

## MEMORANDUM

Rice Creek Watershed District

Board Approved: December 7, 2011

**To:** RCWD Board of Managers **Date:** November 21, 2011  
**From:** Matt Kocian, Lake and Stream Specialist  
Tom Schmidt, Drainage Inspector  
**Subject:** RCWD Natural Channel Management Policy

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**Background**

Rice Creek Watershed District staff received an increased number of requests for maintenance on Rice Creek in 2011. In most cases, the requests were for removal of downed trees. High water levels in the spring, a significant July flooding event, and a number of summer storms with high wind may have contributed to the increased number of requests. Considerable financial and staff resources would be required to comply with these requests.

The District maintains a comprehensive policy on the maintenance of the public drainage system. However, in reviewing the District's 2010 Watershed Management Plan, there is little reference to the policy of maintenance of natural channels. Section 6.3.2.4 states: *The primary management responsibility of the District for the Trunk Drainage System [including Rice, Hardwood, and Clearwater Creeks] is to ensure conveyance capacity by using a stable channel.*<sup>1</sup> The point at which a fallen tree or a debris jam becomes an impediment to "conveyance capacity" is uncertain, and subject to a wide degree of interpretation by landowners. Also open to interpretation is the reference to "stable channel". Often times the primary concern of a landowner requesting tree removal is stream bank erosion.

The purpose of this memo is to summarize a proposed set of criteria that could be used to craft a Rice Creek Watershed District policy on the management of natural waterways. This policy would NOT pertain to the public drainage system. Also, the policy would NOT pertain to emergency situations where the Board may choose to act directly. **Appendix A** depicts natural stream channels and public ditches within the Rice Creek Watershed.

**Stable Channel, Bank Erosion, and Stream Ecology**

Stream systems are, by nature, always changing. Over time, streams move without human influence; in-stream erosion and sediment deposition work together as streams evolve. However, when the balance between sediment erosion and deposition is altered, stream channels may become *unstable*. A significant increase in downstream sediment transport is often a key effect of channel instability. Alternatively, while stream bank erosion may transport significant amounts of sediment downstream, it will not lead to greater stream instability. Smaller bank erosion issues (i.e. associated with fallen trees) may not have any negative impact. In some

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<sup>1</sup> There is no reference in the 2010 Watershed Management Plan to the District's responsibility for management of Rice Creek as part of the Rice Creek Water Trail.

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cases, fallen trees may act as temporary sediment trap. Fallen trees and woody debris also provide critical habitat for fish and aquatic invertebrates.

The District policy for maintenance of natural channels should recognize the difference between bank erosion and channel instability, as well as the ecological benefits of some woody debris.

### **Landowner Cooperation**

In some instances, landowners along natural waterways may not desire management activities. For example, Ramsey County Parks does not have concerns about beaver dams on Middle Rice Creek, and would not want District Staff to cross park property for removal<sup>2</sup>. Similarly, while a landowner may like the District to removal a fallen tree, they would not be willing to allow contractor equipment to cross their property.

The District policy for maintenance of natural channels should recognize the importance of landowner cooperation. When maintenance activities would require crossing private property, the District might consider requiring a temporary easement, or statement of indemnification.

### **RCWD Policy on Natural Waterway Management – Board Approved 12/07/11**

Maintenance activities performed by the District as part of the Natural Waterway Management Program include, but are not limited to the removal of fallen trees, debris jams, and beaver dams.

The primary goals of the District relating to natural waterways, as reflected in its mission statement, are flood control, water quality enhancement, and recreational use.

Thus, the following are a set of criteria under which the Rice Creek Watershed District would consider maintenance of natural waterways (non-public drainage) within the Watershed:

1. Maintenance Pertaining to Channel Capacity and Bank Erosion
  - a. As determined by District Staff, an obstruction exists in the channel that is directly contributing to persistent or prolonged and significant flooding;
  - b. As determined by District Staff, non-action would result in significant downstream sediment transport due to stream bank erosion;
  - c. As determined by District Staff, non-action would result in stream instability, such as significant stream down cutting, or meander (oxbow) cutoff.
  
2. Maintenance Pertaining to Recreational Use

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<sup>2</sup> Under State Watershed Law (103B), the District maintains the right to access waterways for inspection, and to conduct projects for the greater good. However, the District would be liable for any damages caused (e.g. with heavy machinery).

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- a. Maintenance on natural channels to benefit canoe/kayak passage as part of the Rice Creek Water Trail will occur:
    - i. In partnership with other Rice Creek Water Trail management agencies (Anoka County Parks, Ramsey County Parks, the National Park Service, and the Friends of the Mississippi River);
    - ii. As funding is available from other Rice Creek Water Trail management agencies.
  - b. The District will not assume responsibility for maintenance on natural channels to benefit motorized recreational use (i.e. motorboats).
3. Property Owner Considerations
- a. Maintenance that requires access over land will require the support of the landowner;
  - b. Before maintenance that requires access over land, the District will obtain a statement of indemnification from the landowner.

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### APPENDIX A – Stream and Public Ditches in the Rice Creek Watershed

