Montana Department of Natural Resources and Conservation

~ Guidance for Landowners and Practitioners Engaged in Stream and Wetland Restoration Activities ~

This document offers guidance for the development and implementation of wetland and stream restoration projects as they pertain to Montana water rights. These guidelines are not intended to offer official departmental policy nor do they serve as a substitute for administrative rules established through the rulemaking process. DNRC's intention in the development of these guidelines is to provide an educational resource to the public and restoration practitioners involved in the work of stream and wetland restoration efforts.

This document discusses restoration techniques in terms of whether or not they constitute a diversion, impoundment or withdrawal of a quantity of water for beneficial use, which is how the Montana Water Use Act defines an appropriation of water that requires a water right. This document only pertains to State of Montana water right issues and does not contemplate other aspects of private property rights or civil law. This document also does not contemplate permitting requirements in addition to those directly relating to Montana water rights, but other permitting information can be found here: http://dnrc.mt.gov/licenses-and-permits/stream-permitting

DNRC strongly encourages individuals engaged in restoration work to contact their local DNRC Regional Office staff to obtain assistance regarding water rights questions for specific restoration projects:

Billings: (406) 247-4415 Bozeman: (406) 586-3136 Glasgow: (406) 228-2561 Havre: (406) 265-5516 Helena: (406) 444-6999 Kalispell: (406) 752-2288 Lewistown: (406) 538-7459 Missoula: (406) 721-4284

Background:

There is concern that inappropriately assuming a water right is required for wetland and stream restoration projects, including beavery mimicry, might limit ongoing ecological restoration efforts. Conversely, there is concern that some projects described as restoration are not comporting with water right laws when water is artificially manipulated through diversion, impoundment, excavation, groundwater pumping, or other means. Some of these activities may require a water right and some may not.

Appropriations under Montana Law:

Article IX, section 3(3) of the Montana Constitution provides that all surface, underground, flood, and atmospheric water within the boundaries of the state are the property of the state for its people and are subject to appropriation for beneficial uses as provided by law. These constitutional provisions are the basis of state laws that mandate an individual acquire a water right when intentionally ***Appropriating*** water for a ***Beneficial Use***. There are various types of water rights, including but not limited to *Statements of Claim*, *Permits*, and *Groundwater Notices of Completion*

(aka groundwater exceptions to a permit or exemptions from a permit or 602 wells), but this principal is consistent throughout: a water right is required to appropriate water for a beneficial use in the State of Montana.

Montana Statute defines ***Appropriate*** to divert [through Means of Diversion], impound, or withdraw, including by stock for stock water, a quantity of water for a *Beneficial Use* (MCA 85-2-301(1)). The Administrative Rules of Montana further describes appropriations by defining ***Means of Diversion*** as the type of structures, facilities, or methods used to *Appropriate*, impound, or collect water. Examples include, but are not limited to the following: dike, dam, ditch, headgate, infiltration gallery, pipeline, pump, pit, or well (ARM 36.12.101(36)). ***Beneficial Use*** means a use of water for the benefit of the appropriator, other persons, or the public, including but not limited to agricultural, stock water, domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, and recreational uses. *Beneficial Use* includes specific instances of instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource; *Beneficial Use* includes aquifer recharge, mitigation, and aquifer storage and recovery projects (MCA 85-2-102(4)). The DNRC has determined as a matter of policy that some wetland projects constitute a beneficial use under the Montana Water Use Act, as wetland habitat is inextricably linked to the beneficial uses such as aquifer recharge and fish and wildlife. Furthermore, these laws assume that a water user has intent to put the water to beneficial use and intent to protect those uses, which is why water right uses are governed by prior appropriations for purposes of prioritizing among multiple water users.

