area requirements for conventional subdivisions can be met by one or a combination of the following methods: (1) Permanently preserve at least 25 percent of the project area, (2) expand lots by 1.25 times of the minimum lot width and lot area, (3) land dedication or land preservation agreements of riparian areas, and (4) for parcel divisions into three or less riparian lots, protect riparian areas. Local governments may identify locations where riparian dedications or land preservation agreements are allowed or required for development and redevelopment for the purpose of allowing density at the underlying zoning district and for providing important open spaces such as parks, trails, and recreational and natural areas in shorelands.	The purpose of natural area standards is to conserve natural and recreational areas, including those areas containing unique and sensitive natural features such as prime agricultural soils, woodlands, steep slopes, waters, floodplains, critical fish and wildlife habitats, and wetlands. *Guiding Principles:* Think long-term (#4)
Controlled Access Lots (CALs) and Alternative Access Lots (AALs)	May be used by local governments to provide access to public waters to nonriparian lot owners. Specific standards for CALs are provided.	Control access lots are only allowed on big lakes and associated major rivers. Alternative access lots must be used as a tool for providing access to riparian lot owners	Given full-build out of lakes, many lakes are predicted to exceed safe boating density standards. Allowing these lots for non-riparian lot owners will likely create excessive

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		where direct access is not feasible due to the presence of protected vegetation, wetlands, or other critical fish or wildlife habitat. Easements to non-riparian lot owners to allow access are prohibited. Both CALs and AALs must comply with the dimensional standards for the lake or river class. Where more than six lots are to be served, the width of a CAL must increase by 25% for each lot in excess of six.	crowding issues and result in the loss of economic and environmental value. *Guiding Principles:* Think long-term (#4)
Conventional Lot and Block Subdivisions	Permitted or conditional use depending on district.	Where allowed by the local government, the common open space requirements must be met or exceeded. The open space requirements for conventional subdivisions could be met by one or a combination of the following methods: (1) Permanently preserve at least 25 percent of the project area, (2) expand lots by 1.25 times of the minimum lot width and area, (3) land dedication or land preservation agreements of riparian areas, and (4) for parcel divisions into three or less riparian lots, protect riparian areas. Lot size requirements must be met or exceeded. The impervious surface coverage for lots must not exceed 15 percent of lot area, and stormwater management must meet or exceed the specific standards.	Incentives and disincentives are used to promote the use of shoreland conservation subdivisions and PUDs, which are expected to better meet the mission of the shoreland rules. *Guiding Principles:* Incentives (#2), Protect and improve water quality (#6), Think long-term (#4), Safeguard sensitive areas, imperiled species, and critical habitats (#8)
Shoreland Conservation Subdivisions	Residential and commercial PUD standards. Resorts are commercial PUDs and must follow commercial PUD design criteria. The base residential PUD density is calculated by determining the suitable area within each tier divided by the single residential lot size standard for the lake class. Residential PUD Density bonuses: 50% – 1st tier 100% – 2nd tier 200% – 3rd tier 200% – 4th tier 200% – 5th tier Maximum density increases may only be allowed if structure setbacks are increased to at least 50% greater than the minimum (or	Resorts are separated from PUDs, and these developments have their own specific standards. A shoreland conservation subdivision is a specific State PUD standard. Shoreland conservation subdivision provisions include: - Use of 2 tiers; - Base density would be consistent with traditional residential shoreland development; - Density incentives are provided, which the developer chooses, based on elected structure setbacks (from 0 to 33% bonus increase); - Clear natural area standards (i.e., common open space standards); and - Flexibility in lot size is allowed.	Maximum densities increases were large, which reduced the intent of the rules to create or maintain open space, protect water quality, and fish and wildlife habitat. Specific open space standards are given, which are designed to protect economic and natural resource values. Beyond these simple requirements, local governments set their own design criteria for these developments. These provisions are needed to address the shortcomings of conventional subdivisions and to promote developments that are less expensive to developers, more desired by potential buyers, and that offer greater protection and conservation of natural resources in the shorelands.

