

INTRODUCTION

MRCCA plans must identify and protect primary conservation areas (PCAs).

Primary Conservation Areas (PCAs) are defined in the MRCCA rules (6106.0050, Subp. 53) as key resources and features, including shore impact zones (SIZ), bluff impact zones (BIZ), floodplains, wetlands, gorges, areas of confluence with tributaries, natural drainage routes, unstable soils and bedrock, native plant communities, cultural and historic properties, significant existing vegetative stands, tree canopies and “other resources” identified in local government MRCCA plans.

MINIMUM MRCCA PLAN REQUIREMENTS

1. Map and Describe

Describe the PCAs in your community and, where applicable, map them according to the groupings and instructions listed below. Maps for items 1 – 5 below have been prepared as downloadable PDFs and JPGs and are available on your community page. Detailed mapping instructions are provided below for those who want to work with spatial data and create custom maps. GIS data is available for download through the Minnesota Geospatial Commons (MnGeo) and from the link “Download your Community Shapefiles” on your community page.

- 1. Shore impact zones (SIZs).** SIZs apply to the Mississippi and all of its backwaters, as well as to its four key tributaries, including the Crow, Rum, Minnesota, and Vermillion rivers. The depth of the SIZ on these rivers varies by district. Use the DNR’s “Mississippi River Corridor Critical Area (MRCCA) Shore Impact Zones (SIZ)” data to map them. It may help to layer the SIZ data over the DNR’s “Mississippi River Corridor Critical Area (MRCCA) Districts” data to show how the depth of the shore impact zone varies with district. Depending on the size and shape of your community, it may not make “visual” sense to map SIZs. In this case, simply describe what they are and why they are important.
- 2. Wetlands, floodplains, and areas of confluence with key tributaries.** Place the “Circular 39 Class (2009-2014)” NWI data over the FEMA floodplain data. Maps are not required to differentiate between specific wetland types or flood zones. The area of confluence with key tributaries is the general floodplain area at the confluences of the Mississippi with the Crow, Rum, Minnesota, and Vermillion rivers.
- 3. Natural drainage routes.** Use the DNR’s “Stream Routes – Major River Centerlines,” data to map natural drainage routes. Show “Stream Routes – Major River Centerlines” over the “LiDAR Hillshade” layer. Draw in any obvious drainage ways in your community not shown by the stream centerlines.
- 4. Bluff impact zones (BIZs).** Use the DNR’s “Mississippi River Corridor Critical Area (MRCCA) Bluff Impact Zones” data to map bluff features and the associated 20 foot buffer around each bluff. Within the geodatabase link, use the file “MRCCA Bluff Impact Zones.lyr”. Alternatively, you may generate your own bluff features using the DNR’s Bluff Mapping Tool, available on MnGeo. You will then need to create a 20 foot buffer around each bluff to create BIZs. Note that the DNR’s BIZ data has not been cleaned up to remove man-made features. Communities wanting to remove man-made features will have to edit the data. Man-made features are not subject to MRCCA regulations.
- 5. Native plant communities and significant existing vegetative stands.** For mapping native plant communities, use the DNR’s “Native Plant Communities” data. Native plant communities are mapped by the Minnesota Biological Survey (MBS) and identify sites that are 5 acres or greater and meet the criteria established by the MBS to qualify as a native plant community.

For mapping significant existing vegetative stands, use the dataset “National Park Service Vegetation Inventory Program, Mississippi National River and Recreation Area, Minnesota”. Within the geodatabase link, use the file “MRCCA Significant Existing Vegetative Stands.lyr”. This data was developed for the Mississippi National River and Recreation Area (MNRRA) Vegetation Inventory Project. The vegetation inventory classified and mapped all existing vegetation stands within the MNRRA (which shares the same boundary as the MRCCA). The purpose

of the project was to develop baseline vegetation information to support resource assessment, planning, and management. Ecologists, botanists, and mappers collaborated to identify and describe vegetation types using the U.S. National Vegetation Classification system. Vegetation types were identified using color-infrared digital aerial imagery from September and October 2012. This data is the most current and comprehensive inventory of existing, intact plant communities in the corridor. For complete details, please see [the full report](#). Please contact Andrew Strassman (astrassman@usgs.gov or 641.781.6386) at the USGS for questions about the inventory.

