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William T. Wagner
GARLINGTON, LOHN & ROBINSON, PLLP
199 w. Pine – P.O. Box 7909
Missoula, MT 59807-7909

**SECOND RESTATED DECLARATION OF COVENANTS,
CONDITIONS,
RESTRICTIONS AND EASEMENTS FOR
CANYON RIVER**

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- EXHIBIT B:** DESCRIPTION OF ANNEXABLE PROPERTY
- EXHIBIT C:** RIPARIAN MANAGEMENT PLAN
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**SECOND RESTATED DECLARATION OF COVENANTS, CONDITIONS, AND
RESTRICTIONS AND RESERVATION OF EASEMENTS
FOR CANYON RIVER**

This Second Restated Declaration ("Declaration") is made this 22nd day of July, 2010 by **CANYON RIVER DEVELOPMENT, LLC**, a Montana limited liability company ("Declarant"), and restates, revises and supplants prior Declarations as identified in Recital F, below.

RECITALS

A. Declarant owns real property described on attached Exhibit A ("Initial Phase").

B. Declarant also owns real property described on attached Exhibit B ("Annexable Property").

C. Declarant intends to develop the Initial Phase and the Annexable Property in the Canyon River subdivision pursuant to the Act. The Initial Phase (and portions of the Annexable Property as are annexed), and all improvements from time to time constructed thereon, is referred to as the "Project."

D. If fully developed as planned, the Project will contain 270 lots (individually a "Lot" and collectively "Lots") intended for single family residential use and the development and maintenance of a Residential Unit and related common areas.

E. Declarant intends by this Declaration to impose upon the Project mutually beneficial restrictions under a general plan of improvement for the benefit of all Owners of Lots in the Project that will become subject to this Declaration.

F. Declarant previously recorded:

- 1) an initial Declaration of Covenants, Conditions, Restrictions and Easements for Canyon River on March 28, 2005 in Book 749, Page 1163, records of Missoula County, Montana, Document No. 200506809;
- 2) a Restated Declaration of Covenants, Conditions, Restrictions and Easements for Canyon River on June 2, 2005 in Book 753, Page 1126, records of Missoula County, Montana, Document No. 200513181 shall be of no further force or effect;
- 3) a First Amendment to Restated Declaration of Covenants, Conditions, Restrictions and Easements for Canyon River on June 5, 2005 in Book 757,

Page 999, records of Missoula County, Montana, Document No. 200520119;
and

- 4) a Second Amendment to Restated Declaration of Covenants, Conditions, Restrictions and Easements for Canyon River on June 29, 2007 in Book 800, Page 700, records of Missoula County, Montana, Document No. 200716495.

DECLARATION

NOW, THEREFORE, Declarant hereby declares that the Project shall be held, sold, mortgaged, encumbered, used, occupied, improved and conveyed subject to the following declarations, limitations, easements, restrictions, covenants, and conditions which are imposed as equitable servitudes pursuant to a general plan for the development of the Project for the purpose of enhancing and protecting the value, desirability and attractiveness of the Project as a first-class residential development adjoining a quality golf course. These restrictions, covenants, conditions and easements shall run with the Project and be binding on Declarant, its successors and assigns, and on all parties having or acquiring any right, title or interest in or to the Project or any part thereof, and their respective heirs, successors and assigns, and shall inure to the benefit of each Owner thereof.

ARTICLE I **DEFINITIONS**

The terms in and exhibits to this Second Restated Declaration shall generally be given their natural, commonly accepted definitions except as otherwise specified. Capitalized terms shall be defined as set forth below:

1.1 “Act” shall mean and refer to the Montana Subdivision & Platting Act, §§ 76-3-101, *et seq.*, Mont. Code Ann.

1.2 “Annexable Property” shall mean the property described on attached Exhibit B.

1.3 “Architectural Control Committee” or “ACC” shall be the committee described in Section 6.3.

1.4 “Articles” shall mean and refer to the Articles of Incorporation of the Association, as amended from time to time.

1.5 “Assessment” shall mean that portion of the cost of maintaining, improving, repairing, operating and managing the Project, which is to be paid by each Owner as determined by the Association, and shall include regular and special assessments, and each Owner’s share of Common Expenses.

1.6 “Association” means the Canyon River Homeowners Association, a Montana non-profit mutual benefit corporation, the Members of which shall be the Owners of Lots in the Project.

1.7 “Board” or “Board of Directors” shall mean and refer to the governing body of the Association.

1.8 “Bylaws” shall mean and refer to the Bylaws of the Association, as amended from time to time.

1.9 “Common Area” or “Common Areas” shall mean and refer to the portions of the Project and all improvements thereon designated from time to time in this Second Restated Declaration or in any supplemental declaration, which is to be or is actually owned by the Association for the common use and enjoyment of the Owners. Common Areas within the Initial Phase are indicated on the recorded plat maps.

1.10 “Common Expenses” means and includes the actual and estimated expenses of operating the Common Area (and pursuing, implementing, and executing the intent, purposes, business and affairs of the Association) and any reasonable reserve for such purposes as found and determined appropriate by the Board, and all sums designated Common Expenses by or pursuant to this Second Restated Declaration, the Articles, Bylaws or Rules. Common Expenses also include costs and reserves (if appropriate) incurred by the Association in connection with maintaining the Project and any areas at or adjacent to it that the Association is otherwise required to maintain as required by the City or County of Missoula, Montana, or any other governmental agency in jurisdiction. Funds to pay all Common Expenses may be collected as part of Assessments. Common Expenses include street lighting, maintenance and upkeep of the water feature at the entrance to the Project and of future water features, landscaping and maintenance of the Common Areas and maintenance areas noted in Section 5.1, landscaping and maintenance of the boulevards and sidewalks (including snow removal), maintenance and upkeep of any community center or recreational facilities, and all expenses associated with utilities and water for the Common Areas.

1.11 “Declarant” shall mean and refer to Canyon River Development, LLC, a Montana limited liability company, and any successor or assign that expressly assumes the rights and duties of Declarant hereunder in a recorded written document.

1.12 “Declaration” shall mean and refer to this Second Restated Declaration, as amended or supplemented from time to time.

1.13 “Development Period” refers to the period of time during which Declarant is entitled to exercise Development Rights and Special Declarant Rights. The

Development Period commenced upon filing the initial Declaration on March 28, 2005 and terminates January 10, 2025, unless extended by agreement between Declarant and the Association or unless sooner terminated as a result of the sale of all Lots.

1.14 “Development Rights” shall mean and refer to rights reserved to Declarant to (a) submit additional property to be subject to this Second Restated Declaration; (b) create Lots and Common Area; and (c) subdivide lots or convert Lots into Common Area. Development Rights may be exercised in all or any portion of the Project at any time during the Development Period.

1.15 “Estate Lots” shall mean and refer to those Residential Lots designated Lots 1A through 120A on the Plat Maps and Master Plan.

1.16 “First Lender” shall mean any bank, savings and loan association, insurance company, or other financial institution holding a recorded first mortgage on any Lot.

1.17 “First Mortgage” shall mean and refer to any recorded mortgage made in good faith and for value on a Lot with first priority over other mortgages thereon.

1.18 “Foreclosure” shall mean and refer to the legal process by which the mortgaged property of a borrower in default under a Mortgage and the borrower’s interest therein is sold, pursuant to applicable law.

1.19 “Initial Phase” or “Phase 1” shall mean the real property described on attached Exhibit A.

1.20 “Lot” or “Residential Lot” shall mean any legally subdivided parcel within the Project intended for single family residential use and the development and maintenance thereon of a Residential Unit. The term “Lot” shall not include Common Areas or Common Area Lots designated as such on the Plat Maps. Residential Lots are normally designated as numbered lots on recorded Plat Maps. The Residential Lots designated as “Meadows Lots” on the Plat Maps shall constitute a Neighborhood, which are subject to Neighborhood Assessments by the Association.

1.21 “Master Plan” shall mean and refer to the Master Land Use Plan for the development of the Project as amended from time to time. Inclusion of property on the Master Plan shall not obligate Declarant to subject such property to this Second Restated Declaration.

1.22 “Meadows Lots” shall mean and refer to those Residential Lots designated Lots 1 through 150 on the Plat Maps and Master Plan.

1.23 “Member” shall mean and refer to a person entitled to membership in the Association and “Membership” shall refer to such entitlement.

1.24 “Mortgage” includes a trust indenture or deed of trust, as well as a Mortgage.

1.25 “Mortgagee” includes a beneficiary or a holder of a trust indenture or deed of trust, as well as a Mortgage.

1.26 “Mortgagor” includes the grantor or trustor of a trust indenture or deed of trust, as well as a Mortgagor.

1.27 “Neighborhood” means certain Lots designated by the Board in which the Owners have specific common interests other than the common interests of all Owners. The Board may designate a Neighborhood from time to time and revise or delete a Neighborhood at any time. The Meadows Lots constitute a Neighborhood.

1.28 “Neighborhood Assessment” refers to that portion of the costs of maintaining, improving, repairing, operating and managing the Neighborhood, which is to be paid by each Owner of a Lot in the Neighborhood as determined by the Association, and shall include regular and special Neighborhood Assessments.

1.29 “Neighborhood Expenses” means and includes the actual and estimated expenses of maintaining the Neighborhood (and pursuing, implementing, and executing the Association’s intent, purposes, business and affairs as to the Neighborhood), and any reasonable reserve for such purposes as found and determined appropriate by the Board. Funds to pay Neighborhood Expenses shall be collected as part of the Neighborhood Assessments. Neighborhood Expenses include maintenance of lawns, boulevards and Common Area landscaping, water for sprinkling, installation, maintenance and blow out of sprinkling systems, and snow removal of the Meadows Lots and Residential Units located on the Meadows Lots.

1.30 “Owner” or “Owners” shall mean and refer to the record Owner, whether one or more Persons, of fee simple title to any Lot which is a part of the Project, but excluding those Persons having an interest merely as security for the performance of an obligation. If a Lot is sold under a contract of sale and the contract is recorded, the purchaser, rather than the fee owner, shall be considered the “Owner” from and after the date the Association receives written notice of the recorded contract.

1.31 “Person” means a natural person, a corporation, a company, a partnership, a trust, or other legal entity.

1.32 “Plat Map” shall mean and refer to any recorded subdivision Plat Map covering all or any portion of the Project.

1.33 “Project” shall mean and refer to the Initial Phase and any Annexable Property which is annexed thereto and becomes subject to this Second Restated Declaration, and all improvements thereon.

1.34 “Project Documents” shall mean and refer to the basic organizational and governance documents of the Association, including the Articles, Bylaws, this Second Restated Declaration, and Rules.

1.35 “Public Records” shall mean and refer to the Public Records as reflected in the office of the Missoula County Clerk & Recorder.

1.36 “Rules” shall mean and refer to rules adopted from time to time by the Association pursuant to Section 5.2D.

1.37 “Special Assessment” shall mean and refer to Assessments levied in accordance with Section 8.6.

1.38 “Special Declarant Rights” shall mean and refer to the rights of Declarant described in Article XII.

1.39 “Unit” or “Residential Unit” shall mean and refer to any single family residence and related improvements constructed upon a Residential Lot.

ARTICLE II DESCRIPTION OF PROJECT, DIVISION OF PROPERTY, AND CREATION OF PROPERTY RIGHTS

2.1 Description of Project. The Project is a planned development consisting of Common Area, Residential Lots, and all improvements thereon. The Project is intended to be developed in phases. Existing phases are subject to the terms of this Second Restated Declaration upon its recordation. Each subsequent phase will be subject to this Second Restated Declaration upon recording of a Declaration of Annexation applicable to each such phase as provided in Section 2.7.

2.2 Easements; Dedication of Common Area. Each Lot in the Initial Phase and in each annexed phase shall have appurtenant to it as the dominant tenement an easement over all Common Area Lots and Common Areas for ingress, egress, use and enjoyment, and for the construction, maintenance, operation and use of utilities, subject to the rights and easements in favor of Declarant as provided herein, and to the following provisions:

A. The right of the Association to discipline Members and to suspend the voting rights of a Member for any period during which any Assessment against his Lot remains unpaid, and for any infraction of the Articles, Bylaws, this Second Restated Declaration or the Rules, in accordance with the provisions of Sections 4.10, 5.2F, and 9.1 hereof.

B. The right of the Association to dedicate, transfer or mortgage all or any part of the Common Area to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by Board of Directors, provided, that in the case of the borrowing of money and the mortgaging of property as security therefor, the rights of such Mortgagee shall be subordinate to the rights of the Members of the Association, and no such dedication, transfer or Mortgage shall be effective unless an instrument is signed or approved by two-thirds of the voting power of the Association.

C. The right of the Association to grant easements under, in, upon, across, over, above or through any portion of the Common Area for reasonable purposes, as approved by the Board, which are beneficial to the Association or the Project or its development.

D. The right of the Association or Declarant to install or have installed a cable or central television antenna system. The system, if and when installed, shall be maintained by the Association or cable television franchisee. To the extent required to effectuate the foregoing, there shall be an easement in favor of each Lot for the purpose of connecting it with the master cable television terminal, central television antenna or line. Each Lot shall be subject to an easement in favor of all other Lots and in favor of the entity holding the television access franchise, to provide for the passage through the Lot and any structure thereon of television connections from any other Lot to the cable system, and shall be subject to a further easement for the placement and maintenance of such connections.

E. Easements for work and activities necessary to complete construction, development and marketing of the Project, including all parcels annexed or to be annexed, as more particularly described in Section 9.6.

The foregoing easements are granted and reserved subject to the condition that their use and enjoyment shall not unreasonably interfere with the use, occupancy or enjoyment of all or any material part of the Lot servient to them or to which they are appurtenant.

2.3 Easements to Accompany Conveyance of Lot. Easements that benefit or burden any Lot shall be appurtenant to that Lot and shall automatically accompany the

conveyance of such Lot, even though the description in the instrument of conveyance may refer only to the fee title to the Lot.

2.4 Delegation of Use. Any Owner may delegate, in accordance with the Bylaws, his right of enjoyment to the Common Area and facilities to members of his family, guests, tenants, or contract purchasers who occupy such Lot.

2.5 Conveyance of Common Area to Association; Reservations of Easements. On or before conveyance of title to the last Lot in each phase, Declarant shall convey the Common Area in that phase to the Association to be held for the benefit of its Members. Whenever any Common Area is conveyed by Declarant to the Association, an easement is automatically reserved (whether or not expressed in the conveyance document) over, under and through such Common Area for the benefit of remaining portions of the Annexable Property that have not yet been annexed, for ingress, egress, access and all utilities and similar appurtenances, and for the construction, marketing and sale of Lots and/or improvements on such remaining portions of the Annexable Property. Use of such portions of the Annexable Property shall be subject to the obligation to pay an equitable share of regular and special Assessments as provided in Article IV.

2.6 Owners' Rights and Easements for Utilities. The rights and duties of the Owners of Lots within the Project with respect to sewer, drainage, water, electric, gas, television and telephone equipment, cables and lines (collectively "utility facilities") shall be as follows:

A. Whenever utility facilities are installed within the Project, which utility facilities or any portion thereof lie in or upon a Lot or Lots owned by other than the Owner of a Lot served by said utility facilities, the Owners of any Lots served by such utility facilities shall have the right of reasonable access for themselves or for utility companies or providers to repair, to replace and generally maintain the utility facilities as and when necessary, due to failure or inability of the Board to take timely action to make such repairs or perform such maintenance.

B. Whenever utility facilities installed within the Project serve more than one Lot, the Owner of each Lot served thereby shall be entitled to the full use and enjoyment of such portions of the utility facilities as service his Lot.

C. If a dispute arises between Owners with respect to the repair or rebuilding of utility facilities, or with respect to the sharing of the cost thereof, then, upon written request of one (1) Owner addressed to the other Owner(s), the matter shall be submitted first to the Board for mediation, and thereafter, if unresolved, to binding arbitration pursuant to the rules of the American Arbitration Association.

2.7 Annexation of Additional Property. Additional property may be annexed to the jurisdiction of the Association and become subject to this Second Restated Declaration, without the necessity of amending individual sections hereof, by any of the following methods of annexation:

A. Annexation Pursuant to Plan: At Declarant's sole discretion, any or all of the Annexable Property (described on Exhibit "B") may be annexed and become part of the Project, subject to this Second Restated Declaration, and subject to the jurisdiction of the Association, without the necessity of amending individual sections of this Second Restated Declaration and without the assent of the Association, its Members or Owners on condition that:

1. Plan Approved: The annexation and development of additional phases shall be in a plan of development submitted to the state and local governmental agencies with jurisdiction over the annexation and development of additional phases of the Project.

2. Declaration of Annexation: A Declaration of Annexation shall be recorded covering the portion of the Annexable Property to be annexed. Such Declaration of Annexation may contain reasonable additions and/or modifications of the terms and provisions of this Second Restated Declaration provided they are not inconsistent with the scheme of this Second Restated Declaration. The Declaration of Annexation may, among other things, provide that (a) regular and special Assessments shall commence with respect to a Lot in the annexed phase on the first day of the first month following the closing of sale of the Lot from Declarant to Owner, (b) effective upon closing of sale of the Lot from Declarant to Owner, Membership in the Association shall be expanded to include the Owner of such Lot in the annexed phase, provided, however, Declarant is a member of the Association with voting rights for all Lots owned by Declarant in each annexed phase and all parcels designated in the Master Plan to become Lots in the future pursuant to Article III of this Second Restated Declaration and Section 3.6 of the Bylaws; all Owners and Declarant shall be entitled to all rights, privileges and benefits of an Owner, as provided in this Second Restated Declaration and in the Declaration of Annexation, and shall be obligated to comply with each obligation and responsibility of an Owner, as provided in this Second Restated Declaration and in the Declaration of Annexation; and (c) all property in the annexed phase shall be deemed annexed to the Project and made subject to this Second Restated Declaration and the jurisdiction of the Association, and shall be held, sold, leased, transferred, occupied and conveyed subject to the terms, provisions, covenants, conditions, restrictions, reservations and

easements of this Second Restated Declaration and the Declaration of Annexation.

B. Effect of Annexation: Assessments paid by Owners may be expended by the Association without regard to the particular phase from which such Assessments came. All Owners shall have ingress and egress to all portions of the Common Area throughout the Project, subject to the provisions of this Second Restated Declaration, the Articles, Bylaws and Rules in effect from time to time.

C. Failure to Annex: If any portion of the Annexable Property is not annexed, and such portion requires ingress and egress access over private streets located within the Project and access to and use of common utility facilities, easements for such portion shall exist for reasonable vehicular and pedestrian traffic and reasonable use of the common utility facilities, provided however, that such portion (and the Owners thereof) shall be obligated to pay their equitable share of the cost of maintenance and repair of said private streets and common utility facilities and shall be subject to a lien or liens for said maintenance and repair costs, to the same extent as provided in Article IV.

D. Right of Successor Declarant to Annex: The right of unilateral annexation provided for in Section 2.7A constitutes a covenant running with the land, and is enforceable by any successor or assignee of Declarant who acquires any part of the Annexable Property and who assumes the role of Declarant.

2.8 Maintenance Easement. An easement over each Lot as the servient tenement is reserved by Declarant in favor of each other Lot as the dominant tenement, and in favor of the Association, for the purpose of allowing the Association's agents the right, but not the obligation, to enter the Lot to perform such maintenance, if any, as the Association may do in accordance with Sections 5.1A and 7.17 of this Second Restated Declaration.

2.9 Drainage Easements. An easement over and under each Lot as the servient tenement is reserved by Declarant in favor of each other Lot and the Association for the purpose of allowing the Association's agents the right, but not the obligation, to enter the Lot to maintain that portion of any storm drainage system located thereon. No Owner or occupant shall commit any act that would interfere with the operation of any drainage system (including drainage swales) installed on the Owner's Lot. The Owner shall maintain the system free of debris and other obstacles at all times. Reciprocal appurtenant easements between each Lot and the Common Area and between adjoining Lots are reserved for the flow of water in the storm drainage system.

2.10 Other Easements. The Common Area and each Lot are subject to all easements, dedications, and rights of way granted or reserved in, on, over and under the

Project as shown on any Plat Map for the Project, and as otherwise provided or contemplated in this Second Restated Declaration.

2.11 Rights of Entry and Use. The Lots and Common Area shall be subject to the following rights of entry and use:

- A. The right, but not the obligation, of the Association's agents to enter any Lot to cure any violation of this Second Restated Declaration, the Articles, Bylaws or Rules, provided that the Owner has received notice and a hearing as required by the Bylaws (except in the case of an emergency) and the Owner has failed to cure the violation or take steps necessary to cure the violation within thirty (30) days after the finding of a violation by the Association;
- B. The access rights of the Association to perform maintenance;
- C. The easements described in this Article II;
- D. The right of the Association's agents to enter any Lot to perform maintenance to the extent described herein; and
- E. The rights and easements of the Declarant during construction and sales as described in Section 9.6.

2.12 Partition of Common Area. There shall be no subdivision or partition of the Common Area, nor shall any Owner seek any partition or subdivision thereof. Nothing herein shall be construed to prohibit partition of a joint tenancy or co-tenancy in any Residential Lot.

2.13 No Subdivision of Lots. There shall be no further subdivision of any Residential Lot without written approval of Declarant and the Board, which approval may be withheld or conditioned in the discretion of Declarant and the Board.

2.14 No View Rights. This Second Restated Declaration is not intended and shall not in any way confer or grant (or be construed to confer or grant) to any Residential Lot or Residential Unit or the Owner thereof any right to the maintenance of any view, viewscape or scenic corridor or area. Each Owner, by acceptance of a deed to his or her Lot, acknowledges and agrees that no representations or warranties have been made concerning any view, present or future, that may be enjoyed from all or any portion of the Project or such Lot or Unit, and that the same may change and/or be affected or obstructed by construction or installation of improvements, structures, fences, walls and/or landscaping by Declarant or other owners of property within or outside the Project and/or the growth of trees, landscaping and/or vegetation within or outside the Project.

This Second Restated Declaration does not contain any provisions intended to protect the view from any Lot or Unit or any other portion of the Project.

2.15 All Easements Part of Common Plan. Whenever any easements are reserved or created herein, such easements shall constitute equitable servitudes for the mutual benefit of all property in the Project, even if only certain Lots are specifically mentioned as subject to or benefiting from a particular easement, and when easements referred to herein are subsequently created or reserved by deeds or conveyances, such easements are to be considered to be part of the common plan created by this Declaration for the benefit of all Owners within the Project.

ARTICLE III ASSOCIATION ADMINISTRATION, MEMBERSHIP AND VOTING RIGHTS

3.1 Association to Own and Manage Common Areas. The Association shall own and manage the Common Area in accordance with this Second Restated Declaration, the Articles, Bylaws and Rules. Declarant shall provide Common Area noxious weed control, litter removal and implementation of the Riparian Management Plan until the Association accepts maintenance responsibility.

3.2 Membership. The Owner of a Lot shall automatically upon becoming an Owner, be a Member of the Association and shall remain a Member until such time as his ownership ceases for any reason. Membership shall be appurtenant to and may not be separated from ownership of a Lot. Membership shall be held in accordance with this Declaration, the Articles, Bylaws and Rules. Declarant shall be a Member of the Association for all platted Lots it owns and for all parcels designated in the Master Plan to become platted Lots in the future.