Wetland and stream restoration projects that intentionally divert, impound, or withdraw a quantity of water through a human-controlled diversion for a beneficial use clearly require a water right. However, these types of projects are highly variable and diverse which can make them difficult to categorize with respect to water rights. Wetland and stream restoration projects often rely on human initiated alterations to the landscape and/or hydrology with the purpose of restoring or resetting the natural functionality of wetland and stream systems. Sometimes these alterations are very similar to activities commonly associated with appropriation and beneficial use and as a result require water rights. Because restoration methods are so diverse, these activities are neither entirely exempt from water right requirements nor collectively mandated to acquire water rights. This document outlines a number of specific restoration practices as they relate to water right requirements.

The necessity of a water right for a particular restoration project depends upon numerous factors. For this reason, DNRC recommends that you contact your regional office with any water right related questions regarding this guidance document. The fact that a water right may not be required for some restoration activities does not mean that the activity is legal. An activity that results in the waste of water, prevents water from moving to another person, or violates the Montana Water Use Act is illegal and may be subject to judicial enforcement proceedings initiated by the department or another water user. Section 85-2-114, -122, and -125, MCA. Furthermore, restoration projects may be subject to other permitting or regulatory requirements under Montana law. DNRC recommends that you consult the appropriate regulatory agency and seek additional counsel regarding non-water right issues associated with wetland and stream restoration projects.

Water Rights Information:

Depending upon the specifics of the project, it may be necessary or advantageous to secure a water right even on a temporary basis for some restoration projects. The Montana Water Use Act provides numerous methods for obtaining a water right to facilitate or enable restoration efforts on a temporary or permanent basis. For more information on seeking a groundwater certificate (602 form), new right to appropriate (85-2-301 MCA), temporary change in an appropriation right (85-2-407 MCA), short term lease of an appropriation right (85-2-410 MCA), temporary permit (85-2-311 MCA), or other means of ensuring restoration projects comply with regulations, please contact your regional DNRC office or refer to the "Water Rights in Montana Handbook" available online at http://dnrc.mt.gov/divisions/water/water-rights/docs/2014-water_rights_in_mt_handbook.pdf.

Wetland Projects:

For the purpose of this discussion, wetland projects are categorized in terms of *Creation [Construction]*, *Restoration*, and *Enhancement*.

Wetland *Creation* [*Construction*] is the construction of an artificial wetland on a site that was historically non-wetland. Their uses include, but are not limited to landscaping, wildlife enhancement, water quality improvement, and sewage treatment. These wetland projects will always require a water right since water is artificially controlled and diverted to a place-of-use to create artificial wetland features in areas where natural wetland features have not existed in the past. It is noteworthy that some wetland creation [construction] projects used for treatment of wastewater from a public sewage system may not necessarily require a water right specific to reusing wastewater [or purposed as wetland] but that the use of this water is still predicated on an existing water right.

Wetland *Restoration or Historic Restoration* is the rehabilitation of a degraded wetland or the reestablishment of a wetland so that soils, hydrology, vegetative community, and habitat are restored to a close approximation of the original *natural* condition that existed prior to modification to the extent practicable. The term "natural" is emphasized here because a restored wetland should have characteristics similar to other natural wetlands in the area. Pool depths, water conveyance, vegetation and wetland water period of impoundments should share similar characteristics to other wetlands in the area. In the long-term, restored wetlands should function entirely in the absence of artificial controls and diversions of water that intentionally appropriate water for wetland use.

Wetland *Enhancement* is the modification of an existing wetland that augments specific wetland characteristics. Some augmentations, such as the non-irrigated promotion of specific plant species, are unlikely to artificially control water and increase water consumption above and beyond natural levels. However, in some wetland enhancements, impoundments and excavations are used to deepen wetland pools, diversions and headgates are used to impound water for longer periods, or the artificial control of water is used to encourage a larger area of wetland vegetation. Any of these types of enhancements that ultimately increase the amount of consumed or diverted water use beyond natural levels, require a water right.