The “MRCCA Significant Existing Vegetative Stands” layer (.lyr) file was created by the DNR, but derived from the NPS’ inventory, to only depict existing vegetation stands considered “significant.” The plant communities identified in this layer file are significant because they are largely intact and connected and contain a sufficient representation of the original native plant community to be identifiable as a distinct class. Much of this vegetation includes an overstory or tree canopy that contributes to the scenic value of the MRCCA. This vegetation provides high ecological value in addition to the water quality and scenic values of “natural vegetation.” Ecologically, this vegetation provides species diversity, habitat for endangered and threatened plants (supporting 19 state-listed rare plant species and 15 state-listed rare animal species in the MRCCA), and a continuous corridor where plants and animals can naturally spread and disperse. This latter characteristic is especially important as habitat becomes more fragmented, climate change accelerates, and invasive species increase. In addition, these vegetation areas serve as living remnants of the original native communities that existed in the corridor, even though they do not meet the size and quality criteria to be classified as a Native Plant Community by the MBS.

If a local government determines that areas mapped as significant existing vegetation stands in the layer file are not accurate, contact the DNR for guidelines on removing areas from the NPS data. If a community determines that all of the vegetation in the layer file is accurately displayed, then no further analysis is required.

To get more out of their plans, communities may supplement the areas mapped using the NPS data with additional areas using data from the Minnesota Land Cover Classification System (MLCCS), local vegetation inventories, or information on restored areas.

For the purposes of identifying significant existing vegetative stands, maps are not required to differentiate between specific plant community types.

Display the native plant communities layer over significant existing vegetative stands.

6. **Cultural and historic properties.** Describe, list and/or map sites listed in the “National Register of Historic Places,” including historic landmarks and districts, as well as those determined to be eligible for national historic status and sites identified as having local cultural or historical significance.
7. **Gorges.** The gorge is generally located between St. Anthony Falls and the High Bridge. If applicable to your community, map and/or describe this area and its scenic and ecological value.
8. **Unstable soils and bedrock.** Map and/or describe known or probable areas of unstable soils and bedrock.

2. Policies

A. Required Policies

These can be used verbatim or customized as appropriate:

- Protect PCAs (List those specifically found in your community) and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).
- Support mitigation of impacts to PCAs through, subdivisions/PUDs, variances, CUPs, and other permits.
- Make restoration of removed Native Plant Communities and natural vegetation in riparian areas a high priority during development.
- Support alternative design standards that protect the LGU’s identified PCAs, such as conservation design, transfer of development density, or other zoning and site design techniques that achieve better protections or restoration of primary conservation areas.
- Make permanent protection measures (such as public acquisition, conservation easement, deed restrictions, etc.) that protect PCAs a high priority.

B. Examples

The following example policies are from existing MRCCA plans, and are meant to provide ideas for developing policies to protect and restore PCAs:

Vegetation Management

- Clear cutting is prohibited except as necessary for placing public roads, utilities, structures, and parking areas where these uses are permitted consistent with the other policies of this plan. Selective removal of natural vegetation may be allowed, provided that sufficient vegetative cover remains to screen cars, dwellings, and other structures when viewed from the water. Natural vegetation shall be restored to the extent feasible after any construction project is completed to retard surface runoff and soil erosion and to provide screening. Adequate erosion protection measures such as trees and vegetation plantings on slopes shall be used to ensure that soil loss levels do not degrade the protected water body. Cutting of “non-native invasive plant species” should not be prohibited. (Minneapolis).
- Identify and protect areas of significant vegetation, unique vegetative species and wildlife habitats within the corridor and retain existing vegetation and landscaping. (Fridley)
- Support the minimization of vegetative cutting to retain existing vegetation and landscaping and encourage landowners to reestablish native vegetation. Provide information and encourage use of alternatives to fertilizer and pesticides (Brooklyn Park)
- Protect natural resources with preservation areas on public land and work to restore wildlife habitat, particularly for threatened and endangered species, and preserve biological diversity in all areas of the corridor, especially development projects. (Brooklyn Park)
- Removal of natural vegetation in the MRCCA is prohibited, as all development shall be located to preserve the natural features of the site and to preserve significant trees or plant communities (including remnant stands of native trees or prairie grasses or plant communities that are rare to the area or of particular value). Also to be preserved are trees with a diameter at breast height of 12 inches or larger. (Minneapolis)
- Protect rare species and native plant communities by educating owners of property containing, or adjacent to properties containing, rare species and native plant communities of best management practices.