3.3 Transferred Membership. Membership in the Association shall not be transferred, encumbered, pledged, or alienated in any way, except upon the sale or transfer of the Lot to which it is appurtenant, and then only to the purchaser, in the case of a sale, or to a Mortgagee that has foreclosed or received a deed in lieu of foreclosure, in the case of an encumbrance. Membership shall automatically pass with transfer of title to a Lot. A Mortgagee shall not have Membership rights until it obtains title through foreclosure or deed in lieu thereof. Any attempt to make a prohibited transfer is void. No Member may resign his Membership. On receipt of notice of a transfer, the Association shall record the transfer on its books.

3.4 Membership and Voting Rights. Membership and voting rights shall be as set forth in the Bylaws.

ARTICLE IV MAINTENANCE AND ASSESSMENTS

4.1 Creation of the Lien and Personal Obligation of Assessments. Subject to the exception for Declarant as provided in Section 4.7A, each Owner by acceptance of a deed or conveyance to a Lot, whether or not it shall be so expressed in such deed or conveyance, covenants and agrees:

(1) to pay to the Association regular and special Assessments, to be established and collected as hereinafter provided; and

(2) to allow the Association to enforce any Assessment lien by non-judicial proceedings under a power of sale or by any other means authorized by law.

Regular and Special Assessments, together with interest, late charges, collection costs, and reasonable attorneys' fees, shall be a charge on the Lot and shall be a continuing lien upon the Lot against which each such Assessment is made, the lien to become effective upon recordation of a notice of delinquent Assessment. Each Assessment, together with interest, late charges, collection costs, and reasonable attorneys' fees, shall also be the personal obligation (joint and several) of each Person who was the Owner of such Lot when the Assessment fell due. No Owner of a Lot may exempt himself from liability for his contribution towards the Common Expenses by waiver of the use or enjoyment of any Common Areas or by the abandonment of his Lot.

The interest of any Owner in the amounts paid pursuant to any Assessment upon the transfer of ownership shall pass to the new Owner. Upon the termination of these covenants for any reason, any amounts remaining from collection of such Assessments after paying all amounts properly charged against such Assessments shall be distributed to the then Owners on the same pro rata basis on which the Assessments were collected.

4.2 Purpose of Assessments. Assessments shall be used to pay Common Expenses, to promote the economic interests, recreation, health, safety and welfare of Owners in the Project, and to enable the Association to perform its obligations.

4.3 Assessments:

A. Regular Assessments: The Board shall annually establish and levy regular Assessments in an amount the Board estimates will be sufficient to raise the funds needed to pay Common Expenses and perform the duties of the Association during each fiscal year. Assessments shall include a portion for reserves in such amounts as the Board in its discretion considers appropriate to meet the costs of the future repair, replacement or additions to the major improvements and fixtures that the Association is obligated to maintain and repair. Reserve funds shall be deposited in

a separate account and the signatures of at least two (2) Persons, who shall either be Members of the Board or one officer who is not a Member of the Board and one Member of the Board, shall be required to withdraw monies from the reserve account. Except to the limited extent otherwise provided herein, reserve funds may not be expended for any purpose other than repairing, restoring, maintaining or replacing the major components that the Association is obligated to maintain without the consent of Owners holding a majority of the voting power either at a duly held meeting or by written ballot.

B. Special Assessments: The Board may at any time levy a special assessment to raise funds for unexpected operating or other costs, insufficient operating or reserve funds, or such other purposes as the Board in its discretion considers appropriate. Special Assessments shall be allocated among the Lots in the same manner as regular Assessments, except in the case of an Assessment levied by the Board against a Member to reimburse the Association for costs incurred in bringing the Member and his Lot into compliance with provisions of the Project Documents.

4.4 Restrictions on Increases in Regular and Special Assessments. The Board may not impose a regular Assessment on any Lot which is more than twenty percent (20%) greater than the regular Assessment for the preceding fiscal year, or levy a special Assessment to defray the cost of any action or undertaking on behalf of the Association which in the aggregate exceeds five percent (5%) of the Association's budgeted gross expenses for that fiscal year, without the vote or written assent of Members casting a majority of the votes at a meeting at which a quorum is present. For purposes of this Section 4.4, a "quorum" means more than fifty percent (50%) of Association Members. Any meeting for purposes of complying with this Section 4.4 shall be conducted in accordance with the Montana Business Corporation Act. The Board may increase regular Assessments by up to twenty percent (20%) over the regular Assessment for the preceding fiscal year only if the Board has complied with the Bylaws, or has obtained the approval of such increase by the Members in the manner set forth above.

Notwithstanding the foregoing, the Board, without Membership approval, may increase regular Assessments or levy special Assessments necessary for an emergency situation. For purposes of this section, an emergency situation is:

- (1) an extraordinary expense required by an order of a court;
- (2) an extraordinary expense necessary to repair or maintain the Project or any part of it for which the Association is responsible where a threat to personal safety on the Project is discovered; or

(3) an extraordinary expense necessary to repair or maintain the Project or any part of it for which the Association is responsible that could not have been reasonably foreseen by the Board in preparing and distributing the pro forma operating budget, provided, however that prior to the imposition or collection of the Assessment, the Board shall pass a resolution containing written findings as to the necessity of the extraordinary expense involved and why the expense was not or could not have been reasonably foreseen in the budgeting process and the resolution shall be distributed to the Members with notice of the Assessment.

The Association shall give Owners notice by first-class mail of any increase in regular or special Assessments not less than thirty (30) nor more than sixty (60) days prior to the due date of the increased Assessment.

4.5 Notice and Quorum for Any Action Authorized Under Section 4.4. Any action authorized under Section 4.4 requiring a vote of the Membership shall be taken at a meeting called for that purpose, written notice of which shall be sent to all Members not less than ten (10) nor more than sixty (60) days in advance of the meeting, specifying the place, day and hour of the meeting and, in the case of a special meeting, the nature of the business to be undertaken. The action may also be taken without a meeting pursuant to the provisions of the Montana Business Corporation Act.

4.6 Division of Assessments. All Assessments, regular and special, shall be levied equally among Lots, except as otherwise provided herein. Regular Assessments shall be collected on a monthly basis unless the Board directs otherwise. Special Assessments may be collected in one payment or periodically as the Board shall direct.

4.7 Date of Commencement of Regular Assessment; Due Dates. Regular Assessments shall commence as to each Lot in Phase I on the first day of the month following the conveyance of the Lot from Declarant to an Owner. In subsequent phases, regular Assessments against each Lot in each phase shall commence on the first day of the month following the conveyance of the Lot from Declarant to an Owner in such phase. As Lots in each annexed phase become subject to Assessments, the Board shall determine whether the amount of regular Assessments payable by all Owners will change and, if so, the amount of such change, and the Board shall then issue revised Assessment notices as appropriate. Subject to Section 4.3, the Board shall use its best efforts to fix the amount of the regular Assessments against each Lot and send written notice thereof to every Owner at least forty-five (45) days in advance of each fiscal year, but failure to do so shall not affect the validity of any Assessment levied by the Board, which shall establish due dates. The Association shall, upon demand and for a reasonable charge, furnish a certificate signed by an officer of the Association stating whether the Assessments on a specified Lot have been paid. Such a certificate shall be conclusive evidence of such payment.

A. Assessment on Lots Owned by Declarant. Notwithstanding anything stated herein to the contrary, the Board shall determine the amount of Assessments on Lots owned by Declarant and available for sale. The intent is that Declarant shall pay a fair and reasonable portion of Regular Assessments and Special Assessments that are directly related to expenses incurred by the Association on Lots owned by Declarant recognizing that Lots owned by Declarant are undeveloped.

4.8 Effect of Nonpayment of Assessments. Any Assessment not paid within fifteen (15) days after the due date shall be delinquent and shall bear interest at twelve percent (12%) per annum starting thirty (30) days after the due date until paid and shall incur a late payment penalty equal to ten percent (10%) of the Assessment.

4.9 Transfer of Lot by Sale or Foreclosure. Sale or transfer of any Lot shall not affect the Assessment lien. However, the sale of any Lot pursuant to Foreclosure of a First Mortgage shall extinguish the lien of such Assessments including attorneys fees, late charges and interest levied in connection therewith, as to payments which became due prior to such sale by Foreclosure (except for Assessment liens recorded prior to the Mortgage). No Foreclosure sale shall relieve such Lot from liability for any Assessments thereafter becoming due or from the lien thereof.

Where the Mortgagee of a First Mortgage of record or other purchaser of a Lot obtains title as a result of Foreclosure, such acquirer of title, and his successor and assigns, shall not be liable for Assessments by the Association chargeable to such Lot which became due prior to the acquisition of title to such Lot by such acquirer (except for assessment liens recorded prior to the Mortgage). No amendment of the preceding sentence may be made without the consent of Owners of Lots to which at least sixty-seven percent (67%) of the votes in the Association are allocated, and the consent of the Mortgagees holding First Mortgages on Lots comprising fifty-one percent (51%) of the Lots subject to First Mortgages. The unpaid share of such Assessments shall be deemed to be Common Expenses collectible from all Owners of the Lots including such acquirer, and his successors or assigns.

If a Lot is transferred, the grantor shall remain liable to the Association for all unpaid Assessments against the Lot through the date of transfer. The grantee shall be entitled to a statement from the Association, dated as of the date of transfer, setting forth the amount of the unpaid Assessments against the Lot to be transferred and the Lot shall not be subject to a lien for unpaid Assessments in excess of the amount set forth in the statement; provided, however, the grantee shall be liable for any Assessments that become due after the date of the transfer.

4.10 Priorities; Enforcement; Remedies. If an Owner fails to pay an Assessment when due, the Association may bring legal action against the Owner to enforce collection

of the unpaid and past-due Assessment, or may impose a lien on the Lot, or both. Suit to recover a money judgment for unpaid Assessments and attorneys' fees shall be maintainable without foreclosing or waiving the lien. Before the Association may place a lien upon a Lot, the Association shall notify the Owner in writing by certified mail of the fee and penalty procedures, provide an itemized statement of the charges owed, including principal, any penalty, interest, and the method of collection, and any attorneys' fees. The Association may record a notice of delinquent Assessment and establish a lien against the Lot of the delinquent Owner prior and superior to all other liens except (1) all taxes, bonds, Assessments and other levies which, by law, would be superior thereto, and (2) the lien or charge of any First Mortgage of record made in good faith and for value. The notice of delinquent Assessment shall state the amount of the Assessment, collection costs, attorney's fees, late charges and interest, a description of the Lot, the name of the record Owner, and the name and address of the trustee authorized by the Association to enforce the lien by sale. The notice shall be signed by any officer of the Association or any management agent retained by it and shall be mailed in the manner required by Montana law to all record Owners of the Lot no later than 10 days after recordation.

Thirty or more days after recordation of the lien, an Assessment lien may be enforced in any manner permitted by law, including sale by the court or the trustee designated in the notice of delinquent Assessment. Any sale by the trustee shall be conducted in accordance with the provisions of Montana law applicable to the exercise of powers of sale in mortgages and deeds of trust, or in any other manner permitted by law. Nothing herein shall preclude the Association from bringing an action directly against an Owner for breach of the personal obligation to pay Assessments.

The Association, acting on behalf of the Owners, shall have the power to bid for the Lot at Foreclosure sale, and to acquire and hold, lease, mortgage and convey it. Where the purchase of a Foreclosure Lot will result in a five percent (5%) or greater increase in Assessments, the purchase shall require the vote or written consent of a majority of the total voting power of the Association. During the period a Lot is owned by the Association following Foreclosure:

- (1) no right to vote shall be exercised on behalf of the Lot;
- (2) no Assessment shall be assessed or levied on the Lot; and
- (3) each other Lot shall be charged, in addition to its usual Assessment, its share of the Assessment that would have been charged to such Lot had it not been acquired by the Association as a result of Foreclosure.

After acquiring title to the Lot at foreclosure sale following notice and publication, the Association may execute, acknowledge and record a deed conveying title to the Lot which deed shall be binding upon the Owners, successors, and all other parties.

The Board may, after notice and hearing, suspend the voting rights of a Member who is in default in payment of any Assessment as provided in the Bylaws.

Fines and penalties for violation of restrictions are not "Assessments" and are not enforceable by assessment lien, but are enforceable by court proceedings; however, monetary penalties imposed to reimburse the Association for costs incurred for repair of damage to Common Area or facilities for which the Owner, his guests or tenants, were responsible, may become the subject of a lien.

The Association is not empowered to cause a forfeiture or abridgement of an Owner's right to the full use and enjoyment of his Lot on account of the Owner's failure to comply with the Project Documents or Rules, except by judgment of a court or a decision arising out of binding arbitration or on account of a foreclosure or sale under power of sale for failure of the Owner to pay duly levied Assessments.

Each Owner waives, to the maximum extent permitted by law, the benefit of any Montana homestead or exemption laws in effect when any Assessment or installment becomes delinquent or a lien is imposed.

4.11 Unallocated Taxes. If any taxes are assessed against the Common Area, or personal property of the Association, rather than against the Lots, said taxes shall be included in the Assessments made under the provisions of Section 4.1 and, if necessary, a special Assessment may be levied against the Lots in an amount equal to said taxes, to be paid in two (2) installments, thirty (30) days prior to the due date of each tax installment.

4.12 Assessments on Lots in Subsequent Phases. If portions of the Annexable Property are not, for whatever reason, annexed to the Project in the manner provided in Section 2.7, and such portions (or parts thereof) are developed and sold or leased to Persons whose use and occupancy thereof result in use of private streets and/or utilities within the Common Area, such portions (or parts thereof), and the Owners thereof (including Declarant) shall be subject to regular and special Assessments pursuant to Section 4.1 levied by the Board for the costs of maintenance and repair of said streets and/or utilities. Such costs of maintenance and repair shall be prorated equitably between the properties and payment may be enforced pursuant to Section 4.10. In the event of any disagreement as to the reasonableness of such regular and/or special Assessments or the division thereof, the matter shall be submitted to binding arbitration under the rules of the American Arbitration Association. Notwithstanding the foregoing, none of the other sections of this Declaration shall apply to any such portion of the Annexable Property until and unless such portion is annexed in accordance with Section 2.7. Easements for the use of private streets and/or utilities within the Common Area shall be and are reserved to portions of the Annexable Property as provided in Section 2.5.

ARTICLE V DUTIES AND POWERS OF THE ASSOCIATION

5.1 Duties. In addition to the duties enumerated in the Articles and Bylaws, or elsewhere provided for in this Second Restated Declaration, and without limiting the generality thereof, the Association shall perform the following duties:

A. Maintenance: The Association shall maintain and repair the Common Area, all improvements and landscaping thereon, and all property owned by the Association, including the landscaping and water features contained within the Common Area. The Association may maintain limited portions of the golf course property (specified "maintenance areas" originally designated as unmaintained and typically located between lots and maintained golf course. The borders of the "maintenance areas" are the lot property line and the out of bounds stakes adjacent to the golf course. The out of bound stakes may change from time to time at the discretion of the golf course (see attached map which is marked as Exhibit "___")). The Association shall also pay all Common Expenses and arrange for the maintenance of all areas for which Common Expenses are payable. Additionally, the Association shall maintain and repair any Neighborhood designated by the Board, including the Meadows Lots, which maintenance shall include lawns, boulevards, and landscaping maintenance, water for sprinkling, installation, maintenance and blow out of sprinkling systems, snow removal, including sidewalks and driveways, and exterior window cleaning as referred to in the Maintenance Guidelines. The Association shall pay all Neighborhood Expenses and arrange for the maintenance of all areas for which Neighborhood Expenses are payable. The Association shall then collect a Neighborhood Assessment relating to the Neighborhood Expenses as provided herein. The Riparian Management Plan is incorporated herein by this reference (see attached Exhibit C). The Association shall implement and maintain the Riparian Management Plan.

The responsibility of the Association for maintenance and repair shall not extend to repairs or replacements arising out of or caused by the willful or negligent act or omission of any Owner, or his guest, tenant, invitee or pet. Any such repairs or replacements not covered by insurance carried by the Association shall be made by the responsible Owner, provided the Board approves the Person or entity actually making the repairs and the method of repair. If the responsible Owner fails to take the necessary steps to make the repairs within a reasonable time, the Association shall cause the repairs to be made and charge the cost thereof to the responsible Owner, which costs shall bear interest at the rate of twelve percent (12%) per annum (but no greater than the maximum rate allowed by law) until paid in full. If such repair is covered by insurance carried by the Association, the Association shall be responsible for making the repairs, and the responsible Owner shall pay any deductible pursuant to the insurance policy. If the Owner fails to make such payment, the Association may make such payment and shall

charge the responsible Owner, which charge shall bear interest at the rate of twelve percent (12%) per annum (but no greater than the maximum rate allowed by law) until paid in full. If the Owner disputes the charge, the Owner shall be entitled to a notice and a hearing as provided in the Bylaws before the charge may be collected.

B. Insurance: The Association shall obtain and maintain such policy or policies of insurance as are required by Section 8.1 of this Declaration.

C. Discharge of Liens: The Association shall discharge by payment, if necessary, any lien against the Common Area and charge that cost to the Member(s) responsible for the existence of the lien after notice and hearing as provided in this Second Restated Declaration.

D. Assessments: The Association shall fix, levy, collect and enforce Assessments as set forth in Article IV hereof

E. Payment of Expenses and Taxes: The Association shall pay all expenses and obligations incurred by it in the conduct of its business including, without limitation, all licenses, taxes, assessments and governmental charges levied or imposed upon, or which are or may become a lien against, the property of the Association.

F. Enforcement: The Association shall be responsible for the enforcement of this Second Restated Declaration, the Articles, Bylaws and Rules.

The Association shall maintain and operate the Common Area of the Project in accordance with all applicable municipal, state, and federal laws, statutes and ordinances, as the case may be. The Association shall also, as a separate and distinct responsibility, exert reasonable efforts to endeavor to ensure that third parties (including Owners and their guests) utilize the Common Area in accordance with such regulations. The Association shall, when it becomes aware of any violation of such regulations, endeavor to expeditiously correct such violations.

G. Inspection and Maintenance Guidelines: The Board shall adopt inspection and maintenance guidelines for the periodic inspection and maintenance of the Common Area improvements and landscaping and any other improvements outside the Common Area which the Association has the responsibility to maintain. The Board periodically and at least once every two years shall review and update the inspection and maintenance guidelines. The Board shall take all appropriate steps to implement and comply with the inspection and maintenance guidelines.

H. Preparation of Financial Documents: The Board shall cause budgets and financial statements to be prepared as required by the Bylaws.

5.2 Powers. In addition to the powers enumerated herein or in the Articles and Bylaws, and without limiting the generality thereof, the Association shall have the following powers:

A. Utility Service: The Association shall have the authority (but not the obligation) to obtain, for the benefit of all Owners, all utilities and utility services including, without limitation, water, sewer, gas, electric service, refuse collection and cable access television.

B. Easements: The Association shall have the right to grant easements under, in, upon, across, over, above or through any portion of the Common Area for reasonable purposes, as approved by the Board, which are beneficial to the Association or the Project or development of same.

C. Manager: The Association may employ a manager or other Persons and contract with independent contractors or managing agents to perform all or any part of the duties and responsibilities of the Association, except for the responsibility to levy fines, impose discipline, hold hearings, file suit, record or foreclose liens, or make capital expenditures, provided that any contract with a firm or Person appointed as a manager or managing agent shall not exceed a one year term, shall provide for the right of the Association to terminate the same at the first regular meeting of the Association Members, and to terminate the same without cause or payment of a termination fee on ninety (90) days written notice, or for cause on thirty (30) days written notice.

D. Adoption of Rules: The Board shall have the right to adopt, promulgate and enforce reasonable rules and regulations ("Rules"), not in conflict or inconsistent with this Second Restated Declaration relating to the Project including, without limitation, the operation, maintenance, use and enjoyment of the Project, the Common Areas and individual Lots. It is the intent of this section that the Board have broad discretion with respect to the Rules and that the Board's authority in this regard be construed liberally in order to effectuate the Board's objectives with respect to the Rules. In general, the Board's objectives should be to promote and enhance the Project, its attractiveness and economic viability, and provide for its orderly operation, maintenance, repair and upkeep, including procedures relating to the conduct of Association business. Written copies of such Rules and any schedule of fines and penalties adopted by the Board shall be furnished to Owners. Anything contained herein to the contrary notwithstanding, until ninety percent (90%) of the Lots planned

for the overall Project (including subsequently planned phases), the adoption or amendment of any Rules shall require the consent of Declarant.

E. Access: For the purpose of performing construction, maintenance or emergency repair for the benefit of the Common Area or the Owners in common and/or to perform maintenance work which the Lot Owner has failed to perform as provided herein, the Association's agents or employees shall have the right, after reasonable notice to the Owner thereof, to enter any Lot at reasonable hours and at any necessary time in the event of an emergency. Such entry shall be made with as little inconvenience to the Owner as practicable and, except as otherwise provided herein, any damage caused thereby shall be repaired by the Board at the expense of the Association.

F. Assessments, Liens, Penalties, and Fines: The Board shall have the power to levy and collect Assessments in accordance with the provisions of Article IV hereof. The Association may impose fines or take disciplinary action against any Owner for failure to pay Assessments or for violation of any provision of the Project Documents and the unrecorded Rules adopted by the Board or the Association. Penalties may include but are not limited to fines, temporary suspension of voting rights, rights to the use of recreational facilities, if any, or other appropriate discipline, provided the Member is given notice and a hearing as provided in the Bylaws before the imposition of any fine or disciplinary action. The Board shall have the power to adopt a schedule of reasonable fines and penalties for violations of the terms of this Declaration, and for violations of any Rules adopted pursuant to Section 5.2D. The penalties prescribed may include suspension of all rights and privileges of Membership; provided, however, that suspension for failure to pay Assessments shall be for a maximum period of thirty (30) days, renewable by the Board for an additional thirty (30) day period or periods until paid; and provided further that suspension for infraction of Rules or violation of this Second Restated Declaration, other than for failure to pay Assessments, shall be limited to a maximum period of thirty (30) days per infraction or violation, and shall be imposed only after a hearing before the Board. The Board may extend said period for an additional period or periods in the case of a continuing infraction or violation, and no hearing need be held for such extension. Written copies of Rules and the schedule of penalties shall be furnished to Owners. The Board shall assess fines and penalties and shall enforce such Assessments as appropriate under applicable law.

G. Enforcement: The Board shall have the power to enforce this Second Restated Declaration, the Articles, Bylaws and Rules.

H. Acquisition and Disposition of Property: The Board shall have the power to acquire (by gift, purchase or otherwise), own, hold, improve, build upon, operate, maintain, convey, sell, lease, transfer, or otherwise dispose of real or personal property in connection with the affairs of the Association. Any transfer of fee title to Association property shall be by document signed or approved by two-thirds (2/3) of the total voting power of the Association.

I. Loans: The Board shall have the power to borrow money, but only with voted or written assent of two-thirds (2/3) of the total Association voting power, to mortgage, pledge, deed in trust, or hypothecate any or all of its real or personal property as security for money borrowed or debts incurred.

J. Dedication: The Association shall have the power to dedicate, sell, or transfer all or any part of the Common Area to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by the Members. No such dedication shall be effective unless an instrument has been signed or approved by two-thirds (2/3) of the total voting power of the Association.