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	25% with impacts reduced with other means acceptable). Commercial PUD used a floor area ratio to determined allowable density. At least 50% of total project area must be preserved as open space. Open space not defined.	Lots in first tier must not extend into the shore impact zone, and for each tier the average lot size can not exceed 20,000 sq ft.	Conservation subdivisions are an important tool used elsewhere to provide better lots for homeowners while protecting water quality, promoting economic development, and creating open space for recreational use, wildlife, and riparian buffers to protect water quality. *Guiding Principles:* Incentives (#2), Protect and improve water quality (#6), Think long-term (#4), Safeguard sensitive areas, imperiled species, and critical habitats (#8)
Resort	Resorts are commercial PUDs and must follow commercial PUD design criteria.	Resorts are separated from PUDs; however, new resorts must follow many of the PUD design criteria. Resorts may replace structures provided that stormwater management and/or shoreline buffers are addressed. Resort expansion allowances with erosion control, stormwater management, and shoreline buffer to address water quality issues. Specific shoreline recreational facilities requirements for resorts.	Resorts are given flexibility in rule due to their unique economic and cultural value within the State. *Guiding Principles:* Flexibility (#1), Correct existing site problems (#3)
Planned Unit Development (PUD)	Residential and commercial PUD standards. Without the use of the variance process, no flexibility for PUDs that did not meet the state's standard.	Where a riparian land dedication or a land preservation agreement of the riparian area is elected or required, the local government may use the planned unit development provisions of the underlying zoning district, with the following conditions: (1) standards for the placement and height of structures and facilities must be met or exceeded; and (2) if shoreland recreational facilities are allowed, the project must meet or exceed the continuous mooring standards. For cities within areas meeting specific standards (see 'Exceptions to Lot Size and Density Standards'), the PUD standards may be the same as for the underlying zoning district, with the following conditions: (1) standards for the placement and height of structures and facilities must	In the shoreland, local governments are free to use their own PUD standards with clear conditions and requirements. *Guiding Principles:* Flexibility (#1)

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		be met or exceeded; (2) the shore and bluff impact zones, based on required structure setbacks, would be included as common open space and buffers in these zones must standards; and (3) if shoreland recreational facilities are allowed, the project must meet or exceed the continuous mooring standards. Recreational vehicle parks, travel trailer parks, manufactured home parks, and recreational camping areas shall be considered a form of PUD and must be developed or redeveloped consistent with the PUD standards.	
Negotiated Review Process for the Creation of Developments that protect water quality and sensitive natural areas	Not allowed (or no criteria provided).	Local governments can apply for ordinance flexibility to use a negotiated review process for planned unit and resort developments. The commissioner shall only allow the use of this tool where a local government has adopted a comprehensive plan that includes natural resource, open space and recreational goals, and has produced a natural resource priority map for their jurisdiction. The local government may negotiate and collaborate with the applicant on various development options via an established review and approval process. Provisions include establishing goals and desired outcomes, identification of critical or sensitive natural resources, a process to compare development options and for negotiation, and DNR oversight. The negotiated result must meet or exceed the intent of the state standards.	Allowance of an alternative track for collaboration in the design of communities may provide a simple means to get subdivisions that protect sensitive areas and provide additional public benefits. *Guiding Principles:* Flexibility (#1)

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Guiding principles developed through the Statewide External Advisory Committee. See Issue Identification Report for more information.