To determine whether or not a wetland project results in a natural, constructed, or enhanced wetland, it is essential to compare the final project design to local natural wetlands characteristics. Characteristics to consider may include relative standing water (pool) dimensions, wetland plant species composition, wetland periods-of-impoundment, baseflow streamflow outputs, elevation

profiles, and floodplain connectivity. Any wetland project (restoration) whose final design approximates the natural characteristics of adjacent natural wetlands or approximates something smaller in magnitude does not require a water right. Any wetland project that results in deeper than normal wetland pools, higher in elevation water profiles, longer than typical periods of impoundment, curtailment of normative streamflow outputs, or diminished connection to the floodplain are wetland projects (enhancement or creation) that are more likely to require a water right. Wetland project designs should include descriptions of these characteristics as they pertain to water right demands.

It is worth looking at some specific techniques associated with wetland restoration projects, as they relate to water rights:

1. Excavations – The removal of fill (soil and rock) that was historically used to level and dry wetland areas so that they could be repurposed, through excavation, does not typically require a water right so long as the final wetland structure approximates natural characteristics. In contrast, an excavation that creates a wetland that will not be connected to a floodplain or not be located in an area that historically contained wetlands will require a water right. An excavation that results in the enlargement of a natural wetland or the enhancement beyond natural dimensions of a wetland will require a water right. Pool deepening beyond natural wetland conditions through excavation requires a water right.

2. Diversion – Any wetland that uses water sourced from a dike, dam, ditch, headgate, infiltration gallery, pipeline, pump, pit, or well will require a water right. [Groundwater Certificates (form 602), also known as exceptions to permits, are a type of water right]

3. Impoundments – Wetlands naturally impound water through natural depressions in the landscape and/or the existence of hydric soils that absorb and store water during periods of high flow and precipitation. These types of natural impoundments result in wetland associated aquifer recharge and storage and do not require a water right. In contrast, wetlands that use human-created berms, human-created dams, and dikes that result in wetlands that are perched in excess of elevation profiles of natural wetlands in the local area, require a water right for those portions of the wetland that are in excess of a natural wetland formation, as they are “enhanced wetlands” as compared to “natural wetlands.” All impoundments that result in “created wetlands” require a water right for the entire appropriation.

4. Removal of Drains – Many wetlands have historically been converted to agricultural land through the process of installing drain-ditches to remove wetland impounded water thereby converting wetland hydric soils to agricultural soils and converting wetland vegetation to agricultural crops. Restoration of drained wetlands often involves elimination of drains that can include the installation of drain-plugs, the filling of drain-ditches, removal of drain tiles, or otherwise causing cessation of the draining of soil and the eventual promotion of hydric soil development. This activity typically does not require a water right. However, activities that affect the water availability or supply of other water users may result in other types of private property liability issues

5. Wetland Vegetation Planting, Seeding, and Establishment – Wetland plant evapotranspiration (ET) is part of a natural system, but some restorations projects require temporary irrigation of newly seeded, planted, and waddled vegetation during the first years of plant establishment after a restoration action has occurred. So long as water is being applied for the establishment of what will become naturally occurring wetland plants associated with a

restoration activity, and the resulting consumptive use is not more what will be the naturally occurring ET of the wetland vegetation after it becomes established, no water right is needed.

Stream Restoration Projects:

Stream or river restoration projects involve activities intended to restore degraded ecosystems to a stable, healthy condition. Channel restoration, floodplain reconnection, the addition of channel structural complexity, bank stabilization, riparian planting and seeding, dam removal, fish passage construction, biological restoration, beaver dam analogues and flow augmentation are discussed here. Stream restoration typically does not include the protection of water under the Prior Appropriations Doctrine.