K. Contracts: The Board shall have the power to contract for goods and/or services for the Project including Common Areas subject to limitations set forth herein or in the Bylaws.

L. Delegation: The Association, the Board, and the officers of the Association shall have the power to delegate authority and powers to committees, officers or employees of the Association, or to a manager employed by the Association, provided that the Board shall not delegate its responsibility:

- (1) to make expenditures for capital additions or improvements chargeable against the reserve funds;
- (2) to conduct hearings concerning compliance by an Owner or his tenant, lessee, guest or invitee with this Second Restated Declaration, Bylaws or Rules promulgated by the Board;
- (3) to make a decision to levy monetary fines, impose special Assessments against individual Lots, temporarily suspend an Owner's rights as a Member of the Association or otherwise impose discipline;
- (4) to make a decision to levy regular or special Assessments;
- (5) to make a decision to bring suit, record a claim of lien or institute Foreclosure proceedings for default in payment of Assessments.

M. Utility Service and Recreational Facilities: The Association shall have the authority (but not the obligation) to acquire and pay for utility and related services for all Lots in the Project and, to such extent, expenses incurred in connection therewith shall be Common Expenses and shall be collected from Owners as part of regular Assessments. The Association shall also have the authority to limit the number of tenants or guests who may use the recreational facilities, if any, provided that such limitations apply equally to all Owners, unless imposed for disciplinary reasons.

N. Appointment of Trustee: The Association, or the Board acting on behalf of the Association, has the power to appoint or designate a trustee to enforce Assessment liens by sale as provided in Section 4.10.

O. Litigation/Arbitration: Subject to Article X, the Association shall have the power to institute, defend, settle or intervene in litigation, arbitration, mediation or administrative proceedings in matters pertaining to (A) enforcement of the Project Documents, (B) damage to the Common Areas, (C) damage to the separate interests which the Association is obligated to maintain or repair, or (D) damage to the separate interests which arises out of or is integrally related to damage to the Common Areas or separate interests that the Association is obligated to maintain or repair.

P. Other Powers: In addition to the powers contained herein, the Board may exercise the powers granted to a nonprofit mutual benefit corporation under Montana law.

ARTICLE VI ARCHITECTURAL CONTROL

6.1 Purpose of Architectural Controls: The purpose and intent of this Article are to empower Declarant to preserve property values within the Project. Declarant has ultimate responsibility, but may delegate that authority to an Architectural Control Committee ("ACC").

6.2 Requirement for Approval of Plans. No Residential Unit, fence, wall, pool, spa, obstruction, outside or exterior wiring, balcony, screen, patio, patio cover, tent, awning, carport, carport cover, trellis, landscaping, playground equipment, dog runs and their location, structure or improvement of any kind shall be commenced, installed, erected, painted or maintained upon the Project, nor shall any alteration or improvement of any kind be made thereto or to any Lot, until approved in writing by Declarant or by an ACC appointed by Declarant. Plans and specifications showing the nature, kind, shape, color, size, materials and location of such improvements, alterations, etc., shall be

submitted to Declarant or to the ACC for approval of the submitted plans and specifications including approval as to quality of workmanship and design and harmony of external design with existing structures, and as to location in relation to surrounding structures, topography, and finish grade elevation. No permission or approval shall be required to repaint in accordance with a color scheme previously approved by Declarant or the ACC, or to rebuild in accordance with plans and specifications previously approved by Declarant or the ACC. Declarant or the ACC shall have the right to adopt and promulgate reasonable architectural rules and guidelines to implement the intents, purposes and provisions hereof which, upon adoption, shall have the same force and effect as other Rules as provided herein. All plans and specifications for a Residential Unit or other improvement proposed to be built on a Lot shall comply with all applicable zoning laws and regulations, building codes and regulations and building height restrictions.

6.3 ACC Membership. If formed by Declarant, the ACC shall consist of three (3) Persons. Declarant shall appoint all Persons to serve on the ACC and all replacements. Declarant's appointees need not be Members of the Association. A majority of the ACC may designate a representative to act for it. If an ACC member dies or resigns, a successor shall be appointed by Declarant. Neither Declarant nor any Person on the ACC shall be entitled to any compensation for such services. The ACC (or Declarant) shall have the right, but not the obligation, to engage (on a case by case basis or otherwise) an independent architect, draftsman or engineer to assist the ACC (or Declarant) in the review process, and to charge all costs reasonably incurred to the applicant for architectural approval.

6.4 ACC Action: If Declarant or the ACC fails to approve or disapprove plans and specifications in writing within thirty (30) days after submittal, approval will not be required and the related covenants shall be deemed to have been fully complied with. Approval of plans by the ACC or Declarant shall in no way make the ACC or Declarant responsible or liable for the improvements built after approval of the plans, and the Owner whose plans are approved shall defend, indemnify and hold the ACC and Declarant harmless from any and all liability arising out of such approval.

6.5 Landscaping. No landscaping or other physical improvements or additions shall be made to any Lots until plans and specifications showing the nature, kind, shape, and location of the materials shall have been submitted to and approved in writing by Declarant or the ACC.

6.6 Initial Yard Landscaping. Unless installed by Declarant, the first purchaser of each Estate Lot shall submit landscaping plans for the purchaser's Lot to Declarant or the ACC within sixty (60) days after close of escrow and shall complete the installation

of the landscaping within one hundred eighty (180) days after close of escrow or by such later date as Declarant or the ACC may approve.

6.7 Solar Energy, Water Saving Devices. Declarant or the ACC may impose such restrictions on the installation of solar panels as are permitted by applicable state laws. Water saving devices shall be required on all dishwashers, washing machines, toilet flushing mechanisms, showers and sink heads.

6.8 Governmental Approval. Before commencement of any alteration or improvements approved by Declarant or the ACC, the Owner shall comply with all appropriate governmental laws and regulations, including but not limited to the zoning ordinance then in effect in the City of Missoula. Approval by the ACC does not satisfy the appropriate approvals that may be required by any governmental entity with appropriate jurisdiction.

6.9 Structural Integrity. Nothing shall be done in or on any Lot or in or on the Common Area which will impair the structural integrity of any building or structure.

6.10 Appeals to Declarant. Any final decision of the ACC may be appealed in writing to Declarant. Any such appeal must be submitted in writing to Declarant within fifteen (15) days after the date the appealing Member receives notice of the final decision by the ACC. The written notice of appeal shall specifically state the appealing member's grounds for appeal. Declarant may adopt and promulgate procedures and grounds for appeals. The decision of Declarant with respect to all appeals shall be final and determinative.

6.11 Restriction on Construction of Residences on Lots 1B through 5B. The lowest floor of all residences built on Lots 1B through 5B shall be at least two (2) feet above the 100-year flood elevation. Crawl space floors may be at floor elevation if they do not contain any mechanical systems.

ARTICLE VII USE RESTRICTIONS

Use of the Project and each Lot therein is subject to the following:

7.1 Use of Lots. Lots shall be used for purposes of constructing and maintaining single family Residential Units and purposes reasonably incidental thereto and for no other purposes, and shall be used and maintained in compliance with this Second Restated Declaration, the Articles, Bylaws and Rules. Use of Lots shall at all times be in compliance with the conditions of Project approval by the City of Missoula.

7.1.1 Use of Meadows Lots. The following use restrictions apply to all Meadows Lots: (i) no yard art or sidewalk art; (ii) no swing set or playground equipment of any type or character; (iii) no basketball hoop; (iv) no trampoline; (v) no volleyball net; (vi) no skateboarding in the street, sidewalks or driveways of a Meadows Lot or the Meadows Lot Neighborhood; (vii) no vehicle be parked in the street for more than two (2) consecutive nights and Rules on parking vehicles in driveways may be passed by the Association; and (viii) no bicycles, tricycles, battery-powered vehicles or motorcycles may be parked in the lawn, sidewalk, driveway or street of a Meadows Lot or the Meadows Lot neighborhood when not in use.

7.1.2 Use of Estate Lots. Residential Units on Estate Lots shall consist of total living area on the main floor of not less than 2,200 square feet plus a three-car garage.

7.1.3 Use of River Lots. Residential Units on River Lots shall consist of total living area on the main floor of not less than 2,800 square feet plus a three-car garage.

7.2 Nuisances. No noxious, illegal, or seriously offensive (to a reasonable Person) activities shall be allowed on any Lot, or in any part of the Project, nor shall anything be done thereon which may be or become a serious annoyance or a nuisance to or which may in any way interfere with the quiet enjoyment of each Owner or his respective Lot.

7.3 Vehicle Restrictions and Towing. Vehicles may be operated, maintained, parked or stored in the Project only in strict compliance with and to the extent allowed by the Rules. In general, only normal and reasonable transportation vehicles shall be allowed. Inoperable, noisy, smoky, unregistered, unlicensed vehicles shall not be allowed. Recreational vehicles and boats may not be stored or parked at any location within the Project except within a fully enclosed garage so as not to be visible from the Common Area or from any other Lot within the Project or for reasonably brief time periods (not to exceed 24 hours) to allow for loading, unloading and cleaning.

The Association may cause the removal of any vehicle wrongfully parked on the Project. If the identity of the registered owner of the vehicle is known or readily ascertainable, the Association President or designee shall, within a reasonable time, notify the owner of the removal in writing by personal delivery or first class mail. In addition, notice of the removal shall be given to the local traffic law enforcement agency immediately after the vehicle has been removed. The notice shall include a description of the vehicle, the license plate number and the address from where the vehicle was removed. If the identity of the owner is not known or readily ascertainable and the vehicle has not been returned to the owner within one hundred twenty (120) hours after its removal, the Association shall send or cause to be sent a written report of the removal

by mail to the Montana Department of Justice and shall file a copy of the notice with the proprietor of the public garage in which the vehicle is stored. The report shall be made on a form furnished by the Department of Justice and shall include a complete description of the vehicle, the date, time and place from which the vehicle was removed, the amount of mileage on the vehicle at the time of removal, the grounds for removal and the name of the garage or place where the vehicle is stored. Notwithstanding the foregoing the Association may cause the removal, without notice, of any vehicle parked in a marked fire lane, within fifteen (15) feet of a fire hydrant, in a parking space designated for handicapped without proper authority or in a manner which interferes with any entrance to, or exit from the Project or any Lot, parking space or garage located thereon. The Association shall not be liable for any damages incurred by the vehicle owner because of the removal in compliance with this section or for any damage to the vehicle caused by the removal, unless such damage resulted from the intentional or negligent act of the Association or any Person causing the removal of or removing the vehicle. If requested by the owner of the vehicle, the Association shall state the grounds for the removal of the vehicle.

7.4 Parking. Parking of vehicles (recreational, transportation or otherwise) shall be allowed to be parked on the Common Area only in compliance with the Rules.

7.5 Commercial Activity. No business, professional or commercial activity shall be conducted on any Lot, except for Declarant's activities in connection with development of the Project and marketing and sales of Lots as provided or contemplated herein. Nothing in this section is intended to restrict or prohibit Owners from using portions of their Units for home offices and related purposes such as operations of personal computers, the internet and similar equipment and facilities, so long as such activities do not materially increase the volume of vehicular traffic into the Project.

7.6 Storage. No machinery, equipment or other personal property shall be stored on the Common Area or Lots except in compliance with the Rules.

7.7 Signs. No signs shall be displayed to the public view on any Lot or on any portion of the Project including For Sale, For Rent, For Exchange, or advertising, except such signs as are allowed by the Rules and except for signs allowed for Declarant's use as described in Sections 9.6D, 12.3 and 12.7B hereof.

7.8 Animals. No animals, pets or insects of any kind shall be raised, bred, or kept on any Lot or in the Common Area except no more than two (2) usual and ordinary household pets such as dogs or cats provided they are not kept, bred, or maintained for any commercial purposes, and are kept under reasonable control at all times. No dangerous or poisonous pets, animals or insects of any kind shall be allowed in the Project. No pets shall be allowed in the Common Area except as may be permitted by Rules which shall include, without limitation, the requirement that such pets be

maintained on leashes. After making a reasonable attempt to notify the Owner, the Board may cause any pet found within the Common Area in violation of the Rules or this Second Restated Declaration to be removed to a pound or animal shelter under the jurisdiction of the city or county, by calling the appropriate authorities, whereupon the Owner may, upon payment of all expenses connected therewith, repossess the pet. Owners shall prevent their pets from soiling the Common Area and shall promptly clean up any mess left by their pets. Owners shall be fully responsible for any damage caused by their pets.

7.9 Garbage and Refuse Disposal. All rubbish, trash and garbage shall be regularly removed from the Lots and shall not be allowed to accumulate thereon. Trash, garbage and other waste shall not be kept except in sanitary containers. All equipment for storage or disposal of such materials shall be kept in a clean and sanitary condition and screened from view of neighboring Lots, Common Areas and streets. No toxic or hazardous materials shall be disposed of within the Project whether by dumping into garbage containers or down drains or otherwise.

7.10 Antennas. Antennas shall be authorized on Lots for purposes of transmitting or receiving radio, video, television and related signals, to the extent allowed by the Rules.

7.11 Power Equipment and Car Maintenance. No power equipment, hobby shops, or recreational vehicle, truck, car, motorcycle or boat maintenance (other than emergency work) or similar maintenance shall be allowed on the Project except with prior written approval of the Board. Approval shall not be unreasonably withheld and in deciding whether to grant approval the Board shall consider the effects of noise, air pollution, dirt or grease, fire hazard, interference with radio or television reception, and similar objections. All hazardous waste shall be disposed of properly by each Owner.

7.12 Liability of Owners for Damage to Common Area. The Owner of each Lot shall be liable to the Association for all damage to Common Area improvements (including landscaping) caused by such Owner, his agents, employees guests, invitees or pets, except for that portion of damage covered by insurance carried by the Association. The responsible Owner shall be charged with the cost of repairing such damage (including interest) as described in Section 5.1A.

7.13 Leasing of Lots. No Owner shall lease his Unit for any period less than thirty (30) days. Any lease shall be in writing and shall be subject in all respects to this Second Restated Declaration, the Bylaws and the Rules, and any failure of the tenant to comply with the foregoing shall be a default under the lease, regardless of whether the lease so provides. If such a default occurs, the Owner shall immediately take all action to cure the default including, if necessary, eviction of the tenant. All Owners leasing their Lots shall promptly notify the Secretary of the Association in writing of the names of all

tenants and family members occupying such Lot and of the address and telephone number where the tenant and Owner can be reached.

7.14 Commonly Metered Utilities. The Board may establish restrictions regarding the individual use of any utility on a common meter, if any, and may impose reasonable charges for the individual use thereof.

7.15 Activities Causing Increase in Insurance Rates. Nothing shall be done or kept on any Lot or in any improvements constructed thereon, or in the Common Area, which will increase any applicable rate of insurance or which will result in the cancellation of insurance on any Lot or any part of the Common Area, or which would be in violation of any law.

7.16 Temporary Structures. No structure, facility or appurtenance of a temporary character shall be placed upon any Lot except in accordance with the Rules.

7.17 Owner's Right and Obligation to Maintain and Repair. Each Owner shall, at his sole cost and expense, maintain and repair his Unit and Lot and all improvements and lawn and landscaping thereon, including snow removal, keeping the same in good condition, provided, however, the obligation to maintain the Lot may be delegated to the Association. If an Owner shall fail to so maintain his Lot, the Association's agents may, after notice and a hearing as provided in the Bylaws, enter the Lot and perform necessary maintenance, the cost of which shall immediately be paid to the Association by the Owner, plus interest at twelve percent (12%) per annum (but not to exceed the maximum interest rate authorized by law) from the date the cost was incurred by the Association until the date the cost is paid by the Owner. Notwithstanding anything stated herein to the contrary, the Association shall maintain the lawn and landscaping of the Meadows Lots, as well as perform snow removal.

7.18 Timeshare Prohibition. No Lot or Lots or any portion thereof shall be leased, subleased, occupied, rented, let, sublet, or used for or in connection with any time sharing agreement, plan, program or arrangement, including, without limitation, any so called "vacation license," "travel club," "extended vacation," or other membership or time interval ownership arrangement. The term "time sharing" as used herein shall be deemed to include, but shall not be limited to, any agreement, plan, program, or arrangement under which the right to use, occupy, or possess the Lot, or any portion thereof, rotates among various Persons, either corporate, partnership, individual, or otherwise, on a periodically recurring basis for value exchanged, whether monetary or like kind use privileges, according to a fixed or floating interval or period of time. This section shall not be construed to limit the personal use of any Lot or any portion thereof in the Project by any Owner or his or her social or familial guests.

7.19 Wood Burning Stove Prohibition. The Project is located within the Air Stagnation Zone of Missoula County. Wood burning stoves and fireplaces are prohibited.

ARTICLE VIII INSURANCE; DAMAGE OR DESTRUCTION; CONDEMNATION

8.1 Insurance. The Association shall obtain and maintain the following insurance:

- (1) a hazard policy insuring all improvements, equipment, and fixtures owned by the Association, unless the Board determines, in its sole discretion, that such insurance is not necessary;
- (2) a comprehensive general liability policy insuring the Association, its agents, the Owners and their respective family Members, against liability incident to the ownership or use of the Common Area or any other Association owned or maintained real or personal property (in occurrence version form if obtainable); the amount of general liability insurance which the Association shall carry at all times shall be not less than the minimum amounts required by Montana law;
- (3) workers' compensation insurance to the extent required by law (or such greater amount as the Board deems necessary); the Association shall obtain a Certificate of Insurance naming it as an additional insured in regard to workers' compensation claims from any independent contractor who performs any service for the Association, if the receipt of such a certificate is practicable;
- (4) fidelity bonds or insurance covering officers, directors, and employees that have access to any Association funds;
- (5) officers and directors liability insurance;
- (6) flood insurance if the Project is located in an area designated by an appropriate governmental agency as a special flood hazard area;
- (7) earthquake insurance to the extent deemed appropriate by the Board, in its discretion, provided same is available at commercially reasonable rates, in the opinion of the Board;
- (8) water damage coverage, to the extent deemed appropriate by the Board in its discretion;
- (9) liability for non-owned and hired automobiles; and

(10) such other insurance as the Board in its discretion considers necessary or advisable.

To the extent applicable, the Board may, in its discretion, consider including the following endorsements:

- (a) changes in building codes, and demolition coverage (sometimes referred to as "ordinance or law endorsement");
- (b) inflation guard coverage;
- (c) "agreed-amount" endorsement (to eliminate a coinsurance problem);
- (d) replacement cost endorsement; or
- (e) primary coverage endorsement.

Each Owner appoints the Association or any insurance trustee designated by it to act on behalf of the Owners in connection with all insurance matters arising from any insurance policy maintained by the Association including, without limitation, representing the Owners in any proceeding, negotiation, settlement or agreement. Any insurance maintained by the Association shall contain "waiver of subrogation" as to the Association and its officers, directors and Members, the Owners and occupants of the Lots (including Declarant) and Mortgagees, and cross-liability and severability of interest coverage insuring each insured against liability to each other insured. The Association shall periodically (and not less than once every three years) review all insurance policies maintained by the Association to determine the adequacy of the coverage and to adjust the policies accordingly.

All individually owned insurance shall contain a waiver of subrogation as to the Association and its officers, directors and Members, the Owners and occupants of the Lots and Mortgagees, and all Members are deemed to have waived subrogation rights as to the Association and/or other Members, whether or not their policies so provide.

Each Owner shall be responsible for obtaining, maintaining and paying for such insurance as the Owner may deem reasonably necessary with respect to fire, casualty and liability involving such Owner's Lot. All such individually carried insurance shall contain a waiver of subrogation by the carrier as to the other Owners, the Association, Declarant, and the Mortgagees of such Lot.

The Association shall make copies of policies available to Members upon request to enable Members to insure their Lots without duplicating insurance carried by the Association.

The Association, and its directors and officers, shall have no liability to any Owner or Mortgagee if, after a good faith effort, it is unable to obtain the insurance required hereunder because the insurance is no longer available or, if available, can be obtained only at a cost that the Board in its sole discretion determines is unreasonable under the circumstances, or the Members fail to approve any Assessment increase needed to fund the insurance premiums. In such event, the Board immediately shall notify each Member and any Mortgagee entitled to notice that the insurance will not be obtained or renewed.

8.2 Damage or Destruction. If any improvements or landscaping on any Lot are damaged or destroyed by fire or other casualty, the Owner of such Lot may repair or reconstruct the improvement only in accordance with the plans and specifications approved by the Association or its representative including but not limited to approval by the ACC. If such an Owner elects not to rebuild, said Owner shall be responsible for promptly removing from the Lot any and all debris, including any portion of a structure which may remain standing after partial damage or destruction, and the Owner shall landscape the Lot in the manner approved by the ACC and the Association. If such an Owner elects to rebuild the damaged or destroyed improvements, the Owner of such Lot is responsible for the cost of all such reconstruction that is not covered by insurance or is within the deductible amount. If an Owner fails to pay the cost of required demolition or relandscaping, the Association may elect to pay for the uninsured portion of the cost and shall have the right to assess the Owner for the cost thereof and to enforce the Assessment as provided in this Second Restated Declaration.

If Common Area improvements are damaged or destroyed by fire or other casualty, the improvements shall be repaired or reconstructed substantially in accordance with the original as-built plans and specifications, modified as may be required by applicable building codes and regulations in force at the time of such repair or reconstruction, and subject to such alterations or upgrades as may be approved by the ACC, unless either of the following occurs: (1) the cost of repair or reconstruction is more than fifty percent (50%) of the current replacement cost of all Common Area improvements, available insurance proceeds are not sufficient to pay for at least eighty-five percent (85%) of the cost of such repairs or reconstruction, and three-fourths (3/4) of the total voting power of the Association votes against such repair and reconstruction; or (2) available insurance proceeds are not sufficient to substantially repair or reconstruct the improvements within a reasonable time as determined by the Board, a special Assessment levied to supplement the insurance fails to receive the requisite approval (if such approval is required) as provided in Section 4.4, and the Board, without the requirement of approval by the Owners, is unable to supplement the insurance by borrowing on behalf of the Association

sufficient monies to enable the improvements to be substantially repaired or reconstructed within a reasonable time.

A. Process For Repair or Reconstruction of Common Area Improvements: If the Common Area improvement is to be repaired or reconstructed and the cost for repair or reconstruction is in excess of twenty-five percent (25%) of the current replacement cost of all the Common Area improvements in the Project, the Board shall designate a construction consultant, a general contractor, and an architect for the repair or reconstruction. All insurance proceeds, Association monies allocated for the repair or reconstruction, and any borrowings by the Association for the repair or reconstruction shall be deposited with a commercial lending institution experienced in the disbursement of construction loan funds (the "depository") as selected by the Board. Funds shall be disbursed in accordance with the normal construction loan practices of the depository that require as a minimum that the construction consultant, general contractor and architect certify within ten (10) days prior to any disbursement substantially the following:

- (1) that all work completed as of the date of such request for disbursement has been done in compliance with the approved plans and specifications;
- (2) that such disbursement request represents monies which either have been paid by or on behalf of the construction consultant, the general contractor or the architect and/or are justly due to contractors, subcontractors, material men, engineers, or other Persons (whose name and address shall be stated) who have rendered or furnished certain services or materials for the work and giving a brief description of such services and materials and the principal subdivisions or categories thereof and the respective amounts paid or due to each of said Persons in respect thereof and stating the progress of the work up to the date of said certificate;
- (3) that the sum then requested to be disbursed plus all sums previously disbursed does not exceed the cost of the work insofar as actually accomplished up to the date of such certificate;
- (4) that no part of the cost of the services and materials described in Section 8.2A(1) has been or is being made the basis for the disbursement of any funds in any previous or then pending application; and
- (5) that the amount held by the depository, after payment of the amount requested in the pending disbursement request, will be sufficient to pay in full the costs necessary to complete the repair or reconstruction.