#	Principle or Group of Principles
1	**Flexibility.** Provide flexibility (beyond density issues) via recognizing the geopolitical, geographical/regional or ecological differences found in the state. Allow densities in shoreland areas that are in context to the area's infrastructure. Provide flexibility for different regions and type of water body (lakes vs. rivers). Standards should be flexible and reflect the natural baseline condition of lakes and rivers, either individually or by region. To provide greater design flexibility and efficiency in the siting of services and infrastructure, including the opportunity to reduce surface area of roads.
2	**Incentives.** Create incentives for development and redevelopment that provide a reasonable economic return, protect natural areas, and create livable communities. Need to incorporate incentives that allow, by ordinance not variance, deviation from standards (i.e., Rain Gardens, Combining lots, Buffer Restorations, Oversized drain fields, etc.). Find opportunities (i.e., incentives) to promote appropriate land stewardship among all shoreland owners. Use incentive-based, voluntary adoption of BMPs when possible.
3	**Correct existing site problems, like septic and stormwater.** Place more emphasis on existing development and pollutant factors from them. "Other than public out cry ("not in my back yard" NIMBY) for no more development because of lake degradation and environmental – the biggest factor is septic systems that have not been updated since the original shoreland regulations of 1970." For existing development, focus on septic, stormwater controls and other performance-based standards. For redevelopment, look for opportunities to improve water quality or fish and wildlife habitat conditions (i.e., fix the sins of the past). Mandatory septic inspections for private lake homes and cabins.
4	**Think long-term.** Preserve both the short-term and long-term natural environment values of shoreland at the landscape level. Preserve both the short-term and long-term economic and natural environmental values of shoreland. Strive to protect and maintain the ecological values (form and function) of undeveloped shoreland and the adjoining lake.
5	**Use good science.** Best management practices. Use best available science.
6	**Protect and improve water quality of lakes, streams, and other water resources.** Protect and improve water quality of lakes, streams, and other water resources by including all substantially connected waterways in shoreland ordinances. This must include lakes, rivers, streams, tributaries, and ditches. Protect and improve water quality. [Our recommendations for shoreland zoning should be proportionate and reasonable!] Ensure that the construction, reconstruction, structural alteration, expansion or replacement of a structure in the shoreland zone is designed to limit environmental impacts and prevent water pollution. "It is in the best interest of the people to protect for the future Minnesota's natural legacy of clean lakes and rivers for their economic, cultural, and ecological benefits."
7	**Consistency.** [Shoreland zoning has to be consistent throughout the state. The playing field must be fair. Enforcement must be equal.] Strive for consistency of rule (e.g., definitions, applications, etc.). Strive for consistent application of rules. Create rules, regulations and definitions that are consistent between public and private entities (i.e., stormwater design criteria, wetland mitigation, usable land).

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#	Principle or Group of Principles
	Standards should be the same for all waters, and priorities for restoration and/or preservation should be developed through the TMDL process.
8	**Safeguard sensitive areas, imperiled species, and critical habitats.** Protect or maintain the integrity of sensitive habitat areas and the values of undeveloped shorelines. Protect or maintain the integrity of sensitive habitat areas and the values, including aesthetic values of undeveloped shorelines. Protect undeveloped shoreland.
9	**Education.** Promote shoreline restoration through education as a means of improving water quality and habitat in developed shoreland areas.
10	**Respect for private property rights.** Need to balance shoreland restrictions with private property owner's development interests. Respect the rights of private lakeshore owners. Rules need to be based upon sound reasoning. Education, understanding, and incentives will create desired results far easier than mandates and penalties. Desired outcomes need to take precedence over the rules themselves. Right of property owners to have access to the lake
11	**New rules should not create additional nonconformity.** New rules should not create additional non-conforming parcels or structures.
12	**Address Water Run-Off.** (Ensure construction, reconstruction, structural alteration, expansion or replacement of a structure in the shoreland zone is designed to limit environmental impacts and prevent water pollution. Incorporation of Low Impact Development (LID) infiltrative practices and native vegetative buffers into all new shoreline development and redevelopment to fully mitigate all runoff to the water body resulting from construction of new impervious surfaces within shoreland areas. Reduce erosion, sedimentation, and soil compaction through the retention of existing vegetation, minimize development on steep slopes and erodable soils.
13	**Substantive rule changes are needed** in many areas to help sustain quality shoreland habitats, aquatic habitats, and water quality.
14	**Use the Alternative Shoreland Standards** process. Use the alternative shoreland standards as a cornerstone.
15	**Recognize but do not duplicate regulatory controls** administered by other agencies. Collaborate with other state and federal agencies to share common goals and objectives.

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