1. Channel Restoration – Channel restoration or modification is typically used to address channels degraded from down-cutting/incising, widening, artificial braiding, irregular lateral scour, or other impacts to channel morphology. Channel restoration can include full re-sculpting and grading of the channel, installation of cross-vanes or other water velocity reduction structures, engineered log jams, or other channel features designed to raise the stream bed elevation of incised channels and restore floodplain and hydraulic connectivity. Channel restoration does not include channel modifications designed to improve diversions or impoundments of water for withdraw or instream protection under the Montana Water Use Act. Accordingly, channel restoration activities typically do not require a water right. Some grade control structures, developed to address channel incision for example, result in the formation of low velocity backwater and pool areas. Generally speaking, in-channel grade control structures that pool or pond less than 0.1acre-foot of water will not require a water right.

2. Adding Channel Structural Complexity – This category of restoration activity often overlaps with channel restoration, and may use engineered log jams, root wads, and the insertion of large woody debris to provide slow water habitat and promote scour pool formation. The objectives are typically more focused upon improving aquatic habitat conditions for fish and other aquatic organisms as opposed to channel restoration which is typically designed to address issues of high flow energy and undesirable channel meandering. As far as water rights are concerned, the same principles apply as those articulated in the channel restoration section.

3. Beaver Analogues - The construction of beaver dam analogues generates approximations of naturally occurring beaver dams and beaver ponds, done in a manner intended to also promote the channel stability, diverse aquatic habitat conditions, flow energy dissipation, floodplain connectivity, and other benefits associated with naturally occurring beaver formations. These features are typically deformable grade structures that are not entirely water tight allowing for fish passage both upstream and downstream as well as the conveyance of base streamflows. They may include dam anchors of large buried logs that are incorporated into the dam and are typically constructed from biodegradable materials and designed to inundate as well as incorporate flow deposited cobble, gravel, and other non-organic materials. So longs as beaver analogues do not use control gates, culverts, headgates, ditches, or pipelines, they typically do not require a water right.

If installing a series of structures, deformable or otherwise, within close proximity of each other, it is highly recommended that you discuss project specifics with your regional DNRC office. Projects that pool or pond more than 0.1acre-foot of water per structure or per series of structures in close proximity may require a water right.

4. Bank Stabilization - Bank stabilization takes many forms, all of which tend to focus on the armoring of stream and river banks. Projects focused on the installation of hard- and bio-engineered structures typically do not have any water rights requirements.

5. Riparian Vegetation Planting, Seeding, and Establishment – Riparian plant ET is part of a natural system, but some restorations projects require temporary irrigation of newly seeded, planted, and waddled vegetation during the first years of plant establishment after a restoration action has occurred. So long as water is being applied for the establishment of what will become naturally occurring riparian plants associated with a restoration activity, and the resulting consumptive use is not more than what will be the naturally occurring ET of the riparian vegetation after it becomes established, no water right is needed.

6. Dam Removal – Any removal of human-made dams will likely involve water rights, as all legally operating existing dams are required to have obtained a water right for their use and those water rights must be considered when decommissioning a dam. It is necessary to identify each and every existing water user who is legally entitled to the continuation of the operation of any dam being removed, as each of those water users may have unique claim to title and use that needs to be addressed before dam removal.

7. Fish Passage Construction – Dedicated fishways, fish passages, or fish ladders are similar to side-channels of a river. They only serve to route water and therefore do not require a water right.

8. Biological Restoration – Biological restoration is the restoration of biological organisms and focuses on the manipulation of species composition with actions that aide the desirable or removal of undesirable organisms. Biological Restoration projects typically do not involve water rights issues.

9. Flow Augmentation – Flow augmentation, as presented here, is the increase of instream flow through water transactions that include, but are not limited to: acquiring instream flow water rights and protecting water instream through prior appropriations, acquiring other purposed water rights and changing them to instream flow and protecting water instream through prior appropriations, storing/releasing water, and the establishment of diversionary reduction agreements. Any flow augmentation project that involves the acquiring of protectable [prior appropriations] water supplies, including storage, to purpose or repurpose for instream use always involves water rights, often of a complex nature.