If the cost of repair or reconstruction is less than twenty-five percent (25%) of the current replacement cost of all the Common Area improvements in the Project, the Board shall disburse the available funds for the repair and reconstruction under such procedures as the Board deems appropriate under the circumstances.

The repair or reconstruction shall commence no later than ninety (90) days after the date of such damage or destruction and shall be completed no later than one hundred eighty (180) days after commencement of reconstruction, subject to delays that are beyond the control of the party responsible for making the repairs. Steps shall be taken as reasonably necessary to secure any hazardous condition and to screen any unsightly views resulting from the damage or destruction.

If the work required to maintain, repair or restore damage or destruction involves work that is the responsibility of Owner and the Association, then all such work shall be directed by the Board, with the expense to be allocated as appropriate between Owner and the Association. If more than one Owner is involved, the expense to be paid by each Owner shall be apportioned by the Board.

If the Association undertakes any work which this Second Restated Declaration requires an Owner to undertake, or any work which, pursuant to this Second Restated Declaration, the Association is required to undertake at the expense of the Owner, the Board shall assess the Lot of the Owner for such work and shall so inform the Owner thereof in writing; provided, however, that the Assessment shall be reduced by the amount of any insurance proceeds paid to the Association as a result of damage to or destruction of the Lot involved. Such Assessment shall be a lien upon the Lot of the Owner and may be foreclosed, as set forth in Section 4.10.

B. Process If Repair or Reconstruction Not Undertaken: If the Common Area improvement is not repaired or reconstructed in accordance with the foregoing, all available insurance proceeds shall be disbursed among all Owners and their respective Mortgagees in the same proportion that the Owners are assessed, subject to the rights of the Mortgagees, after first applying the proceeds to the cost of mitigating hazardous conditions on the Project, making provision for the continuance of public liability insurance to protect the interests of the Owners until the property can be sold, and complying with all other applicable requirements of governmental agencies.

8.3 Condemnation. If all or any part of a Lot (except the Common Area) is taken by eminent domain, the award shall be disbursed to the Owner of the Lot, subject to the rights of the Mortgagees. If the taking renders the Lot uninhabitable, the Owner shall be divested of any further interest in the Project, including Membership in the Association, and the interest of the remaining Owners shall be adjusted accordingly. If all or any part of the Common Area is taken by eminent domain, the proceeds of

condemnation shall be used to restore or replace the portion of the Common Area affected by condemnation, if restoration or replacement is impossible, and any remaining funds, after payment of any and all fees and expenses incurred by the Association relating to such condemnation, shall be distributed among the Owners in the same proportion as such Owners are assessed, subject to the rights of Mortgagees. If necessary, the remaining portion of the Project shall be resurveyed to reflect such taking. The Association shall participate in the negotiation, and shall propose the method of division of the proceeds of condemnation, where Lots are not valued separately by the condemning authority or by the court. The Association shall represent the Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority for acquisition of the Common Area or part thereof.

ARTICLE IX GENERAL PROVISIONS

9.1 Enforcement. Subject to Article X, the Association or any Owner shall have the right to enforce, by any proceeding at law or in equity, all restrictions, conditions, covenants, reservations, liens, and charges now or hereafter imposed by the provisions of this Second Restated Declaration, the Articles and the Bylaws, and in such action shall be entitled to recover reasonable attorneys' fees as are ordered by the Court. The Association has the right to record a Notice of Violation against the Lot of an Owner who is not in compliance with the provisions of the Project Documents. Failure by the Association or by any Owner to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of the right to do so thereafter.

9.2 Invalidity of Any Provision. If any provision or portion hereof is declared invalid or illegal, all other provisions and portions shall remain valid, unaffected and in full force and effect.

9.3 Term. The covenants and restrictions of this Second Restated Declaration shall run with and bind the Project, and shall inure to the benefit of and shall be enforceable by the Association or the Owner of any property subject to this Second Restated Declaration, their respective legal representatives, heirs, successors and assigns, for a term of sixty (60) years from the date this Second Restated Declaration is recorded, after which time they shall be automatically extended for successive periods of ten (10) years, unless an instrument in writing, signed by a majority of the then Owners of the Lots, has been recorded within the year preceding the beginning of each successive period of ten (10) years, agreeing to change said covenants and restrictions in whole or in part, or to terminate the same.

9.4 Amendments. This Second Restated Declaration may be amended only by the affirmative vote (in person or by proxy) or written consent of Members representing a majority of the total voting power of the Association. However, the percentage of voting

power necessary to amend a specific clause shall not be less than the prescribed percentage of affirmative votes required for action to be taken under that clause. Any amendment must be certified in a writing executed and acknowledged by the Association President or Vice President and recorded in the Missoula County Clerk & Recorder's Office. No amendment shall adversely affect the rights of the holder of any Mortgage of record prior to the recordation of such amendment. Covenants regarding wildlife and riparian habitat and that restrict land use to protect wildlife or riparian/wetland areas may not be amended without review by the Montana Department of Fish, Wildlife & Parks and governing body approval. FURTHER, THE PROVISIONS OF SECTIONS 4.7A, 9.4, 9.6, 9.7, 9.10, 9.11, 10.8, AND ARTICLES VI, VII, XI AND XII SHALL NOT BE AMENDED WITHOUT THE PRIOR WRITTEN CONSENT OF DECLARANT SO LONG AS IT OWNS ANY PLATTED LOT OR UNTIL THE EARLIER OF (A) JANUARY 10, 2030 OR (B) DECLARANT'S RECORDING OF A WRITTEN STATEMENT THAT ALL SALES ACTIVITY HAS CEASED.

9.5 Rights of First Lenders. No breach of any of the covenants, conditions and restrictions contained herein, nor the enforcement of any lien provisions herein, shall render invalid the lien of any First Mortgage (meaning a Mortgage with first priority over any other Mortgage) on any Lot made in good faith and for value, but all covenants, conditions and restrictions shall be binding upon and effective against any Owner whose title is derived through Foreclosure or trustee's sale, or otherwise. Notwithstanding any provision in this Second Restated Declaration to the contrary, First Lenders shall have the following rights:

A. Copies of Project Documents: The Association shall make available to Owners and First Lenders, and to holders, insurers or guarantors of any First Mortgage, current copies of this Second Restated Declaration, Bylaws, Articles or other Rules concerning the Project and the books, records and financial statements of the Association. "Available" means available for inspection and copying, upon request, during normal business hours or under other reasonable circumstances. The Board may impose a fee for providing the foregoing which may not exceed the reasonable cost to prepare and reproduce the requested documents

B. Audited Statement: Any holder, insurer or guarantor of a First Mortgage shall be entitled, upon written request, to an audited financial statement for the immediately preceding fiscal year, free of charge to the party so requesting. Such statement shall be furnished within one hundred twenty (120) days of the end of the Association's fiscal year.

C. Notice of Action: Upon written request to the Association, any First Lender will be entitled to timely written notice of: (1) any condemnation loss or any casualty loss which affects a material portion of the Project or any Lot on which

there is a First Mortgage held, insured, or guaranteed by such First Lender; (2) any default in performance of obligations under the Project Documents or delinquency in the payment of Assessments or charges owed by an Owner of a Lot subject to a First Mortgage held, insured or guaranteed by such First Lender, which remains incurred for a period of sixty (60) days; (3) any lapse, cancellation or material modification of any insurance policy or fidelity bond maintained by the Association; (4) any proposed action which would require the consent of a specified percentage of First Lenders as specified in Section 9.5D. The Association shall discharge its obligation to notify such First Lenders by sending written notices required herein to such parties, at the address given on the request for notice, in the manner prescribed by Section 9.9.

D. Consent to Action:

(1) Except as provided by statute or the Project Documents in case of substantial destruction or condemnation of the Project, and further excepting any reallocation of interests in the Common Area(s) which might occur pursuant to any plan of expansion or phased development contained in the original Project Documents:

(a) the consent of Owners of Lots to which at least sixty-seven percent (67%) of the votes in the Association are allocated and the approval of First Lenders holding First Mortgages on Lots which have at least fifty-one percent (51%) of the votes of the Lots subject to First Mortgages, shall be required to add or amend any material provisions of the Project Documents which establish, provide for, govern or regulate, any of the following: (i) voting rights; (ii) increases in Assessments that raise the previously assessed amount by more than twenty percent (20%), Assessment liens, or the priority of Assessment liens; (iii) reductions in reserves for maintenance, repair, and replacement of Common Areas; (iv) responsibility for maintenance and repairs; (v) reallocation of interests in the Common Areas, or rights to its use; (vi) convertibility of Lots into Common Areas or vice versa; (vii) expansion or contraction of the Project, or the addition, annexation, or withdrawal of property to or from the Project; (viii) hazard or fidelity insurance requirements; (ix) imposition or any restrictions on the leasing of Lots; (x) imposition of any restrictions on an Owner's right to sell or transfer his or her Lot; (xi) restoration or repair of the Project (after damage or partial condemnation,) in a manner other than that specified in the Project Documents; or (ix) any provisions that expressly benefit Mortgage holders, insurers, or guarantors;

(b) a First Lender who receives a written request to approve additions or amendments who does not deliver or post to the requesting party a negative response within thirty (30) days after the notice of the proposed addition or amendment shall be deemed to have approved such request, provided the notice has been delivered to the First Lender by certified or registered mail, return receipt requested.

(2) Unless the holder(s) of at least two-thirds (2/3) of the First Mortgages (based upon one vote for each First Mortgage owned), or two-thirds (2/3) of the Owners (other than Declarant) of the individual Lots in the Project have given their prior written approval, the Association and/or the Owners shall not be entitled to:

(a) by act or omission, seek to abandon or terminate the Project, or abandon, partition, subdivide, encumber, sell or transfer the Common Area or property owned directly or indirectly, by the Association (the granting of easements for public utilities or for other public purposes consistent with the intended use of such property shall not be deemed a transfer within the meaning of this clause) except for abandonment or termination provided by law in the case of substantial destruction by fire or other casualty, or in the case of a taking by condemnation or eminent domain; or

(b) change the method of determining the obligations, Assessments or dues or other charges which may be levied against an Owner; or

(c) by act or omission, change, waive or abandon any scheme of regulations, or enforcement thereof, pertaining to the architectural design or the exterior appearance of Lots, the exterior maintenance of Lots, the maintenance of the Common Area walks or fences and driveways, or the upkeep of landscaping in the Common Area; or

(d) fail to maintain fire and extended coverage uninsurable Association Common Area improvements on a current replacement cost basis in an amount not less than one hundred percent (100%) of the insurable value (based on current replacement costs); or

(e) use hazard insurance proceeds for losses to any Common Area property for other than the repair, replacement or reconstruction of such Common Area property.

E. Right of First Refusal: The right of an Owner to sell, transfer, or otherwise convey his or her Lot shall not be subject to any Association or Declarant right of first refusal or similar restriction.

F. Contracts: Any agreement for professional management of the Project may not exceed three (3) years provided it is terminable by the Association after no longer than one (1) year without cause, penalty or other obligation upon 90 days' written notice of termination to the other party.

G. Reserves: Association dues or charges shall include an adequate reserve fund for maintenance, repairs, and replacement of those improvements the Association is obligated to maintain and that must be replaced on a periodic basis, and Assessments therefor shall be payable in regular installments rather than by special Assessments.

H. Priority of Liens: Any First Lender who obtains title to a Lot pursuant to the remedies provided in the Mortgage or Foreclosure of the Mortgage will not be liable for such Lot's unpaid Assessments and fees, late charges, fines or interest levied in connection therewith which accrue prior to the acquisition of title to such Lot by the Mortgagee (except for claims for a pro rata share of such Assessments or charges resulting from a pro rata reallocation of such Assessments or charges to all Project Lots including the Mortgaged Lot, and except for assessment liens recorded prior to the Mortgage).

I. Distribution of Insurance or Condemnation Proceeds: No Owner or other party shall have priority over First Lenders pursuant to their Mortgages in the case of a distribution to Owners of insurance proceeds or condemnation awards for losses to or taking of Common Area property.

J. Termination of Professional Management: When professional management has been previously required by the Project Documents, any decision to establish self management by the Association shall require the consent of Owners of Lots to which at least sixty-seven percent (67%) of the votes in the Association are allocated and the approval of First Lenders holding Mortgages on Lots which have at least fifty-one percent (51%) of the votes of Lots subject to First Mortgages.

K. Payment of Taxes or Insurance by Lenders: First Lenders may, jointly or singly, pay taxes or other charges which are in default and which may or have become a charge against the Common Area property and may pay overdue premiums on hazard insurance policies, or secure new hazard insurance coverage on the lapse of a policy, for such Common Area property

and First Lenders making such payment shall be owed immediate reimbursement from the Association, provided said lender(s) have given notice to the Association prior to making such payment(s) and the Association has failed to pay the same.

9.6 Limitation of Restrictions on Declarant. Declarant is undertaking the work of constructing improvements upon the Project. Completion of that work and the sale, rental and other disposal of said Lots are essential to the establishment and welfare of the Project as a first-class residential community. In order that said work may be completed and said Project be established as a fully occupied residential community as rapidly as possible, nothing in this Second Restated Declaration shall be understood or construed to:

- A. Prevent Declarant, its contractors or subcontractors from doing on the Project or any Lot whatever is reasonably necessary or advisable in connection with completion of said work; or
- B. Prevent Declarant or its representatives from erecting, constructing and maintaining on the Project (except upon Lots owned by others), such structures as may be reasonably necessary for developing said Project as a residential community and selling the same, including a sales office and design center; or
- C. Prevent Declarant from conducting on the Project (except upon Lots owned by others) its business of completing said work and of establishing a plan of residential ownership and selling Lots and Units; or
- D. Prevent Declarant from maintaining or displaying such signs, pennants and flags(s) on the Project (except upon Lots owned by others) as may be necessary for the sale, lease or disposition thereof; or
- E. Subject Declarant to the architectural control provisions of Article VI for the construction of any improvement on the Project.
- F. Prevent Declarant from exercising the following rights: Declarant reserves and shall have the right and easement, both while Declarant is still the Owner of Lots in the Project and thereafter, to enter upon the Project to inspect and correct any alleged defect in the design or construction of improvements in the Project.

The foregoing rights of Declarant shall, except as provided in Section 9.6.F., terminate upon the sale by Declarant of all Lots in the Project and Annexable Property. Until such time, said rights shall constitute easements reserved by Declarant for the

benefit of Declarant and any Lots or property owned by Declarant within the Project or Annexable Property.

So long as Declarant, or its successors and assigns, owns one or more Lot, Declarant, or its successors and assigns, shall be subject to the provisions of this Second Restated Declaration. Declarant shall make reasonable efforts to avoid disturbing the use and enjoyment of Lots and the Common Area by their Owners while completing any work necessary for said Lots or Common Area.

9.7 Termination of Any Responsibility of Declarant. If Declarant conveys all of its rights, title and interest in and to the Project to any successor Person or entity, then Declarant shall be relieved of the performance of any further duty or obligation hereunder, and such successor Person or entity shall be obligated to perform all such duties and obligations of Declarant.

9.8 Owners' Compliance. Each Owner, tenant or occupant of a Lot shall comply with this Second Restated Declaration, the Articles, Bylaws and Rules, and the decisions and resolutions of the Association or the Board, as lawfully amended from time to time. Failure to comply with any such provisions, decisions, or resolutions shall be grounds for an action (1) to recover sums due, (2) for damages, (3) for injunctive relief, (4) for costs and attorneys fees, or (5) any combination of the foregoing.

In the event of a violation of the Project Documents, the Association may record a Notice of Violation against the Lot of the non-complying Owner. Upon recording a Notice of Violation, the Association shall have complete discretion in deciding whether, when and how to proceed with enforcement and any delay after recording a Notice of Violation shall not give rise to a defense of waiver or estoppel in favor of a non-complying Owner. The Association may take action to enforce compliance against a subsequent Owner who acquires a Lot with a recorded Notice of Violation. The right of the Association to record a Notice of Violation shall be in addition to all other rights and remedies the Association may have at law or under the Project Documents.

All agreements and determinations lawfully made by the Association in accordance with the voting percentages established in this Second Restated Declaration, or in the Articles or the Bylaws, shall be deemed to be binding on all Owners, their successors and assigns.

9.9 Notice. Any notice permitted or required by this Second Restated Declaration, Articles or Bylaws may be delivered either personally or by mail. If by mail, delivery shall be deemed to have been made seventy-two (72) hours after a copy has been deposited in the U.S. mail, first class, postage prepaid, addressed to the person to be notified at the current address given by such person to the Secretary of the Board or addressed to such person's Lot if no address has been given to the Secretary.

9.10 Special Provisions Regarding Completion of Common Area Improvements.

Where any Project phase includes Common Area improvements not completed prior to the close of escrow on the first Lot sale in that phase, and where the Association is obligee under a bond or other arrangement (hereafter "Bond") to secure performance of Declarant's commitment to complete said improvements, the Board shall consider and vote on the question of action by the Association to enforce obligations under the Bond with respect to any improvement for which a notice of completion has not been filed within sixty (60) days after the completion date specified for that improvement in the planned construction statement appended to the Bond. If the Association has given an extension in writing for completion of any Common Area improvement, the Board shall consider and vote on such question if a notice of completion has not been filed within thirty (30) days after expiration of the extension. A special meeting of Association Members for the purpose of voting to override a Board decision to not initiate action to enforce obligations under the Bond or on the Board's failure to consider and vote on the question shall be held not less than thirty-five (35) days nor more than forty-five (45) days after receipt by the Board of a petition for such a meeting signed by Members representing five percent (5%) or more of the total voting power of the Association. At such special meeting a vote of a majority of Association Members other than Declarant shall be required to take action to enforce obligations under the Bond and a vote of a majority of the voting power of the Association, excluding Declarant, shall be deemed to be the decision of the Association, and the Board shall thereafter implement this decision by initiating and pursuing appropriate action in the name of the Association.

On satisfaction of Declarant's obligation to complete the Common Area improvements, the Association shall acknowledge in writing that it approves release of the Bond and shall execute any other documents as may be necessary to effect such release. The Association shall not condition its Bond release approval on satisfaction of any condition other than completion of the Common Area improvements as described on the planned construction statement. Any dispute between Declarant and the Association regarding completion of the Common Area shall be submitted to binding arbitration under the rules of the American Arbitration Association and the prevailing party shall be entitled to recover costs, including reasonable attorneys' fees.

9.11 Special Provisions Regarding Payment of Assessments by Declarant.

Where the Association is obligee under a bond or other arrangement (hereafter "Bond") to secure performance of Declarant's commitment to pay Assessments on Lots it owns, the Board shall consider and vote on the question of action by the Association to enforce obligations under the Bond with respect to any of Declarant's Assessments which are delinquent for thirty (30) days. A special meeting of Association Members for the purpose of voting to override a Board decision to not initiate action to enforce obligations under the Bond or on the Board's failure to consider and vote on the question shall be held not less than ten (10) nor more than twenty (20) days after the Board's receipt of a

petition for such a meeting signed by Members representing five percent (5%) or more of the total voting power of the Association. At such special meeting a vote of a majority of Association Members other than Declarant shall be required to take action to enforce obligations under the Bond and a vote of a majority of the voting power of the Association, excluding Declarant, shall be deemed to be the decision of the Association, and the Board shall thereafter implement this decision by initiating and pursuing appropriate action in the name of the Association.

On satisfaction of Declarant's obligation to assure the availability of funds to pay Assessments upon unsold Lots if required under Montana law, the Association shall acknowledge in writing that Declarant is not delinquent in payment of its Assessments, and that it approves the release of the Bond, and shall execute any other documents as may be necessary to effect release of the Bond. The Association shall not condition its approval of such Bond release on satisfaction of any condition other than payment of Assessments. Any dispute between Declarant and the Association regarding payment of Assessments shall be submitted to binding arbitration under the rules of the American Arbitration Association and the prevailing party shall be entitled to recover costs, including reasonable attorney's fees.

9.12 No Discrimination. No Owner shall either directly or indirectly forbid or restrict the conveyance, encumbrance, lease, mortgage, or occupancy of his Lot to any person of a specified race, sex, adulthood, marital status, color, religion, ancestry, physical handicap, or national origin.

9.13 Alternative Dispute Resolution. Alternative dispute resolution procedures shall be applicable and implemented as provided in Article X hereof

9.14 Number; Gender. The singular and plural number and the masculine, feminine and neuter gender shall each include the other where the context requires

9.15 Captions. Captions and headings herein are for convenience only and shall not be used to limit or expand the terms or provisions hereof.

9.16 Exhibits. All Exhibits are deemed incorporated herein by reference as though set forth in full.

9.17 Compliance with FHA, VA, FHLMC or FNMA Requirements. If Declarant chooses a financing program that involves Mortgage insurance issued by a government agency such as the FHA or VA or involves first Mortgage sales to an agency such as FHLMC or FNMA, the Association, the Board and each Owner shall take reasonable steps to satisfy the requirements of such program and/or agency including, without limitation, initiating and completing amendments to the Project Documents.

ARTICLE X ENFORCEMENT

10.1 Priority and Defined Terms. This Article shall have priority over and supersede any inconsistent terms or provisions contained in any other Articles or portions of this Second Restated Declaration. The defined (initially capitalized) terms contained in this Article shall be in addition to defined terms set forth in Article I.

10.2 Enforcement and Nonwaiver. The Association or any Owner shall have a right of action against any Owner, and any Owner shall have a right of action against the Association, to enforce by proceedings at law or in equity all restrictions, conditions, covenants and reservations, now or hereafter imposed by the Project Documents or any amendment thereto, including the right to prevent the violation of such restrictions, conditions, covenants, or reservations and the right to recover damages or other dues for such violation except that Owners shall not have any right of enforcement concerning liens for Assessments. The Association shall have the exclusive right to the enforcement of provisions relating to architectural control and the Rules, unless the Association refuses or is unable to effectuate such enforcement, in which case any Owner who otherwise has standing shall have the right to undertake such enforcement. Failure of the Association, Declarant or any Owner to enforce any covenants or restrictions herein contained shall in no event be deemed a waiver of the right to do so thereafter. The City of Missoula shall have the same right to enforce this Second Restated Declaration as an Owner in the Project.

10.3 Agreement to Avoid Litigation. Declarant, the Association, its officers, directors, and committee members, all Persons subject to this Second Restated Declaration, any Builder, and any Person not otherwise subject to this Second Restated Declaration who agrees to submit to this Article (collectively "Bound Parties") agree to encourage the amicable resolution of disputes involving the Properties without the emotional and financial costs of litigation. Accordingly, each Bound Party covenants and agrees that claims, grievances or disputes described in Section 10.4 ("Claims") shall be resolved using the procedures set forth in Section 10.5 in lieu of filing suit in any court.