Subdivision/Development

- Conservation design and other innovative residential and mixed use development design techniques shall be encouraged within the (specify) District of the Hastings MRCCA to preserve open space, vegetative stands, and wildlife habitat areas. (Hastings).
- Subdivisions shall be designed to preserve natural topography, wildlife habitat areas and native resource features, to the extent possible. (Hastings)
- Preferred site plans will preserve existing vegetation, minimize vegetative cutting of existing trees, and include new native species plantings within the Corridor to improve scenic quality, to screen visually intrusive elements, to provide habitat and increase biological diversity, and to minimize erosion. (Dayton)
- Encourage private landowners within 300 feet of the river to retain existing undeveloped land as open space. (Mendota)

Unstable Soils and Bedrock

- Projects proposing stormwater facilities in Karst-sensitive areas must complete a Karst sensitivity analysis consistent with the LSCWMO Karst Feature Inventory and Management Plan (2007). (Denmark Twp)

Cultural and Historic Properties

- Work with the Anoka County Historical Society (ACHS), the State Historic Preservation Office (SHPO), Native American groups and any other interested organizations to identify, protect and preserve historic sites, historic buildings and archeological resources within the corridor. (Fridley)
- Sites of historical and natural interest shall be preserved and access shall be promoted to these sites for the enjoyment of residents, if appropriate. Where development and access would affect a historical or archeological site, the appropriate special interest groups shall be notified to work together with the City in development decisions. (Dayton)
- Work with the Dakota County and Minnesota Historical Societies to identify and protect the City’s cultural landscapes. (South St Paul)
- The city encourages the use of historic properties in public and private riverfront development plans, particularly where interpretation of historic themes is planned. Structures and landscapes listed on the National Register of Historic Places, and those designated as local sites should be preserved in their present condition... (St Paul).

3. Implementation Actions

A. Required Implementation Actions

These can be used verbatim or customized as appropriate:

- Ensure that information on the location of PCAs is readily available to property owners to understand how PCA-relevant ordinance requirements, such as vegetation management and land alteration permits, apply to their property for project planning and permitting.
- Establish procedures and criteria for processing applications with potential impacts to PCAs, including:
 - identifying the information that must be submitted and how it will be evaluated,
 - determining appropriate mitigation procedures/methods for variances and CUPs,
 - establishing evaluation criteria for protecting PCAs when a development site contains multiple types of PCAs and the total area of PCAs exceed the required set aside percentages.
- Developing administrative procedures for integrating DNR and local permitting of riprap, walls and other hard armoring. (**Note:** Application procedures will be a required element of MRCCA ordinance review and approval.)

B. Examples

None available from existing plans

MRCCA ORDINANCE REQUIREMENTS

Following are specific ordinance requirements that pertain to PCAs. Understanding these requirements will help guide development of the MRCCA plan for effective ordinance administration.

Structure and Impervious Surface Placement

1. Structures and impervious surface must not be located in the SIZ or BIZ
2. Roads and driveways associated with public recreational facilities must not be located in the SIZ or BIZ, unless no alternative
3. Hard-surface trails are not allowed on bluffs exceeding 30%
4. Water-oriented accessory structures (WOAS) not allowed in BIZ
5. Trails, and viewing areas (signs, kiosks) for public recreational facilities allowed in BIZ and SIZ if consistent with BMPs
6. Limits on private access path widths in SIZ and BIZ
7. Structures and impervious surfaces (including private roads & parking) must be set back specific distances from the OHWL and bluffline.
8. Decks/patios may encroach into setbacks from OHWL and bluff lines per formula, but not into BIZ
9. Mining is prohibited in SIZ/BIZ and bluffline setback
10. Cell towers prohibited in SIZ/BIZ

Variances and CUPs

1. Negative impacts to PCAs must be evaluated for variances and CUPs
2. If impacts, then mitigation required

Project Information

1. LGUs must require submission of relevant project information to evaluate how proposed development complies with MRCCA plans and ordinances, including maps, plans and other materials that describe PCAs. Drainage patterns, existing topo, existing vegetation, OHWL, and blufflines are PCA-related features that are specifically listed in addition to PCAs.