10.4 Claims. Unless specifically exempted below, all claims, grievances or disputes relating to the interpretation, application or enforcement of the Project Documents, or the rights and duties of any Bound Party under the Project Documents or relating to the design or construction of improvements on the Lots shall be subject to Section 10.5.

Notwithstanding the above, unless all parties thereto otherwise agree, the following shall not be Claims and shall not be subject to the provisions of Section 10.5:

A. any suit by the Association against any Bound Party to enforce the provisions of Article IV (Assessments);

B. any suit by the Association to obtain a temporary restraining order (or equivalent emergency equitable relief) and such other ancillary relief as the court may deem necessary to maintain the status quo and preserve the Association's ability to enforce the provisions of Article VI (Architectural Controls) and Article VII (Use Restrictions).

C. any suit that asserts a Claim which would constitute a cause of action independent of the Project Documents;

D. any suit in which any indispensable party is not a Bound Party; with the consent of all parties, any of the above may be submitted to the alternative dispute resolution procedures set forth in Section 10.5.

10.5 Mandatory Procedures.

A. Notice. Any Bound Party having a Claim ("Claimant") against any other Bound Party ("Respondent") (collectively, "Parties") shall notify each Respondent in writing (the "Notice"), stating plainly and concisely:

1. nature of the Claim, including the Persons involved and Respondent's role in the Claim;
2. legal basis of the Claim (i.e., specific authority from which the Claim arises);
3. Claimant's proposed remedy; and
4. that Claimant will meet Respondent to discuss in good faith ways to resolve the Claim.

B. Negotiation and Mediation.

1. The Parties shall make every reasonable effort to meet in person and confer for the purpose of resolving the claim by good faith negotiation. If requested in writing, accompanied by a copy of the Notice, the Board may appoint a representative to assist the Parties in resolving the dispute by negotiation.

2. If the Parties do not resolve the Claim within thirty (30) days of the Notice date (or within such other period as the Parties may agree) ("Termination of

Negotiations”), Claimant shall have 30 days to submit the Claim to mediation under the auspices of an independent agency providing dispute resolution services in Montana.

3. If Claimant does not submit the Claim to mediation within 30 days after Termination of Negotiations or does not appear for the mediation, Claimant shall be deemed to have waived the Claim, and Respondent shall be released and discharged from any liability to Claimant on account of such Claim; provided, nothing herein shall release or discharge Respondent from any liability to any Person other than Claimant.

4. Settlement of any Claim through mediation shall be documented in writing by the mediator and signed by the Parties. If the Parties do not settle within 30 days after submitting the Claim to the mediation process, or within such time as determined by the mediator, the mediator shall issue a notice of termination of mediation proceedings (“Termination of Mediation”). The Termination of Mediation notice shall state that the Parties are at an impasse and the date mediation was terminated.

5. Within five (5) days of Termination of Mediation, Claimant shall make a final settlement demand (“Settlement Demand”) to Respondent and Respondent shall make a final written settlement offer (“Settlement Offer”) to Claimant. If Claimant fails to make a Settlement Demand, Claimant’s original Notice shall constitute the Settlement Demand. If Respondent fails to make a Settlement Offer, Respondent shall be deemed to have made a “zero” or “take nothing” Settlement Offer.

C. Arbitration.

1. If the parties do not agree in writing to settle the Claim within fifteen (15) days of the Termination of Mediation, Claimant shall have 15 additional days to submit it to arbitration under the rules of the American Arbitration Association. If not timely submitted to arbitration or if Claimant fails to appear for the arbitration proceeding, the Claim shall be deemed abandoned and Respondent shall be released and discharged from any liability to Claimant arising out of such Claim; nothing herein shall release or discharge Respondent from any liability to Persons other than Claimant.

2. This subsection (C) is an agreement to arbitrate and is specifically enforceable. The arbitration award (the “Award”) shall be final and binding and judgment may be entered upon it in any court of competent jurisdiction to the fullest extent permitted under Montana law.

10.6 Allocation of Costs of Resolving Claims.

10.6.1. Subject to Section 10.6.2, each party shall bear its own costs, and legal fees, and each Party shall share equally all charges rendered by the mediator(s) and all filing fees and costs of conducting the arbitration proceeding (“Post Mediation Costs”).

10.6.2. Any award equal to or more favorable to Claimant than Claimant's Settlement Demand shall add to Claimant's Post Mediation Costs to the Award, such costs to be borne equally by all Respondents. Any award equal to or less favorable to Claimant than any Respondent's Settlement Offer shall award to such Respondent its Post Mediation Costs.

10.7 Enforcement of Resolution. After resolution of any Claim, if any Party fails to abide by the terms of any agreement or binding Award, any other Party may file suit or initiate administrative proceedings to enforce such agreement or Award without having to again comply with the Section 10.5 procedures. The Party taking action to enforce the agreement or Award shall be entitled to recover from the non-complying Party (or Parties pro rata) all costs incurred in enforcing such agreement or Award, including, without limitation, attorney's fees and court costs.

10.8 Agreement for Dispute Resolution; Waivers of Jury Trial and Award of Punitive Damages. DECLARANT AND, BY ACCEPTING A DEED OR CONVEYANCE TO THE COMMON AREA OR A LOT, AS THE CASE MAY BE, THE ASSOCIATION AND EACH OWNER AGREE TO HAVE ANY DISPUTE RESOLVED ACCORDING TO THIS ARTICLE X AND WAIVE THEIR RESPECTIVE RIGHTS TO PURSUE ANY DISPUTE IN ANY MANNER OTHER THAN AS PROVIDED IN THIS ARTICLE X. SUCH PARTIES ACKNOWLEDGE THAT BY AGREEING TO RESOLVE ALL DISPUTES AS PROVIDED IN THIS ARTICLE X. THEY ARE GIVING UP THEIR RESPECTIVE RIGHTS TO HAVE CERTAIN DISPUTES TRIED BEFORE A JURY AND FURTHER WAIVE THEIR RESPECTIVE RIGHTS TO AN AWARD OF PUNITIVE DAMAGES RELATING TO SUCH DISPUTES, THEREBY GIVING UP ANY RIGHTS SUCH PARTIES MAY POSSESS TO SUCH REMEDIES.

ARTICLE XI GOLF COURSE

11.1 Assumption of Risk and Indemnification. Each Owner, by purchasing a Lot near a golf course, hereby expressly assumes the risk of noise, personal injury or property damage caused by maintenance and operation of any such golf course including, without limitation: (a) noise from maintenance equipment (it being specifically understood that such maintenance typically takes place around sunrise or sunset), (b) noise caused by golfers, (c) use of pesticides, herbicides and fertilizers, (d) use of effluent in the irrigation of the golf course, (e) reduction in privacy caused by constant golf traffic on the golf course or the removal or pruning of shrubbery or trees on the golf course, (f) errant golf balls and golf clubs, and (g) design of the golf course.

Each Owner agrees that Declarant, the Association and any of Declarant's affiliates or agents shall not be liable to Owner or any other person claiming any loss or damage including, without limitation, indirect, special or consequential loss or damage arising from personal injury, destruction of property, trespass, loss of enjoyment or any other alleged wrong entitlement to remedy based upon, due to, arising from or otherwise related to the proximity of Owner's Lot to the golf course including, without limitation, any claim arising in whole or in part from the negligence of Declarant, any of Declarant's affiliates or agents or the Association. Owner hereby agrees to indemnify and hold harmless Declarant, Declarant's affiliates and agents and the Association against any and all claims by Owner's visitors, tenants and others upon such Owner's Lot.

11.2 View Impairment. Neither Declarant nor the Association guarantees or represents that any view over and across any golf course from adjacent Lots will be preserved without impairment. No provision of this Second Restated Declaration shall be deemed to create an obligation of the Association or Declarant to relocate, prune, or thin trees or other landscaping except as provided in Article V. The owner of the golf course may, in its sole and absolute discretion, change the location, configuration, size and elevation of the trees, bunkers, fairways and greens on such golf course from time to time. Any such additions or changes to the golf course may diminish or obstruct any view from the Lots and any express or implied easements for view purposes or for the passage of light and air are hereby expressly disclaimed. Any such addition or change to any golf course may not adversely affect drainage flow across the Properties.

11.3 River Lots. Each Owner, by purchasing a Lot in the vicinity of the river, hereby expressly assumes the inherent risks associated with construction of a Unit in close proximity to the river. Each such Owner acknowledges that stopping the riverbank from eroding may be a difficult or impossible task, and Missoula County flood plain regulations prohibit the use of riprap for river bank stabilization. Further, each River Lot Owner, by purchasing a Lot near the driving range, expressly assumes the risk of noise, personal injury or property damage caused by operation of, activities on, and use of such driving range.

ARTICLE XII SPECIAL DECLARANT RIGHTS

12.1 Special Declarant Rights. Declarant reserves the following Declarant Rights during the Development Period, which may be exercised, where applicable, anywhere within the Project:

- A. To complete any improvements indicated on Plat Maps or development plans filed with the original or amended Declaration or the Master Plan;
- B. To exercise a Development Right;

C. To maintain sales offices, management offices, signs advertising on the Project as set forth in Section 12.3;

D. To use easements through the Common Area for the purpose of making improvements within the Project;

E. To merge or consolidate the Association with another common interest community of the same form of ownership or make it subject to a master association; and

F. To operate a resale or rental office on site after all Lots have been developed, sold and completed.

12.2 Transfer of Special Declarant Rights.

A. Assignment. Declarant may assign any Special Declarant Rights, Development Rights, or other special rights and obligations of Declarant set forth herein or in the Bylaws to any affiliate of Declarant, or Declarant may allow any affiliate to exercise such rights on its behalf.

B. Transfer. Any or all Special Declarant Rights or any of the other special rights and obligations of Declarant set forth in this Second Restated Declaration or the Bylaws may be transferred in whole or in part to other Persons, provided that the transfer shall not reduce an obligation or enlarge a right beyond that which Declarant has under this Second Restated Declaration or the Bylaws. No such transfer shall be effective unless it is in a written instrument signed by Declarant and duly recorded in the Public Records.

12.3 Models, Sales Offices and Management Offices. During the Development Period, Declarant may maintain upon any Lot it owns or any portion of the Common Area such facilities and activities as, in Declarant's sole opinion, may be reasonably required, convenient, or incidental to the sale of Lots and construction of Units on the Lots including, but not limited to, business offices, signs, model units, marketing trails, and sales offices. Declarant shall have easements for access to and use of such facilities. Declarant's unilateral right to use the Common Area for purposes stated in this section shall not be exclusive and shall not unreasonably interfere with use of such Common Area by Owners unless leased pursuant to a lease agreement with the Association providing for payment of reasonable rent.

12.4 Construction of Improvements. Declarant and its employees, agents and designees shall also have a right and easement during the Development Period over and

upon all of the Common Area for the purpose of making, constructing and installing such improvements to the Common Area as it deems appropriate in its sole discretion.

12.5 Other Covenants Prohibited. During the Development Period, no Person shall record any declaration of covenants, conditions and restrictions, or similar instrument affecting any portion of the Project without Declarant's review and written consent. Any attempted recordation without such consent shall result in such instrument being void and of no force and effect unless subsequently approved by written consent signed by Declarant and recorded with the Missoula County Clerk & Recorder.

12.6 Master Planned Community. Each Owner, by accepting title to a Lot and becoming an Owner, and each other Person, by acquiring any interest in the Lots, acknowledges awareness that Canyon River is a master planned community, the development of which is likely to extend over many years, and agrees not to protest or otherwise object to (a) zoning or changes in zoning or to uses of, or changes in density of, the Project (other than within said Owner's or other Person's Neighborhood) during the Development Period, or (b) changes in any conceptual or master plan for the Project; provided, such revision is or would be lawful (including, but not limited to, lawful by special use permit, variance or the like) and is not inconsistent with what is permitted by this Second Restated Declaration as amended from time to time.

12.7 Equal Treatment. So long as Declarant owns any property described in Exhibit A or Exhibit B, the Association shall not, without Declarant's prior written consent, adopt any policy, rule or procedure that:

- A. Limits the access of Declarant, its successors, assigns and/or affiliates or their personnel, from using Association Common Areas;
- B. Limits or prevents Declarant, its successors, assigns and/or affiliates or their personnel, from advertising, marketing or using the Association or its Common Areas or any property owned by it in promotional materials;
- C. Limits or prevents Owners of Units from becoming members of the Association or enjoying full use of its Common Areas, subject to the membership provisions of this Second Restated Declaration and the Bylaws;
- D. Discriminates against or singles out any group of Association members or prospective members or Declarant that discriminates against or singles out any group or Association members or Declarant;
- E. Impacts the ability of Declarant, its successors, assigns and/or affiliates, to carry out to completion its development plan and related construction activities for Canyon River as such may be amended and updated from time to time, including

Declarant's right to easements for development and construction of Residential Units and related landscaping activities; or

F. Impacts the ability of Declarant, its successors, assigns and/or affiliates, to develop and conduct customer service programs and activities in a customary and reasonable manner. The Association shall not exercise its authority over the Common Areas (including, but not limited to, any gated entrances and other means of access to the Project) to interfere with Declarant's rights set forth herein or to impede access to any portion of the Project over streets and other Common Areas within the Project.

12.8 Right to Use Common Area for Special Events. As long as Declarant owns any property described in Exhibit A or Exhibit B, it shall have the right to use all Common Area, including any recreational facilities, for up to eight days each year to sponsor special events for charitable, philanthropic, political or marketing purposes as determined by Declarant in its sole discretion. Any such event shall be subject to the following conditions.

A. availability of the facilities at the time a request is submitted to the Association;

B. Declarant shall pay all costs and expenses incurred and shall indemnify the Association against any loss or damage resulting from the special event; and

C. Declarant shall return the facilities and personal property owned by the Association and used in conjunction with the special event to the Association in the same condition as existed prior to the special event.

Declarant shall have the right to assign the rights contained in this Section 12.8 to charitable organizations or foundations selected by Declarant. Declarant's right to use the Common Area for special events shall be enforceable by injunction, by any other remedy in law or equity, and by the terms of this Second Restated Declaration.

12.9 Amendment. This Article shall not be amended without the prior written consent of Declarant so long as Declarant owns any property described in Exhibit A or Exhibit B. The rights contained in this Article shall terminate upon the earlier of (a) January 10, 2025, or (b) upon Declarant's recording of a written statement that all sales activity has ceased. Thereafter, Declarant may continue to use the Common Areas for purposes stated in this Article only pursuant to a rental or lease agreement between Declarant and the Association which provides for rental payments based on the fair market value of any such portion of the Common Areas.

12.10 Perpetual Right to Use Office. Notwithstanding anything stated in this Article XII to the contrary, Declarant shall have the perpetual right to use an office in any community center constructed by Declarant and transferred to the Association. Declarant shall have the right to use such office for the purposes of managing the Project and for sales, resales, or rentals of Residential Units. The office shall be under the sole control and possession of Declarant, and Declarant shall have perpetual right to use the office rent free. However, Declarant shall pay its pro rata share of maintenance and utility costs for the building in which the office is located.

ARTICLE XIII LIVING WITH WILDLIFE

In addition to all covenants, conditions and restrictions previously stated herein, the use of the Project and each Lot therein is subject to the following restrictions necessary to protect wildlife living in the area:

13.1 No Permanent Barbeque Pits. No Lot shall have a permanent barbeque pit installed and each Owner shall clean portable barbeque grills regularly and store the grill either indoors or immediately adjacent to the Unit when not in use.

13.2 Flowers, Shrubs and Trees. The Association and each Owner shall protect flowers, ornamental shrubs and fruit trees which may be susceptible to damage from wildlife. Native vegetation shall be planted for landscaping and re-vegetation. All fruit trees shall be properly harvested so as not to allow an accumulation of rotting organic matter, which is a prime wildlife attractant.

13.3 No Gardens or Fencing. Gardens are not permitted. No fences are allowed. No dog runs or kennels may be located outside Residential Units on a Meadows Lot. Dog runs or kennels may be located outside Residential Units on an Estate Lot if approved by the ACC. Bird feeders and compost piles attract bears and are not permitted.

13.4 No Dumping Ground. No Lot or any portion thereof shall be used as a dumping ground. All rubbish, trash and other waste shall not be allowed to accumulate, except in sanitary containers. The sanitary containers shall be emptied of waste and the waste removed from the Project at least on a weekly basis. All garbage shall be stored indoors in containers of metal, plastic or other suitable material, which have sufficiently tight fitting covers to prevent entrance or destruction by wildlife.

13.5 No Artificial Feeding of Wildlife. Artificial feeding of wildlife is prohibited, including the use of salt blocks, mineral blocks, and feeding platforms for deer or other wildlife.

13.6 Storage of Pet Food. All pet food shall be stored indoors or in wildlife proof containers. Domestic pets shall be fed indoors to prevent attraction of wildlife.

13.7 Domestic Pets Only. In addition to the restrictions stated in Section 7.8, domestic pets shall not be allowed to run freely and potentially harass wildlife. Dogs shall be kept in an enclosed structure when not under direction supervision of the Owner to prevent loss of life and maiming of wildlife, in addition to causing unnecessary expenditures of energy and displacement of wildlife to less suitable habitat. Additionally, rabbits, chickens, turkeys, pigs, sheep and goats are not permitted.

13.8 No Apiary. Apiaries may attract species such as bears and shall not be located on any Lot or Common Area in the Project.

13.9 Living with Wildlife Brochure. Incorporated herein by this reference is the brochure "Living with Wildlife." Copies of that brochure, "Living with Wildlife," can be obtained from the Missoula Office of Planning and Grants, 435 Ryman, Missoula, Montana 59802. Lot Owners should follow recommendations made in that brochure.

ARTICLE XIV
ENFORCEMENT BY MISSOULA COUNTY AND
MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

Each Owner acknowledges, by acceptance of the deed to or other conveyance of the Lot whether or not it shall be expressed in any such deed or other instrument, that covenants which restrict the use of the land for the purpose of protecting wildlife or riparian/wetland areas are enforceable by each of the Lot Owners, by Missoula County and by the Montana Department of Fish, Wildlife and Parks ("FW&P"). This right to enforce such covenants, conditions and restrictions does not obligate Missoula County or FW&P to inspect the Project, and no claim of damages may be made against Missoula County or FW&P resulting from undetected lack of compliance with wildlife or riparian/wetland protection requirements. Further, covenants regarding wildlife, riparian habitat and covenants that restrict the use of the land for the purpose of protecting wildlife or riparian/wetland areas shall not be changed or amended without FW&P review and governing body approval.

DATED July 22, 2010.

DECLARANT:

CANYON RIVER DEVELOPMENT, LLC

By


Wayne Raffhausen, managing member

By


Douglas R. McCollum, managing member

STATE OF MONTANA)
 : SS.
County of Missoula)

This instrument was acknowledged before me on July 22, 2010 by Wayne Paffhausen and Douglas R. McCollum, managing members of Canyon River Development, LLC.


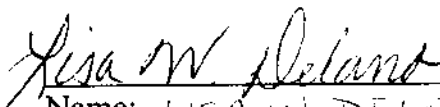
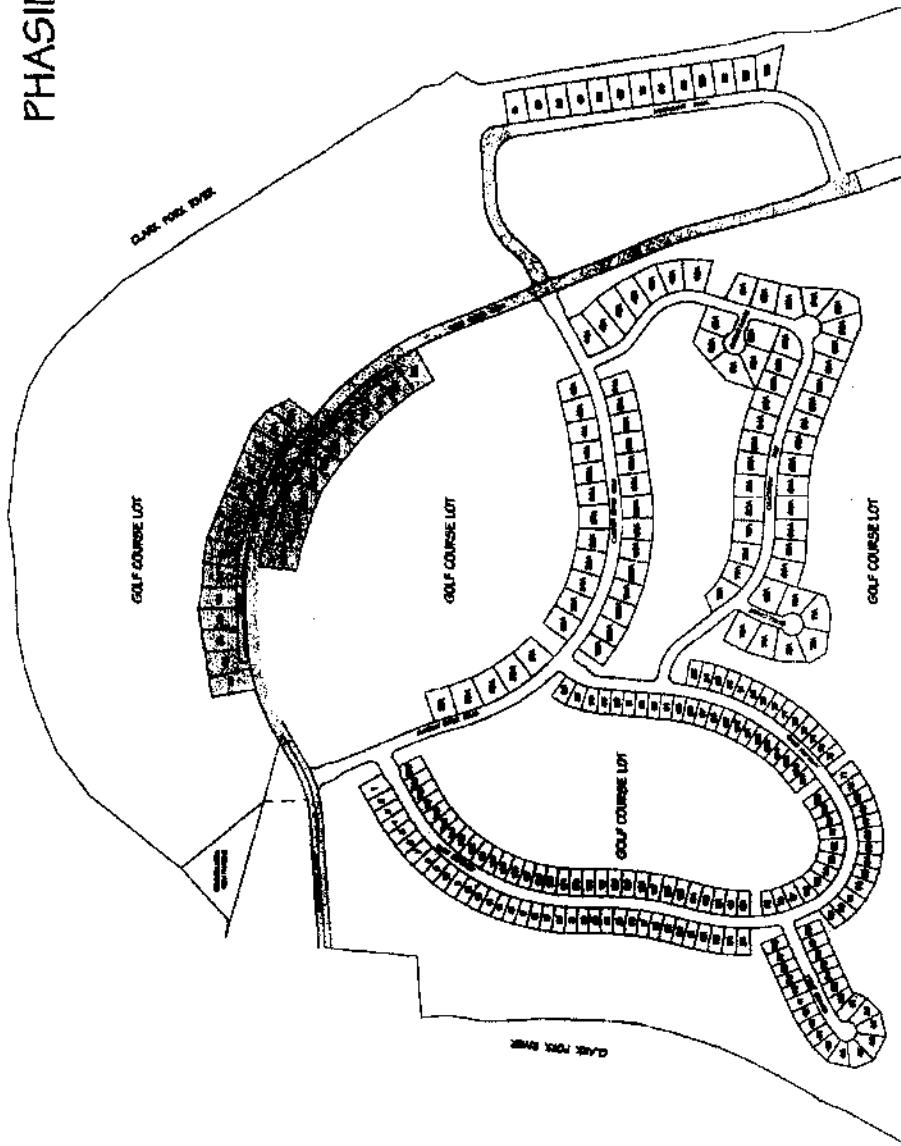
A circular notary seal for Lisa W. Delano, Notary Public for the State of Montana. The seal contains the text "LISA W. DELANO", "NOTARY PUBLIC-MONTANA", "Residing at Missoula, Montana", and "My Comm. Expires Jul. 23, 2011".
A handwritten signature of Lisa W. Delano in cursive script.
Name: LISA W. DELANO
Notary Public for the State of Montana

EXHIBIT B: ANNEXABLE PROPERTY

CANYON RIVER

PHASING AND ANNEXATION PLAN



THE GOLF COURSE SHALL BE INCLUDED AS A SUBDIVISION LOT WITH PHASE 2

PROJECT 6265-00
MARCH 2005



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Missoula County Vickie M Zeller COV

EXHIBIT B

LAW OFFICES OF
POORE, ROTH & ROBINSON, P.C.

A PROFESSIONAL CORPORATION

1341 HARRISON AVENUE

P. O. BOX 2000

BUTTE, MONTANA 59702

TELEPHONE (406) 497-1200

FAX (406) 782-0043

E-MAIL pr@prmr.com

DONALD C. ROBINSON
ROBERT C. BROWN
J. RICHARD ORIZOTTI
BRENDON J. ROHAN
JOHN P. DAVIS
THOMAS M. WELSH
PATRICK M. SULLIVAN
TINA L. MORIN
LEE BRUNER
LISA A. LEVERT

RONALD A. THUESSEN
CHARLES K. SMITH

OF COUNSEL

ROBERT A. POORE
URBAN L. ROTH

JAMES A. POORE, JR.
(1916-2002)

CERTIFICATION TO MISSOULA COUNTY

I hereby certify that I prepared, reviewed and approved the Declaration of Covenants, Conditions, Restrictions and Easements for Canyon River as counsel for the Declarant, Canyon River Development, LLC.

DATED this 22nd December, 2004.

POORE, ROTH & ROBINSON, P.C.

By *J. Richard Ortizotti*
J. Richard Ortizotti



CANYON RIVER DEVELOPMENT

Riparian Resource Area Management Plan

Prepared for:

CANYON RIVER DEVELOPMENT
P O Box 16930
Missoula, MT 59808

Prepared by:

PBS&J
1120 Cedar Street
Missoula, MT 59802

Revised June 22, 2007

Project # 100294.002



1120 Cedar Street • Missoula, Montana 59802 • Tel (406) 721-0354
www.pbsj.com • Fax (406) 721-0355

EXHIBIT C

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- Figure 1 *Canyon River Development Riparian Resources*
Figure 2 *Canyon River Development Activities and Riparian Resources*

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- Appendix A *Species List for the Canyon River Development Riparian Inventory*
Appendix B *Descriptions of the Most Common Riparian Types*
Appendix C *Additional Maintenance Information for Riparian and Upland Areas*



1.0 INTRODUCTION

Riparian areas are important for many reasons. They filter pollutants (especially sediment) from runoff before it enters streams. Riparian vegetation protects streambanks from erosion. This same vegetation shades streams which reduces temperatures to fish-friendly levels and protects fish from predators. The diversity of plants and plant heights provides a tremendous variety of habitats or niches for many wildlife species.

This management plan addresses areas of riparian resources at the proposed Canyon River Development (CRD) located east of Missoula, Montana. The riparian inventory includes a riparian resource area map, vegetation descriptions and a list of existing plants. The management plan identifies activities permitted within riparian resource areas and describes mitigation, maintenance and monitoring activities for the project.

2.0 RIPARIAN INVENTORY

Riparian resource areas at the proposed CRD have been subject to wood-cutting, grazing, weed infestation and other impacts since white settlement. These impacts have reduced the amount of riparian vegetation and increased the amount of noxious weeds and other non-native plants, especially those planted in the adjacent agricultural fields.

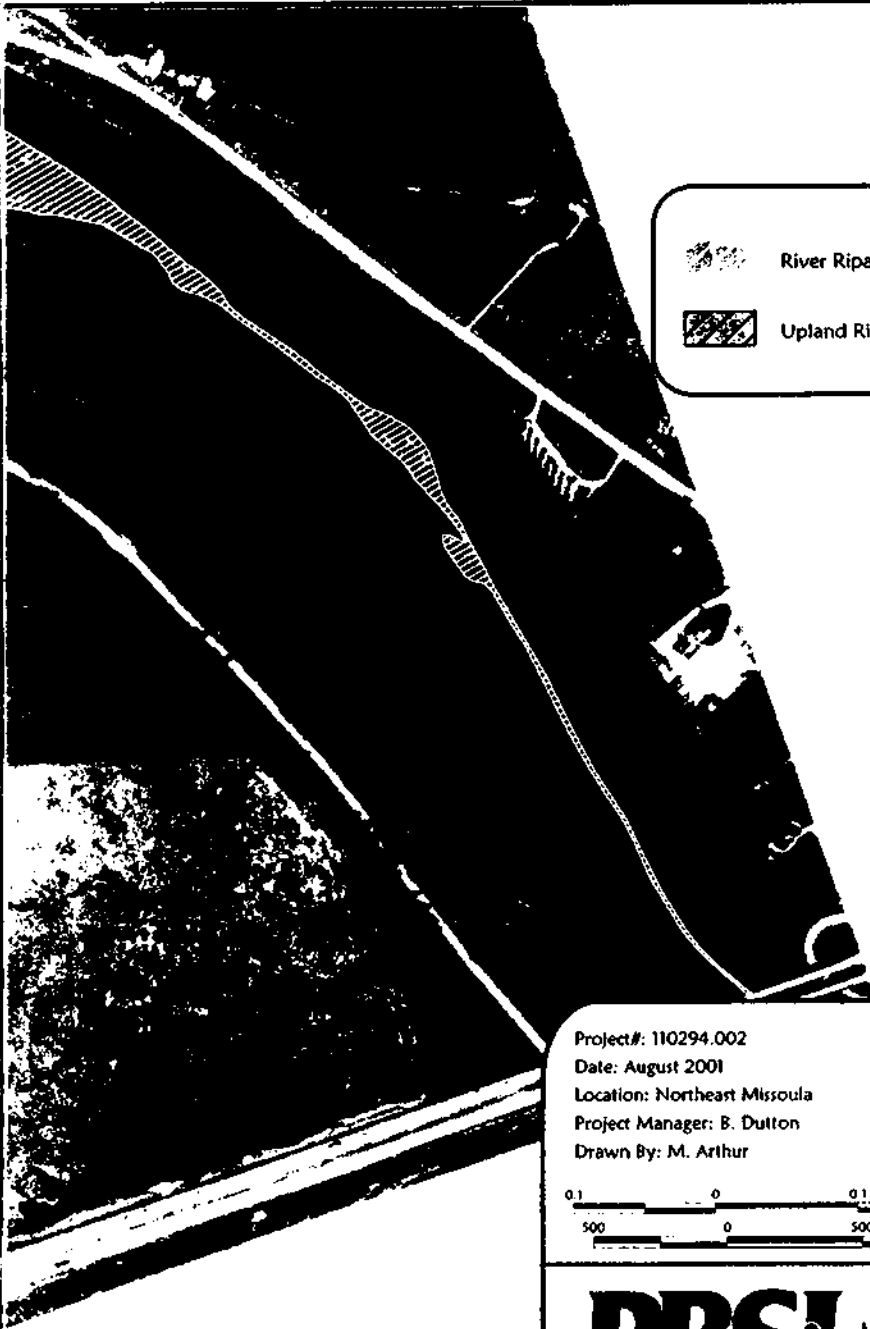
Spotted knapweed and leafy spurge are present as well as Canada thistle and hound's-tongue. There are many less cottonwood, willow and similar tall species than would occur naturally. Overall, the vertical and horizontal diversity of the CRD riparian areas has been reduced. These changes over time have affected the wildlife, fisheries and other values that the riparian resource ordinance seeks to protect. It is likely that the original area of riparian resources was more extensive on this property before white settlement. This inventory has identified the riparian resource area according to current vegetation conditions.

2.1 Riparian Area Delineation

There are approximately 29.7 acres that meet the criteria for Riparian Resource Areas at the CRD (**Figure 1**). Approximately 24.2 acres occur as riverbank riparian on low terraces along the immediate river banks, much of which is within the 100-year floodplain. Approximately 5.5 acres occur as upland riparian along narrow, steep, terrace edges in the northern portion of the property.

Appendix A includes a list of all plant species encountered during this inventory. Some species may have been missed which had not emerged or flowered at the time of field investigations. Brief descriptions of the most common CRD riparian types are presented below. **Appendix B** includes more detailed descriptions of the most common riparian types from the regional classification document (Hansen and others 1995).

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River Riparian Resources



Upland Riparian Resources

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Project#: 110294.002
Date: August 2001
Location: Northeast Missoula
Project Manager: B. Dutton
Drawn By: M. Arthur



0.1 0 0.1 0.2 Miles
500 0 500 1000 Feet

PBSJ

1120 Cedar Street
Missoula, MT 59807
(406) 721-0334

marthur@pbsj.com

Figure 1.
Canyon River Golf
Riparian Resources

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2.2 Riparian Type Descriptions

The main riparian types at the Canyon River Development are:

- Common chokecherry Community Type
- Woods rose Community Type
- Sandbar willow Community Type
- Black cottonwood/Red-osier dogwood Habitat Type

The most common riparian community type at CRD is the common chokecherry community type. This vegetation type is dominated by common chokecherry with smaller amounts of mock orange, Douglas hawthorn, serviceberry, common snowberry and woods rose.

A narrow band of the sandbar willow riparian type is present along some sections of the immediate riverbank and is dominated by sandbar willow. Where cottonwood is absent, the riparian type is usually common chokecherry or woods rose although small areas of Douglas hawthorn are also present.

Habitat types represent the potential or climax plant community at a site. Without disturbance, these types represent the ultimate vegetation that can develop in relation to climate, soils, hydrology and other factors. Most of the CRD riparian area has been altered, especially by removal of large cottonwood trees. This makes identification of the climax plant community difficult. The most common riparian habitat type at the CRD is probably the spruce/red-osier dogwood Habitat Type. This is the dominant type along the Clark Fork river riparian area. This habitat type includes black cottonwood with a few scattered ponderosa pine and Rocky Mountain juniper.

Shrubs include red-osier dogwood, alder, snowberry, serviceberry, chokecherry, Douglas hawthorn, gooseberry and others. Forbs include starry Solomon's seal, strawberry, mountain sweet-cicely, western meadowrue and others. Non-native plants include spotted knapweed, common tansy, leafy spurge, hound's-tongue, Canada thistle and several grasses such as timothy, Kentucky bluegrass, smooth brome and orchard-grass. It is likely that the entire riparian area along the river was originally the black cottonwood/red-osier dogwood Habitat Type. Disturbance has changed this original vegetation due to grazing, weed infestation and other activities.

2.3 Relationships of Riparian Types to Bank Stabilization, Soil Compaction, Erosion and Habitat for Fish and Wildlife

Riparian types along the Clark Fork River provide bank stabilization directly through root mass anchoring of soil materials. Above-ground plant parts also provide bank stabilization during floods by slowing water velocities. Riparian invader plants such as sandbar willow and black cottonwood provide bank stabilization after floods by rapidly invading fresh flood deposits and reducing their future erosion.

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Soils in the CRD riparian areas are dominated by sandy textures and high rock contents. These soils are not readily compacted and any minor compaction that does occur will not prevent vegetation growth.

These riparian types prevent soil erosion in several ways; 1) root masses anchor soil, 2) above-ground plant parts reduce flood velocities and 3) above-ground plant parts and dead plant remains on the soil surface protect the soil from erosion directly. There is a direct relationship between the amount of riparian vegetation and the susceptibility to erosion.

No threatened or endangered (TE) wildlife species were observed during this inventory. Bald eagles are the most likely TE species to use the CRD riparian resource areas. No nest sites were observed but some trees have potential roosting/resting sites. These riparian areas provide significant habitat values for a wide range of wildlife. Many species such as white-tail deer use these sites for food, cover and resting as well as travel corridors. Upland game birds and many non-game birds use the edges for cover and the multi-layer diversity as niches for permanent homes as well as transitory use. Many bird species use shrub fruits as a food source including chokecherry, hawthorn, serviceberry and gooseberry. Fish benefit from the cooling effects of overhanging shrubs and from the cover provided by woody debris from dead trees. Bull trout are present in the adjacent river and are currently listed as a threatened species.

3.0 RIPARIAN AREA MANAGEMENT PLAN

This section describes management practices to be permitted in the Canyon River Development riparian areas. Also discussed are maintenance and monitoring activities for these riparian areas.

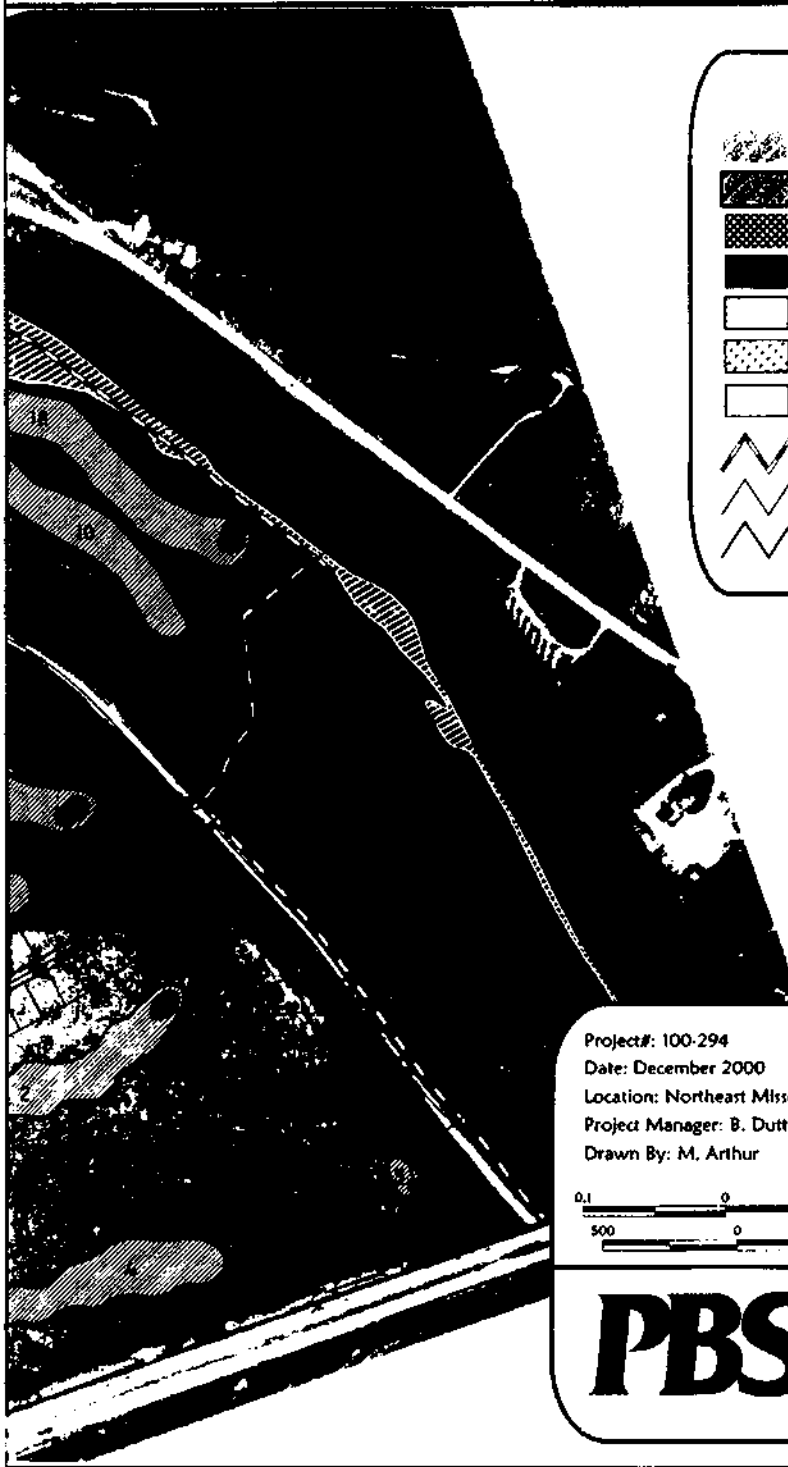
3.1 Activities Within Canyon River Development Riparian Areas

Activities planned within CRD Riparian Areas include trail construction, vegetation management and weed control. Portions of four homestead lots are also within riparian areas. Additional regulations covering these riparian areas are identified. No motorized use will be allowed in CRD Riparian Areas except for trail construction and maintenance.

3.1.1 Roads and Trails

No road construction is permitted within CRD riparian areas. A public access trail will cross approximately 4,280 feet of riparian area (Figure 2). The public access trail may be extended behind lots 1B through 13B if public access is acquired along the river south of I-90 and/or a trail is constructed. Assuming a 10 foot wide disturbance, this will affect approximately 1 acre of the 29.7 acre total. Trail construction will include a crushed rock surface of 6-12 inches over the native soil. In the river riparian area, no portion of the trail will be elevated more than 6 inches above native grade to prevent alterations to flood flows. Within the floodplain portion of the riparian area the trail will be constructed so that it does not block, restrict, or otherwise change or impede drainage.

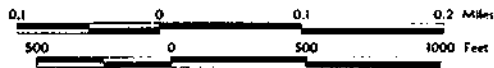




Legend

-  River Riparian Resources
-  Upland Riparian Resources
-  Proposed Tee
-  Proposed Green
-  Proposed Fairway
-  Proposed Pond
-  Proposed Lot
-  Proposed Trail
-  Proposed & Existing Streets
-  River

Project#: 100-294
 Date: December 2000
 Location: Northeast Missoula
 Project Manager: B. Dutton
 Drawn By: M. Arthur



PBSJ

1120 Cedar Street
 Missoula, MT 59807
 (406)721-0354

marthur@pbsj.com

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Figure 2.
Canyon River Golf Development
Activities and Riparian Resources

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Dips or small diameter culverts will be used to cross any high water channels encountered along the riparian portion of the trail. No motorized use is allowed within the riparian resource area except during trail construction.

3.1.2 Homesites

Portions of four subdivision lots (1A - 4A) include riparian resources (**Figure 2**). These riparian resources are mainly chokecherry community types on steep terrace edges. No structures or roads may be placed in the riparian resource area. "No-build" areas will be designated on the face of the plat to protect the riparian resource area on these lots and the areas of these lots that lie north of the riparian area on each lot. A notation will be placed on the deeds for these four lots stating they must conform to the riparian management plan and no-build areas. The riparian management plan will be included in covenants for these four lots.

Vegetation management including removal, pruning, weed control and planting must conform to the other sections of this management plan. Fencing is only allowed in the riparian resource area to protect new vegetation during establishment as outlined in section 3.1.5 of this plan.

All homeowners in the CRD will be provided with a list of adapted native plant species and will be encouraged to incorporate them into landscaping plans. This list will include all riparian species appropriate for revegetation.

3.1.3 Golf Course

No Golf course construction will occur within riparian areas. All golf course features will be constructed in a manner that they will not significantly affect adjacent riparian areas including flood flows, flood heights and drainage patterns. Golf course features outside the riparian areas but within the floodplain will be protected from erosion during floods to prevent erosion and sediment delivery to the riparian area or river.

Additional areas of riparian vegetation will be incorporated into final golf course design. These areas will be used to enhance the visual appearance, and course difficulty as well as to screen homes and provide wildlife habitat.

3.1.4 Grazing

No future grazing will be allowed in riparian resource areas at CRD except on a very limited basis for special purposes such as part of a weed control program.

3.1.5 Fencing

Fences restrict wildlife movement and will be permitted only for specific purposes within the CRD riparian area. Fences will be to protect vegetation plantings from wildlife damage during establishment. Fences should be designed to provide the level of control needed while allowing



maximum wildlife movement. Tall, small-mesh wire fences should only be used where absolutely necessary. Fences will also not be permitted separating the CRD riparian area from the Golf Course. The 50 foot buffer area east of Lots 1B through 13B shall not be fenced or landscaped with non-native vegetation. No fencing is permitted within the riparian areas on Lots 1A through 4A.

3.1.6 Vegetation Management and Enhancement

Additional detail for maintenance activities is provided in **Appendix C**. The information in **Appendix C** was taken from a separate document "*Canyon River Development: Vegetation Management Plan*." Vegetation management at the CRD riparian areas will emphasize protection and enhancement of native vegetation. Vegetation management on the non-residential lot areas will be the responsibility of the golf course managers. All personnel will be given orientation training which includes the vegetation management restrictions outlined in this report. No live or dead trees will be removed except where they present a safety concern from falling. No other vegetation removal or pruning will be allowed within CRD riparian areas. No routine fertilization will occur within CRD riparian resource areas. Temporary spot fertilization may be used to improve the establishment and early growth of planted stock.

The CRD riparian resource area currently has relatively low plant diversity due to past management activities and non-native plant invasion. The river riparian zone has very few trees and therefore is missing an entire vegetation layer. This tree layer provides habitat for birds and other terrestrial wildlife as well as shade and woody debris for fish. The riparian shrub layer at CRD is dominated by chokecherry which provides cover, nesting sites, fruit and shade for many bird and animal species. However, an increase in diversity would significantly increase the wildlife habitat value of the riparian zone. In consideration of these issues, during golf course construction at least 100 riparian trees and 100 riparian shrubs will be planted throughout the existing river riparian zone.

In addition to the vegetation enhancement described in this section, golf course designers and future homeowners will be provided with **Appendix A** of this report which lists native trees, shrubs, grasses and forbs suited to this site. It is certain that native species will be incorporated into golf course design to provide screening, interest and aesthetics. Tree and shrub plantings will be most effective for wildlife if installed as dense, diverse thickets and not as scattered individual plants.

3.1.7 Weed Control

Weeds are a significant component of the CRD riparian vegetation. Several weeds on the state noxious list are present including leafy spurge, spotted knapweed, hound's-tongue, common tansy and Canada thistle. Other common weeds present are woolly mullein, tumble mustard and wild licorice. Although not often thought of as weeds, a number of non-native grasses also are present and occupy space that could support native plants with much higher wildlife values. These grasses include smooth brome, orchard-grass, Kentucky bluegrass, cheatgrass and timothy.

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Weed management at CRD will emphasize an Integrated Pest Management (IPM) approach incorporating cultural, mechanical, chemical and biological control methods.

A formal weed control plan will be completed for the golf course and include CRD riparian areas. Most, if not all of the following weed control methods will be incorporated into the weed control plan.

Cultural weed control methods:

- Minimizing disturbances
- Re-seeding disturbed areas immediately with native species
- Protecting and enhancing native vegetation especially tree and shrub layers for shading purposes
- Effective weed control on adjacent non-riparian areas.

Mechanical weed control methods:

- Hand-pulling
- Weed whipping
- Mowing
- Mulching.

Chemical weed control methods:

- Spot applications to individual plants or small areas
- Most effective chemicals approved for riparian areas
- Most effective chemicals for the target weeds
- Application at the most effective time.

Biological control methods:

- Release of weed control bioagents including insects and pathogens
- Grazing with weed control animals including goats and sheep
- Coordination with local weed district biocontrol programs.

The foundation of the CRD weed control program will be protection and enhancement of native vegetation. Keeping native plants healthy will solve much of the weed problem. Many of the CRD weeds, especially knapweed can be controlled by shade. Others such as leafy spurge, hound's-tongue, tansy and Canada thistle are more shade tolerant and may require additional efforts. When weed are at low levels, as they are across most of the CRD riparian area, they may be controlled with mechanical means as a maintenance task. The need for chemical control methods will likely be limited to special cases such as spurge patches, post-flood deposit invasion or other disturbances. Riparian weed control methods are evolving rapidly and efforts will be made to keep current through the Missoula Weed Control Board and Extension Service.

Chemical use, including pesticides and fertilizers, is a significant water quality concern at riparian areas. The close proximity to surface and groundwater combined with the presence of porous soils increases the potential for water impacts. Chemicals will be chosen that are less toxic and persistent and that target the specific weeds present. Applications will be made at the



most effective time and re-seeding will follow to reduce the chance for weed regrowth. Workers will receive orientation training which includes the general intent and specific conditions of riparian resource management goals related to chemical use.