Vegetation Management

1. Intensive clearing not allowed (except by permit) in the following PCAs: SIZ, BIZ, within 50 feet of wetlands or natural drainage ways, native plant communities, and significant vegetative stands.
2. Intensive clearing not allowed except for the “minimum necessary for development that is allowed as an exception under part 6106.0180.” This is provision 6106.0150 Subp. 3. A. (5).
3. Applicants requesting permits to allow intensive clearing must submit information to evaluate permits.
4. Local governments must attach conditions to permits to assure:
 - Development is sited to minimize removal/disturbance of natural vegetation
 - Removal activities are conducted so as to expose the smallest practical area of soil for the least possible time.
 - Soil, slope stability and hydrologic conditions are suitable for proposed work, as determined by engineer or resource agency.
 - Clearing is confined to the minimum area necessary and blends with terrain and minimizes visual impact to PRCVs.
 - Vegetation restoration:
 - For any native plant communities (NPCs) removed they must be replaced with vegetation of

- equivalent function.
- For all other vegetation removed they must be restored with natural vegetation to the greatest extent practicable.
- Restoration priorities:
 - Stabilization of erodible soils
 - Shoreline/riparian edge
 - Bluffs and steep slopes visible from river
- Disturbance of highly erodible soils is replanted with deep-rooted vegetation

Land Alteration

1. Land alteration is prohibited in the BIZ except by permit
2. Stormwater facilities are prohibited in BIZ except by permit
3. Land alteration in the water quality impact zone (WQIZ) over 10 cy or 1,000 sf requires a permit. The WQIZ is land within the SIZ or within 50 feet of public water wetland or natural drainage way, whichever is greater.
4. Construction/replacement of riprap/retaining walls within the BIZ and WQIZ are only allowed by permit
5. Permits to conduct riprap work below the OHWL require approval of the DNR Commissioner
6. Riprap must not exceed the height of the regulatory flood protection elevation (RFPE)
7. In the WQIZ, new/reconstructed impervious surface over 10,000 sf requires SW permit
8. Local governments must attach conditions to permits to assure: (covered similarly under the veg permit)
 - Natural site topo, soil and vegetation are used to control runoff and reduce erosion
 - Work is consistent with vegetation standards (prohibition on intensive clearing)
 - For SW facilities in BIZ – construction/operation does not affect slope stability and mitigation is applied to minimize risk of slope failure.

Subdivision

1. Standards apply to subdivisions, PUDs, and master-planned development and redevelopment of land.
2. Ordinance must contain provisions, including incentives, for “alternative design methods” such as conservation design, transfer of development density, or other zoning and site design techniques that achieve better protections or restoration of primary conservation areas.
3. PCAs, where they exist, must be set aside (in amounts specific to each district) as open space and permanently protected.
4. The CA-SR district requires a 10% set aside only if the parcel contains native plant communities OR provides feasible connections to a regional park or trail system.
5. If the amount of PCAs exceeds the required set aside, the LGU can determine which PCAs are to be protected.
6. If PCAs exist but do not have natural vegetation, then a vegetation assessment must be completed for the areas to be protected to determine whether vegetation restoration is needed.
7. If no PCAs, the LGU must determine whether any portion of the site has been identified as potential restoration areas (Restoration Priorities Plan Element). If potential restoration areas exist, then vegetation must be restored.
8. Storm water treatment or other green infrastructure may be used to meet the open space set aside requirements if the vegetation provides biological and ecological functions.
9. Any land dedicated for public access or “public facilities” may be counted toward the set-aside requirements.
10. Open space must be permanently protected by acquisition, easement, deed restrictions or other arrangements that achieve an equivalent degree of protection by local government.
11. Protected open space areas must connect open space, natural areas, and recreational areas, where present on adjacent parcels, as much as possible to form a connected network.
12. LGUs requiring dedication must encourage dedication of lands suitable for river access, parks, open space, SW management within the MRCCA.

MORE INFORMATION

Please contact Matthew Bauman (matthew.bauman@state.mn.us) at the Minnesota Department of Natural Resources for additional information.

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**LOCAL PLANNING
HANDBOOK**

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