3.1.8 Common Area

A 3.6 acre 'Common Area' has been identified within the CRD Riparian Resource Area (Figure 2). This will not be an improved park but will be accessible from the adjacent public trail.

3.1.9 Other Regulations

Permits for all activities in the CRD riparian resource area will be obtained when needed. These may include 310 permits from the Missoula County Conservation District for any alteration of streambanks, 404 permits for any impacts to wetlands or waters of the US, and floodplain permits for activities in the floodplain.

3.2 Maintenance and Monitoring

The golf course managers will be responsible for executing this plan and maintaining CRD riparian resource areas other than on individual homesites. The CRD managers will review the plan in relation to permitted management actions, monitor the condition of riparian areas and ensure compliance. The Missoula Office of Planning and Grants may also choose to review riparian activities for plan compliance.

Monitoring activities will include an on-the-ground review of the entire CRD riparian resource area. This examination will note evidence of unauthorized road, trail, structure and fence construction as well as grazing. The CRD riparian resource area boundary will be examined and compared with **Figures 1 and 2** in this report. Changes will be noted and corrective action taken to halt activities not permitted in this plan.

The general vegetation health and integrity of the CRD riparian resource area will be monitored by examining key vegetation indicators. Key indicators of riparian vegetation health will include acreage, number of native plant species, coverage of native vegetation and coverage of weeds. Any decrease in acreage will be noted and halted then replaced in consultation with Missoula County officials. The total number of native plant species in each life form category (tree, shrub, graminoids, forbs) will be maintained at or above current levels as indicated in **Appendix A**. The coverage of native plant species will be maintained above 50% and the total coverage of all plant species will be maintained above 90% except on new flood deposits. The total coverage of weed species will be maintained below 50%. Key vegetation indicators will be evaluated by a qualified professional at least every 5 years.

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4.0 SUMMARY

The Canyon River Development riparian resource area provides an important component of the overall property. It adds diversity and accounts for a significant share of the wildlife values across the entire site. This plan provides a framework for protecting and enhancing riparian values for wildlife, fisheries, water quality and other resources.

5.0 REFERENCES

- Extension Service. June 1990. "Montana Interagency Plant Materials Handbook for Forage Production, Conservation, Reclamation, and Wildlife."
- Hansen, P.L., R. Pfister, K. Boggs, B. Cook, J. Joy and D. Hinckley. 1995. "Classification and Management of Montana's Riparian and Wetland Sites." Miscellaneous Publication No. 54. Montana Forest and Conservation Experiment Station. School of Forestry. University of Montana. Missoula, Montana.
- Pfister, R.D., Kovalchik, B.L., Arno, S.F., and Presby, R.C. 1977. "Forest Habitat Types of Montana." USDA Forest Service General Technical Report INT-34. Intermountain forest and Range Experiment Station. US Department of Agriculture. Ogden, Utah.
- Sheley, R., B. Mullin and P. Fay. 1995. Draft Riparian Weed Management Guidelines. Montana State University Extension Service, Bozeman, MT 8p. (processed).



Appendix A

SPECIES LIST FOR THE CANYON RIVER DEVELOPMENT RIPARIAN INVENTORY

Canyon River Development



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APPENDIX A. Species List For The Canyon River Development Riparian Inventory.

SCIENTIFIC NAME	COMMON NAME	STATUS	BEST TO PLANT
TREES			
Juniperus scopulorum	Rocky mountain juniper	NATIVE	X
Pinus ponderosa	Ponderosa pine	NATIVE	X
		(STATE TREE)	
Populus tremuloides	Quaking aspen	NATIVE	X
Populus trichocarpa	Black cottonwood	NATIVE	X
Pseudotsuga menziesii	Douglas fir	NATIVE	X
SHRUBS			
Acer glabrum	Rocky mountain maple	NATIVE	X
Alnus incana	Mountain alder	NATIVE	
Amelanchier alnifolia	Serviceberry	NATIVE	X
Berberis repens	Creeping Oregongrape	NATIVE	
Cornus stolonifera	Red-osier dogwood	NATIVE	X
Crataegus douglasii	Douglas hawthorne	NATIVE	X
Fraxinus pennsylvanica	Mock orange	NATIVE	X
Physocarpus malvaceus	Ninebark	NATIVE	
Prunus virginiana	Common chokecherry	NATIVE	X
Ribes sp.	Currant	NATIVE	X
Rosa woodsii	Woods rose	NATIVE	X
Salix bebbiana	Bebb willow	NATIVE	X
Salix exigua	Sandbar willow	NATIVE	X
Symphoricarpos albus	Snowberry	NATIVE	X
GRAMINOIDS			
Agropyron repens	Quack grass	INTRODUCED	
Agropyron spicatum	Bluebunch wheatgrass	NATIVE	X
	(state grass)		
Agrostis stolonifera	Redtop	NATIVE	X
Bromus inermis	Smooth brome	INTRODUCED	
Bromus tectorum	Cheatgrass	INTRODUCED	
Dactylis glomerata	Orchardgrass	INTRODUCED	
Elymus cinereus	Basin wild rye	NATIVE	X
Festuca idahoensis	Idaho fescue	NATIVE	X
Festuca scabrella	Rough fescue	NATIVE	X
Phalaris arundinacea	Reed canarygrass	INTRODUCED	
Phleum pratense	Timothy	INTRODUCED	
Poa pratensis	Kentucky bluegrass	INTRODUCED	
FORBS			
Achillea millefolium	Western yarrow	NATIVE	
Arctium minus	Common burdock	WEED	
Centaurea maculosa	Spotted knapweed	WEED	
Chenopodium album	Common lambsquarter	WEED	
Cirsium arvense	Canada thistle	WEED	
Cynoglossum officinale	Hound's-tongue	WEED	
Equisetum arvense	Field horsetail	NATIVE	
Euphorbia esula	Leafy spurge	WEED	
Fragaria virginiana	Virginia strawberry	NATIVE	
Galium triflorum	Sweet-scented bedstraw	NATIVE	



Species List, continued

SCIENTIFIC NAME	COMMON NAME	STATUS	BEST TO PLANT
Glycyrrhiza lepidota	Wild licorice	WEED	
Heracleum lanatum	Cow-parsnip	NATIVE	
Rumex crispus	Curly dock	WEED	
Sisymbrium altissimum	Tumble mustard	WEED	
Smilacina stellata	Starry Solomon-plume	NATIVE	
Tanacetum vulgare	Common tansy	WEED	
Taraxacum officinale	Common dandelion	WEED	
Thlaspi arvense	Field pennycress	WEED	
Verbascum thapsus	Wooly mullein	WEED	
Xanthium strumarium	Common cocklebur	WEED	


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PLANT SOURCES AND SEED SUPPLIERS

Bitterroot Native Growers, 445 Quast Lane, Corvallis, MT 59828 (406) 961-4991

Local Nurseries

Granite Seed Co., PO Box 177, Lehi, UT 84043 (801) 768-4422

Plants of the Wild, PO Box 866, Tekoa, WA 99033 (509)284-2848

Westland Seeds, Box 57, Charlo, MT 59824 (406)644-2202

Wind River Seeds, Rte 1 Box 97, Manderson, WY 82432 (307) 568-3361



Appendix B

DESCRIPTIONS OF THE MOST COMMON RIPARIAN TYPES

Canyon River Development

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Missouri County Vickie M Zeier COV Bk-898 Pg-700

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range site; Foothills and Mountains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site; Foothills and Mountains, 15-19 inch Precipitation Zone = overflow range site, subirrigated range site; Foothills and Mountains, 20 inch Plus Precipitation Zone = overflow range site, subirrigated range site; Northern Rocky Mountain Valley Bottoms, West of the Continental Divide, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site, wet meadow range site; Northern Rocky Mountain Valleys, West of the Continental Divide, 15-19 inch Precipitation Zone = overflow range site, subirrigated range site; Northern Rocky Mountain Parks, West of the Continental Divide, 20 inch Plus Precipitation Zone = overflow range site, subirrigated range site.

OTHER STUDIES

Similar communities have been described by Mutz and Quenz (1983), Youngblood and others (1985b), Padgett and others (1989), and Chadde and others (1988). A drier, upland, *Potentilla fruticosa*/*Festuca idahoensis* (shrubby cinquefoil/Idaho fescue) habitat type was identified for western Montana by Mueggler and Stewart (1980).

Prunus virginiana Community Type (Common Chokecherry Community Type)

★ **PRUVIR (PRVI)**
Number Of Stands Sampled = 25

LOCATION AND ASSOCIATED LANDFORMS

The *Prunus virginiana* (common chokecherry) community type is an incidental type at low to mid elevations along streams, rivers, lakes, and ponds throughout Montana. In some instances, stands may be located on side slopes of hill-sides immediately below a spring or seep. The community type occurs as small dense thickets, narrow bands, or irregular patches. Sites range in elevation from 716 to 1,295 m (2,350 to 4,250 ft).

VEGETATION

Stands dominated by *Prunus virginiana* (common chokecherry) community type form dense, monotypic stands. When disturbance occurs, stands tend to open. Associated species in open stands may include *Symphoricarpos occidentalis* (western snowberry), *Poa pratensis* (Kentucky

bluegrass), *Smilacina stellata* (starry Solomon-plume), and *Taraxacum officinale* (common dandelion).

Table 81 provides the average canopy cover, the range of canopy cover, and the constancy for indicator species and those species that occurred in 40 percent or more of the sampled stands. A complete list of species including their constancy and average canopy cover is found in Appendix C.

Table 81. Average canopy cover, range of canopy cover, and constancy for indicator species and those species recorded in 40 percent or more of the sampled stands of the grazing disclimax *Prunus virginiana* (common chokecherry) community type (number = 25 stands)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
Shrubs			
<i>Prunus virginiana</i> (common chokecherry)	47	1-98	100
<i>Symphoricarpos occidentalis</i> (western snowberry)	16	0-50	72
Graminoids			
<i>Poa pratensis</i> (Kentucky bluegrass)	23	0-60	40
Forbs			
<i>Smilacina stellata</i> (starry Solomon-plume)	9	0-20	44
<i>Taraxacum officinale</i> (common dandelion)	2	0-10	40

SUCCESSIONAL INFORMATION

In central and eastern Montana, the *Prunus virginiana* (common chokecherry) community type represents a mid-seral grazing disclimax successional stage of the *Fraxinus pennsylvanica*/*Prunus virginiana* (green ash/common chokecherry) habitat type or the *Acer negundo*/*Prunus virginiana* (box-elder/common chokecherry) habitat type. Careful observation of site characteristics and remnant plant species will assist in the determination of the site potential.

Increased disturbance leads to stands with large amounts of *Rosa woodsii* (woods rose), *Symphoricarpos occidentalis* (western snowberry), and *Poa pratensis* (Kentucky bluegrass) present. Excessive disturbance may result in large areas of exposed soil.

SOILS

Soils are variable, ranging from Entisols (Torrifluvents) to Mollisols (Haploborolls and Argiborolls). Soil texture ranges from silt to sandy loam. The *Prunus virginiana* (common chokecherry) community type is most common on well drained, older, more developed soils that afford good rooting depth and higher fertility. This type can tolerate weakly saline soils, but is intolerant of poor drainage and prolonged flooding.

ADJACENT COMMUNITIES

Adjacent wetter communities may include the cottonwood, *Salix exigua* (sandbar willow), or *Salix amygdaloides* (peach-leaf willow) community types, or the *Fraxinus pennsylvanica*/*Prunus virginiana* (green ash/common chokecherry) or *Acer negundo*/*Prunus virginiana* (box-elder/ common chokecherry) habitat types. Some wetter communities may include the *Salix lutea* (yellow willow) dominated habitat types. Adjacent drier communities are typically dominated by the *Artemisia cana*/*Agropyron smithii* (silver sagebrush/western wheatgrass) habitat type or by upland communities.

MANAGEMENT INFORMATION

Additional management information can be found in Appendix A.

Livestock

In dense, monotypic stands, forage production from the *Prunus virginiana* (common chokecherry) community type is low. The palatability of *Prunus virginiana* (common chokecherry) ranges from poor to fair for both cattle and sheep, although livestock losses due to poisoning sometimes occur. Livestock normally do not eat fatal quantities except when other forage is scarce (Wasser 1982, Johnson and Nichols 1982).

Over the years there has been some debate whether *Prunus virginiana* (common chokecherry) leaves are poisonous to livestock. The leaves and seeds do have sugars that contain cyanide. These cyanide sugars are not poisonous themselves, but when plant material is crushed, eaten or decomposed, enzymes cause hydrogen cyanide to be released (Ode Pers. Comm. 1987). In high concentrations hydrogen cyanide is a metabolic poison to most animals, including humans. It has recently been shown that livestock can acquire the ability to detoxify hydrogen cyanide if they consume limited amounts of it over an extended period of time.

Therefore, *Prunus virginiana* (common chokecherry) will poison livestock only if it is consumed in large amounts without prior exposure.

Wildlife

The moderate structural diversity of the *Prunus virginiana* (common chokecherry) community type provides thermal and hiding cover for livestock, big game, and upland bird species. *Prunus virginiana* (common chokecherry) rates fair to good as palatable browse for big game. In some instances, dwarfed and thinned communities can occur as the result of concentrations of game in winter. As stands open and herbaceous species establish due to increasing disturbance, the forage value for both livestock and wildlife increases accordingly. *Prunus virginiana* (common chokecherry) is moderately tolerant of browsing.

Prunus virginiana (common chokecherry) is among one of our most important wildlife food plants. The fruits are relished by both birds and mammals. The leaves and twigs of *Prunus virginiana* (common chokecherry) are also nutritious for browsing animals, and this shrub is rated as one of the best sources of winter browse for deer and elk (Ode Pers. Comm. 1987). This is due to the increase of protein content in the stems during the fall and winter. The leaves and stems are also higher in carbohydrates, calcium, and phosphorus than other native shrubs.

Fisheries

Prunus virginiana (common chokecherry) is an excellent shrub for providing thermal cover for fish and for controlling erosion along streams.

Fire

Prunus virginiana (common chokecherry) will survive all but a hot, intense fire. *Prunus virginiana* (common chokecherry) has an aggressive root system and vigorously sprouts from surviving root crowns after fire (or occasionally from rhizomes).

Soil Management and Rehabilitation Opportunities

Disturbed areas can be revegetated with *Prunus virginiana* (common chokecherry) with nursery grown stock or rooted cuttings. Adapted to a wide variety of sites, transplant success rates are typically high.

Recreational Uses and Considerations

The fruit of *Prunus virginiana* (common chokecherry) is highly regarded for making wine and tasty jelly, but one

must harvest ahead of the birds (Johnson and Nichols 1982). Indians ate the fruit fresh or preserved it by drying. In addition they combined it with venison and buffalo meat to make mincemeat. They also used the berries for medicinal purposes.

Because of the density of branches, twigs, and heavy foliage, communities dominated by *Prunus virginiana* (common chokecherry) provide excellent screens in recreation areas. Because of their fruits, they also provide excellent opportunities for viewing a variety of wildlife.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

Two additional classification systems that are being used to describe/define riparian and wetland ecosystems are listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = scrub-shrub; Subclass = broad-leaved deciduous; Water Regime (nontidal) = temporarily flooded to intermittently flooded.

USDA Soil Conservation Service Range Site

Classification (USDA Soil Conservation Service 1983)

Eastern Glaciated Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site; Western Glaciated Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site; Eastern Sedimentary Plains, 10-14 inch Precipitation Zone = overflow range site, silty range site, subirrigated range site, thin sandy range site, thin silty range site; Eastern Sedimentary Plains, 15-19 inch Precipitation Zone = overflow range site, subirrigated range site; Western Sedimentary Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site, thin clayey range site, thin sandy range site, thin silty range site; Foothills and Mountains, 10-14 inch Precipitation Zone = overflow range site; Foothills and Mountains, 15-19 inch Precipitation Zone = overflow range site; Northern Rocky Mountain Valley Bottoms, West of the Continental Divide, 10-14 inch Precipitation Zone = overflow range site.

OTHER STUDIES

Similar communities have not been described elsewhere.

Rosa woodsii Community Type (Woods Rose Community Type)

★ ROSWOO (ROWO)

Number Of Stands Sampled = 59

CAUTION—Not all sites currently dominated by *Rosa woodsii* (woods rose) are considered riparian or wetland sites. In some instances, they are considered upland sites. The topographic position of the site must match the description as presented in the Location and Associated Landform section.

Note: The *Rosa woodsii* (woods rose) community type includes all combinations of *Rosa woodsii* (woods rose) and *Rosa acicularis* (prickly rose) due to similarities in environmental conditions and management concerns.

LOCATION AND ASSOCIATED LANDFORMS

The *Rosa woodsii* (woods rose) community type is a major type at low to mid elevations in Montana. It occurs on alluvial floodplain terraces along streams and rivers. Stands are located in V-shaped ravines and swale-like depressions where overland flows provide additional moisture. However, in some instances stands may be located on the side slopes of hillsides immediately below a spring or seep (Fig. 14). Sites range in elevation from 655 to 1,707 m (2,150 to 5,600 ft).

VEGETATION

The *Rosa woodsii* (woods rose) community type represents a grazing disclimax. It usually forms dense, impenetrable stands. In some instances, the stands contain only *Rosa* species (rose), while in most cases, stands take on a two layer appearance. The upper layer is comprised of *Rosa* species (rose). The second layer, which is only slightly shorter than the *Rosa* species (rose) layer, is comprised of dense clones of *Symphoricarpos occidentalis* (western snowberry). The lowest layer is generally dominated by *Poa pratensis* (Kentucky bluegrass).

Table 82 provides the average canopy cover, the range of canopy cover, and the constancy for indicator species and those species that occurred in 40 percent or more of the sampled stands. A complete list of species including their constancy and average canopy cover is found in Appendix C.

Table 82. Average canopy cover, range of canopy cover, and constancy for indicator species and those species recorded in 40 percent or more of the sampled stands of the grazing disclimax *Rosa woodsii* (woods rose) community type (number = 59 stands)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
Shrubs			
<i>Rosa acicularis</i> (prickly rose)	19	0-50	8
<i>Rosa woodsii</i> (woods rose)	28	0-98	88
<i>Symphoricarpos occidentalis</i> (western snowberry)	25	0-80	44
Graminoids			
<i>Poa pratensis</i> (Kentucky bluegrass)	29	0-70	49
Forbs			
<i>Cirsium arvense</i> (Canada thistle)	8	0-40	42

SUCCESIONAL INFORMATION

In central and eastern Montana, the *Rosa woodsii* (woods rose) community type represents a mid-seral grazing disclimax successional stage of the *Fraxinus pennsylvanica*/*Prunus virginiana* (green ash/common chokecherry) habitat type or the *Acer negundo*/*Prunus virginiana* (box-elder/common chokecherry) habitat type. Once again, careful observation of site characteristics and remnant plant species will assist in the determination of the site potential.

The thorny nature of *Rosa woodsii* (woods rose) generally precludes most forms of disturbance. However, if the dense overstory is opened up, disturbance species such as *Poa pratensis* (Kentucky bluegrass) and *Achillea millefolium* (common yarrow) will invade.

SOILS

Soils vary from dry, young Entisols (Torrifluvents) to more well developed Mollisols (Argiborolls). Soil texture varies little from silt loam to sandy loam. Soils are commonly well drained and nonsaline. *Rosa woodsii* (woods rose) is intolerant of poor drainage, high water tables, and prolonged flooding (Wasser 1982).

ADJACENT COMMUNITIES

Adjacent wetter communities may include the cottonwood, *Salix exigua* (sandbar willow), or *Salix amygdaloides* (peach-leaf willow) community types, or the *Fraxinus penn-*

sylvanica/*Prunus virginiana* (green ash/common chokecherry) or *Acer negundo*/*Prunus virginiana* (box-elder/common chokecherry) habitat types. Some wetter communities may include the *Salix lutea* (yellow willow) dominated habitat types. Adjacent drier communities are typically dominated by upland communities.

MANAGEMENT INFORMATION

Additional management information can be found in Appendix A.

Livestock

Forage production from dense thickets of the *Rosa woodsii* (woods rose) community type is low. Stands may be so dense that they exclude most livestock use. However, the leaves of *Rosa woodsii* (woods rose) are considered fair to fairly good livestock forage, particularly for sheep (Johnson and Nichols 1982).

Wildlife

Stands of the *Rosa woodsii* (woods rose) community type provide good structural diversity for both thermal and hiding cover. Deer and elk may browse heavily on *Rosa woodsii* (woods rose), while the persistent fruit (rose hips) provides fall and winter food for birds, small mammals, and bears, which disperse the seeds. *Rosa woodsii* (woods rose) is strongly grazing tolerant but can be dwarfed and thinned by intense browsing or defoliation by season long use.

Fire

Rosa woodsii (woods rose) is strongly fire tolerant, except for smoldering fires with heavy volumes of surface fuel. The species has a shallow and much branched rhizomatous root system that will readily sprout and sucker. This sprouting capability of *Rosa woodsii* (woods rose) make it a good soil stabilizer. This is especially important given the severe disturbance common to areas colonized by this community type

Soil Management and Rehabilitation Opportunities

Rosa woodsii (woods rose) is valuable for revegetating disturbed sites along streambanks and seeps. It is easily established from nursery grown stock, root cuttings, or transplanted materials.

Recreational Uses and Considerations

Native Americans made extensive use of *Rosa woodsii* (woods rose) roots, stems, leaves, flowers, and rose hips for food and therapeutic materials (US Forest Service 1975).

The persistent rose hips are edible, and are one of the best natural sources of vitamin C. They can be dried for use in flavoring teas, jellies, fruitcakes, and puddings.

Nature trails should be routed around dense stands of *Rosa woodsii* (woods rose) community type. However, *Rosa woodsii* (woods rose) is useful for planting in recreation areas as a biological barrier to protect physical structures, young and delicate plants, and to direct traffic.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

Two additional classification systems that are being used to describe/define riparian and wetland ecosystems are listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = scrub-shrub; Subclass = broad-leaved deciduous; Water Regime (nontidal) = temporarily flooded to intermittently flooded.

USDA Soil Conservation Service Range Site

Classification (USDA Soil Conservation Service 1983)
Eastern Glaciated Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site; Western Glaciated Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site; Eastern Sedimentary Plains, 10-14 inch Precipitation Zone = overflow range site, silty range site, subirrigated range site, thin sandy range site, thin silty range site; Eastern Sedimentary Plains, 15-19 inch Precipitation Zone = overflow range site, subirrigated range site; Western Sedimentary Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site, thin clayey range site, thin sandy range site, thin silty range site; Foothills and Mountains, 10-14 inch Precipitation Zone = overflow range site; Foothills and Mountains, 15-19 inch Precipitation Zone = overflow range site; Foothills and Mountains, 20 inch Plus Precipitation Zone = overflow range site; Northern Rocky Mountain Valley Bottoms, West of the Continental Divide, 10-14 inch Precipitation Zone = overflow range site; Northern Rocky Mountain Valleys, West of the Continental Divide, 15-19 inch Precipitation Zone = overflow range site; Northern Rocky Mountain Valley Parks, West of the Continental Divide, 20 inch Plus Precipitation Zone = overflow range site.

OTHER STUDIES

Similar communities have not been described elsewhere.

Sarcobatus vermiculatus/*Agropyron smithii* Habitat Type (Black Greasewood/Western Wheatgrass Habitat Type)

SARVER/AGRSMI (SAVE4/AGSM)

Number Of Stands Sampled = 11

LOCATION AND ASSOCIATED LANDFORMS

The *Sarcobatus vermiculatus*/*Agropyron smithii* (black greasewood/western wheatgrass) habitat type occupies nearly level, older alluvial terraces on both broad and narrow floodplains and coalescing alluvial fans in valleys. It may occur on rather broad expanses along flat/lakeshores and playas. It is a major type throughout central and eastern Montana, and a minor type in southwestern Montana. The *Sarcobatus vermiculatus*/*Agropyron smithii* (black greasewood/western wheatgrass) habitat type represents one of the driest extremes of the riparian or wetland zone. Sites are where either overland flow or soil conditions (fine textured, poorly drained saline or alkaline soils), or a combination of both, allow for a greater than normal moisture regime. In many situations, the fine textured soils have resulted in a perched water table (Fig. 20). Sites range in elevation from 655 to 1,067 m (2,150 to 3,500 ft).

VEGETATION

Floristically, sites appear similar to the *Artemisia cana*/*Agropyron smithii* (silver sagebrush/western wheatgrass) habitat type with the substitution of *Sarcobatus vermiculatus* (black greasewood) for *Artemisia cana* (silver sagebrush). The *Sarcobatus vermiculatus*/*Agropyron smithii* (black greasewood/western wheatgrass) habitat type is dominated by *Sarcobatus vermiculatus* (black greasewood) in the shrub layer and *Agropyron smithii* (western wheatgrass) in the herbaceous layer. Canopy cover of *Sarcobatus vermiculatus* (black greasewood) may be low, yet the stature of the plant compared to associated vegetation creates a shrubland appearance. *Sarcobatus vermiculatus* (black greasewood) is among the most alkali tolerant of the native shrubs (Johnson and Nichols 1982).

Due to the limited number of late seral to climax stands sampled, Table 83 provides the average canopy cover, the range of canopy cover, and the constancy for indicator species and those species that occurred in 40 percent or more of the sampled stands. A complete list of species including their constancy and average canopy cover is found in Appendix C.

OTHER STUDIES

The *Salix drummondiana* (Drummond willow) community type has not been previously described. However, communities containing high constancies and coverages of *Salix drummondiana* (Drummond willow) have been described. These include the *Salix boothii* (Booth willow) dominated communities described by Padgett and others (1989) for Utah and southeastern Idaho, the *Salix geyeriana* (Geyer willow) dominated communities types described by Hansen and others (1989) for Montana, and the *Salix boothii* (Booth willow) dominated communities described by Youngblood and others (1985b) for eastern Idaho and western Wyoming.

Salix exigua Community Type (Sandbar Willow Community Type)

* SALEXI (SAEX)

Number Of Stands Sampled = 117

LOCATION AND ASSOCIATED LANDFORMS

The *Salix exigua* (sandbar willow) community type is a major, widespread type at low to mid elevations throughout Montana. Sites range from 777 to 1,754 m (2,550 to 5,750 ft). Typical sites occupied by this type are sand and cobble deposits subject to periodic flooding each year, ditches, and lakeshores (Fig. 9, 13, and 30).

VEGETATION

Major shrub species of this community type are *Salix exigua* (sandbar willow), with some stands having large amounts of *Cornus stolonifera* (red-osier dogwood) and *Prunus virginiana* (common chokecherry). Other species of *Salix* (willow) may be present, indicating a possible successional trend toward willow communities dominated by *Salix lutea* (yellow willow), *Salix geyeriana* (Geyer willow), and *Salix boothii* (Booth willow). Herbaceous species present include a wide variety of pioneering species (Table 55).

Table 55. Average canopy cover, range of canopy cover, and constancy for species recorded in stands of the *Salix exigua* (sandbar willow) community type that are relatively undisturbed by livestock or wildlife (number = 21 stands)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
Trees			
<i>Acer negundo</i> (box-elder)	3	0-3	5
<i>Populus deltoides</i> (Great Plains cottonwood)	1	0-1	5
<i>Populus trichocarpa</i> (black cottonwood)	1	0-1	5
<i>Salix amygdaloides</i> (peach-leaf willow)	2	0-3	10
Shrubs			
<i>Alnus incana</i> (mountain alder)	1	0-1	5
<i>Clematis occidentalis</i> (Columbia clematis)	3	0-3	5
<i>Cornus stolonifera</i> (red-osier dogwood)	38	0-80	14
<i>Prunus virginiana</i> (common chokecherry)	14	0-30	14
<i>Rosa</i> spp. (rose)	3	0-3	5
<i>Rosa woodsii</i> (woods rose)	2	0-3	24
<i>Salix exigua</i> (sandbar willow)	82	60-98	100
<i>Salix lasiandra</i> (Pacific willow)	1	0-1	5
<i>Salix lutea</i> (yellow willow)	1	0-1	14
<i>Solanum dulcamara</i> (climbing nightshade)	1	0-1	5
<i>Symphoricarpos occidentalis</i> (western snowberry)	2	0-3	10
<i>Toxicodendron rydbergii</i> (poison ivy)	1	0-1	5
Graminoids			
<i>Agropyron repens</i> (quackgrass)	1	0-1	5
<i>Agropyron smithii</i> (western wheatgrass)	20	0-20	5
<i>Agrostis stolonifera</i> (redtop)	28	0-80	19
<i>Bromus inermis</i> (smooth brome)	7	0-10	10
<i>Bromus japonicus</i> (Japanese brome)	3	0-3	5
<i>Carex lanuginosa</i> (woolly sedge)	2	0-3	10
<i>Carex rostrata</i> (beaked sedge)	42	0-80	10
<i>Carex</i> spp. (sedge)	1	0-1	5
<i>Carex stipata</i> (sawbeak sedge)	1	0-1	5
<i>Carex vesicaria</i> (inflated sedge)	10	0-10	5
<i>Deschampsia cespitosa</i> (tufted hairgrass)	10	0-10	5
<i>Echinochloa crusgalli</i> (large barnyard-grass)	20	0-20	5
<i>Eleocharis palustris</i> (common spikesedge)	15	0-30	10

Table 55 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Elymus virginicus</i> (Virginia wildrye)	12	0-20	10
<i>Hordeum brachyantherum</i> (meadow barley)	1	0-1	5
<i>Hordeum jubatum</i> (foxtail barley)	8	0-20	14
<i>Phalaris arundinacea</i> (reed canarygrass)	44	0-80	24
<i>Poa palustris</i> (fowl bluegrass)	10	0-20	29
<i>Poa pratensis</i> (Kentucky bluegrass)	7	0-10	10
<i>Scirpus pungens</i> (sharp bulrush)	3	0-3	5
<i>Spartina gracilis</i> (alkali cordgrass)	80	0-80	5
<i>Spartina pectinata</i> (prairie cordgrass)	80	0-80	5
Forbs			
<i>Apocynum androsaemifolium</i> (spreading dogbane)	3	0-3	5
<i>Apocynum cannabinum</i> (hemp dogbane)	3	0-3	10
<i>Artemisia dracunculoides</i> (tarragon)	1	0-1	5
<i>Artemisia lindleyana</i> (riverbank wormwood)	3	0-3	5
<i>Aster chilensis</i> (long-leaved aster)	1	0-1	5
<i>Aster</i> spp. (aster)	3	0-3	5
<i>Calystegia sepium</i> (hedge bindweed)	1	0-1	5
<i>Centaurea maculosa</i> (spotted knapweed)	1	0-1	5
<i>Chenopodium album</i> (lambsquarters)	1	0-1	10
<i>Cicuta maculata</i> (spotted water-hemlock)	1	0-1	5
<i>Cirsium arvense</i> (Canada thistle)	7	0-20	19
<i>Coreopsis tinctoria</i> (common bugseed)	1	0-1	5
<i>Descurainia sophia</i> (flaxweed tansymustard)	10	0-10	5
<i>Epilobium angustifolium</i> (fireweed)	1	0-1	5
<i>Epilobium ciliatum</i> (common willow-herb)	2	0-3	10
<i>Galium aparine</i> (goose-grass)	1	0-1	5
<i>Geum macrophyllum</i> (large-leaved avens)	1	0-1	5
<i>Glycyrrhiza lepidota</i> (American licorice)	1	0-1	5
<i>Helianthus annuus</i> (common sunflower)	1	0-1	5
<i>Kochia scoparia</i> (summer cypress)	20	0-20	5

Table 55 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Lactuca</i> spp. (lettuce)	2	0-3	10
<i>Lysimachia ciliata</i> (fringed loosestrife)	7	0-10	10
<i>Medicago lupulina</i> (black medic)	1	0-1	5
<i>Melilotus alba</i> (white sweet-clover)	1	0-1	5
<i>Melilotus officinalis</i> (yellow sweet-clover)	7	0-10	10
<i>Mentha arvensis</i> (field mint)	2	0-3	24
<i>Minulus guttatus</i> (common monkey-flower)	1	0-1	5
<i>Phacelia procera</i> (tall phacelia)	1	0-1	5
<i>Physostegia parviflora</i> (purple dragonhead)	1	0-1	5
<i>Plantago major</i> (common plantain)	1	0-1	5
<i>Polygonum amphibium</i> (water smartweed)	10	0-20	10
<i>Potentilla anserina</i> (common silverweed)	10	0-20	10
<i>Potentilla argentea</i> (silvery cinquefoil)	3	0-3	5
<i>Rumex crispus</i> (curly dock)	1	0-1	5
<i>Rumex maritimus</i> (golden dock)	12	0-20	10
<i>Salsola iberica</i> (Russian thistle)	20	0-20	5
<i>Smilacina stellata</i> (starry Solomon-plume)	1	0-1	5
<i>Solidago canadensis</i> (Canada goldenrod)	1	0-3	14
<i>Sonchus arvensis</i> (field milk-thistle)	2	0-3	10
<i>Stachys palustris</i> (swamp hedge-nettle)	1	0-1	5
<i>Tanacetum vulgare</i> (common tansy)	1	0-1	10
<i>Typha latifolia</i> (common cattail)	7	0-10	10
<i>Urtica dioica</i> (stinging nettle)	1	0-1	10
<i>Verbascum thapsus</i> (common mullein)	1	0-1	5
<i>Verbena hastata</i> (blue verbena)	20	0-20	5
<i>Xanthium strumarium</i> (common cocklebur)	2	0-3	19
Ferns and Allies			
<i>Equisetum arvense</i> (field horsetail)	2	0-3	10
<i>Equisetum pratense</i> (meadow horsetail)	1	0-1	5

SUCCESSIONAL INFORMATION

The *Salix exigua* (sandbar willow) community type is an early seral (pioneer) primary successional stage on newly

deposited sediments that may persist under a regime of repeated fluvial disturbance. It commonly occurs in open stands of *Populus trichocarpa* (black cottonwood), *Populus angustifolia* (narrowleaf cottonwood), or *Populus deltoides* (Great Plains cottonwood), or as a fringe around dense cottonwood stands.

In eastern Montana, many stands are seral to either the *Fraxinus pennsylvanica*/*Prunus virginiana* (green ash/ common chokecherry) habitat type or the *Acer negundo*/*Prunus virginiana* (box-elder/common chokecherry) habitat type. Seedlings of both *Salix exigua* (sandbar willow) and *Populus deltoides* (Great Plains cottonwood) are typically established at the same time on alluvial mud flats. Initially, *Salix exigua* (sandbar willow) may grow faster than *Populus deltoides* (Great Plains cottonwood). However, in a few short years, saplings of *Populus deltoides* (Great Plains cottonwood) will overtop *Salix exigua* (sandbar willow) and begin to dominate the overstory canopy. As the dense overstory canopy of *Populus deltoides* (Great Plains cottonwood) matures, *Salix exigua* (sandbar willow) is shaded out. At the same time that *Salix exigua* (sandbar willow) is being shaded out, the understory is beginning to be dominated by seedlings, saplings, and pole size *Fraxinus pennsylvanica* (green ash).

In the mountains and lower foothills of eastern and central Montana, the *Salix exigua* (sandbar willow) community type may represent a successional stage of the *Salix geyeriana*/*Calamagrostis canadensis* (Geyer willow/bluejoint reedgrass) habitat type or the *Salix lutea*/*Calamagrostis canadensis* (yellow willow/bluejoint reedgrass) habitat type, depending upon elevation. Heavy grazing pressures may cause some sites to go to the *Salix geyeriana* (Geyer willow) community type or the *Salix lutea* (yellow willow) community type.

Disturbance Stages

Salix exigua (sandbar willow) is highly adapted to most forms of disturbance. It is a prolific sprouter and will reestablish itself on sites dominated by *Glycyrrhiza lepidota* (American licorice) and *Agropyron smithii* (western wheatgrass) following release from heavy grazing pressure, provided it has not been totally removed from the site. Heavy grazing may open up stands resulting in invasion by introduced species or nonpalatable native species (Table 56).

Table 56. Average canopy cover, range of canopy cover, and constancy for species recorded in disturbed and/or early to mid-seral stands of the *Salix exigua* (sandbar willow) community type (number = 96 stands)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
Trees			
<i>Acer negundo</i> (box-elder)	2	0-3	3
<i>Fraxinus pennsylvanica</i> (green ash)	2	0-3	4
<i>Juniperus scopulorum</i> (Rocky Mountain juniper)	2	0-3	3
<i>Pinus ponderosa</i> (ponderosa pine)	1	0-3	3
<i>Populus angustifolia</i> (narrowleaf cottonwood)	3	0-3	1
<i>Populus deltoides</i> (Great Plains cottonwood)	5	0-20	8
<i>Populus trichocarpa</i> (black cottonwood)	4	0-20	10
<i>Salix amygdaloides</i> (peach-leaf willow)	2	0-30	4
Shrubs			
<i>Alnus incana</i> (mountain alder)	15	0-30	2
<i>Artemisia cana</i> (silver sagebrush)	10	0-10	1
<i>Betula glandulosa</i> (bog birch)	1	0-1	1
<i>Betula occidentalis</i> (water birch)	1	0-1	2
<i>Clematis ligusticifolia</i> (western virgins-bower)	12	0-3	4
<i>Clematis</i> spp. (clematis)	1	0-1	1
<i>Cornus stolonifera</i> (red-osier dogwood)	12	0-60	23
<i>Prunus virginiana</i> (common chokecherry)	6	0-10	6
<i>Rhus aromatica</i> (fragrant sumac)	20	0-20	1
<i>Ribes americanum</i> (black currant)	20	0-20	1
<i>Ribes</i> spp. (currant)	8	0-20	6
<i>Ribes hudsonianum</i> (stinking currant)	3	0-3	1
<i>Ribes missouriense</i> (Missouri gooseberry)	3	0-3	1
<i>Ribes odoratum</i> (buffalo currant)	18	0-40	4
<i>Rosa acicularis</i> (prickly rose)	32	0-60	2
<i>Rosa arkansana</i> (Arkansas rose)	1	0-1	1
<i>Rosa</i> spp. (rose)	10	0-20	4
<i>Rosa woodsii</i> (woods rose)	23	0-60	44
<i>Rubus idaeus</i> (red raspberry)	1	0-3	3
<i>Salix bebbiana</i> (Bebb willow)	16	0-20	4
<i>Salix boothii</i> (Booth willow)	2	0-3	6
<i>Salix eriocephala</i> (diamonds willow)	3	0-3	2

Table 56 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Salix exigua</i> (sandbar willow)	56	1-100	100
<i>Salix geyeriana</i> (Geyer willow)	3	0-3	1
<i>Salix lasiandra</i> (Pacific willow)	12	0-30	6
<i>Salix lutea</i> (yellow willow)	2	0-3	9
<i>Salix planifolia</i> (planeleaf willow)	20	0-20	1
<i>Salix pseudomonticola</i> (mountain willow)	1	0-1	1
<i>Shepherdia canadensis</i> (Canada buffaloberry)	1	0-1	1
<i>Solanum dulcamara</i> (climbing nightshade)	27	0-50	2
<i>Symphoricarpos albus</i> (common snowberry)	1	0-1	1
<i>Symphoricarpos occidentalis</i> (western snowberry)	25	0-80	22
<i>Tamarix chinensis</i> (salt cedar)	40	0-40	1
<i>Toxicodendron rydbergii</i> (poison ivy)	3	0-10	4
Graminoids			
<i>Agropyron caninum</i> (bearded wheatgrass)	10	0-20	2
<i>Agropyron dasystachyum</i> (thick-spiked wheatgrass)	5	0-10	2
<i>Agropyron intermedium</i> (intermediate wheatgrass)	1	0-1	1
<i>Agropyron</i> spp. (wheatgrass)	20	0-20	2
<i>Agropyron repens</i> (quackgrass)	25	0-80	18
<i>Agropyron smithii</i> (western wheatgrass)	22	0-70	10
<i>Agrostis stolonifera</i> (redtop)	29	0-100	32
<i>Agrostis tenuis</i> (Colonial bentgrass)	3	0-3	1
<i>Alopecurus aequalis</i> (short-awn foxtail)	2	0-3	2
<i>Aristida longiseta</i> (red threeawn)	1	0-1	1
<i>Beckmannia syzigachne</i> (American sloughgrass)	1	0-1	2
<i>Bromus inermis</i> (smooth brome)	27	0-90	27
<i>Bromus japonicus</i> (Japanese brome)	1	0-1	1
<i>Bromus tectorum</i> (cheatgrass)	6	0-20	4
<i>Calamagrostis canadensis</i> (bluejoint reedgrass)	1	0-1	1
<i>Calamagrostis stricta</i> (narrow-spiked reedgrass)	7	0-10	2
<i>Carex aquatilis</i> (water sedge)	7	0-10	2

Table 56 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Carex bebbii</i> (Bebb's sedge)	10	0-10	1
<i>Carex</i> spp. (sedge)	2	0-3	2
<i>Carex hoodii</i> (Hood's sedge)	1	0-1	1
<i>Carex lanuginosa</i> (woolly sedge)	5	0-20	8
<i>Carex leptalea</i> (bristle-stalked sedge)	60	0-60	1
<i>Carex nebrascensis</i> (Nebraska sedge)	1	0-1	2
<i>Carex praticola</i> (meadow sedge)	80	0-80	1
<i>Carex retrorsa</i> (retorse sedge)	1	0-1	1
<i>Carex rostrata</i> (beaked sedge)	12	0-20	5
<i>Carex scopulorum</i> (Holm's Rocky Mountain sedge)	1	0-1	1
<i>Carex striata</i> (sawbeak sedge)	1	0-1	1
<i>Carex vesicaria</i> (inflated sedge)	1	0-1	1
<i>Dactylis glomerata</i> (orchard-grass)	20	0-40	4
<i>Deschampsia cespitosa</i> (tufted hairgrass)	5	0-1	4
<i>Dichanthelium acuminatum</i> (western witchgrass)	2	0-3	2
<i>Eleocharis compressa</i> (flatstem spike-rush)	12	0-20	2
<i>Eleocharis palustris</i> (common spikesedge)	9	0-20	7
<i>Elymus canadensis</i> (Canada wildrye)	20	0-40	2
<i>Elymus cinereus</i> (basin wildrye)	9	0-30	4
<i>Elymus glaucus</i> (blue wildrye)	1	0-1	1
<i>Elymus virginicus</i> (Virginia wildrye)	40	0-40	1
<i>Festuca rubra</i> (red fescue)	1	0-1	1
<i>Glyceria grandis</i> (American mannagrass)	10	0-10	2
<i>Glyceria striata</i> (fowl mannagrass)	1	0-1	1
<i>Hordeum jubatum</i> (foxtail barley)	7	0-20	8
<i>Juncus articulatus</i> (jointed rush)	7	0-10	2
<i>Juncus balticus</i> (Baltic rush)	10	0-10	1
<i>Juncus</i> spp. (rush)	1	0-1	1
<i>Juncus hallii</i> (Hall's rush)	20	0-20	1
<i>Juncus tenuis</i> (slender rush)	1	0-1	1
<i>Juncus torreyi</i> (Torrey's rush)	1	0-1	1
<i>Juncus tracyi</i> (Tracy's rush)	3	0-3	1
<i>Muhlenbergia asperifolia</i> (alkali muhly)	5	0-10	2
<i>Muhlenbergia filiformis</i> (slender muhly)	1	0-1	1

Table 56 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Phalaris arundinacea</i> (reed canarygrass)	28	0-100	22
<i>Phleum pratense</i> (common timothy)	7	0-20	16
<i>Poa compressa</i> (Canada bluegrass)	8	0-10	4
<i>Poa palustris</i> (fowl bluegrass)	16	0-60	23
<i>Poa pratensis</i> (Kentucky bluegrass)	20	0-60	31
<i>Poa</i> spp. (bluegrass)	3	0-3	1
<i>Scirpus acutus</i> (hardstem bulrush)	2	0-3	2
<i>Scirpus fluviatilis</i> (river bulrush)	40	0-40	1
<i>Scirpus maritimus</i> (alkali bulrush)	30	0-30	1
<i>Scirpus microcarpus</i> (small-flowered bulrush)	5	0-10	2
<i>Scirpus pungens</i> (sharp bulrush)	7	0-20	3
<i>Spartina pectinata</i> (prairie cordgrass)	20	0-20	1
<i>Stipa comata</i> (needle-and-thread)	5	0-10	2
Forbs			
<i>Achillea millefolium</i> (common yarrow)	1	0-1	1
<i>Allium cernuum</i> (nodding onion)	1	0-1	2
<i>Allium schoenoprasum</i> (chives)	1	0-1	3
<i>Ambrosia psilostachya</i> (western ragweed)	3	0-3	1
<i>Ambrosia trifida</i> (giant ragweed)	1	0-1	1
<i>Angelica arguta</i> (sharptooth angelica)	1	0-1	1
<i>Apocynum androsaemifolium</i> (spreading dogbane)	40	0-40	2
<i>Apocynum cannabinum</i> (hemp dogbane)	18	0-60	7
<i>Arctium lappa</i> (great burdock)	1	0-1	1
<i>Arctium minus</i> (common burdock)	3	0-3	1
<i>Arctium</i> spp. (burdock)	1	0-1	1
<i>Arnica amplexicaulis</i> (clasping arnica)	1	0-1	1
<i>Arnica latifolia</i> (broadleaf arnica)	1	0-1	2
<i>Artemisia dracuncululus</i> (tarragon)	1	0-1	1
<i>Artemisia lindleyana</i> (riverbank wormwood)	8	0-10	4
<i>Artemisia ludoviciana</i> (prairie sagewort)	1	0-1	1
<i>Asclepias</i> spp. (milkweed)	3	0-3	1
<i>Asclepias speciosa</i> (showy milkweed)	1	0-3	7
<i>Asclepias viridiflora</i> (green milkweed)	1	0-1	1
<i>Aster chilensis</i> (long-leaved aster)	5	0-20	4
<i>Aster ericoides</i> (white aster)	1	0-1	1
<i>Aster</i> spp. (aster)	1	0-1	3

Table 56 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Aster foliaceus</i> (leafy aster)	1	0-1	1
<i>Aster junceiformis</i> (rush aster)	3	0-3	1
<i>Aster laevis</i> (smooth aster)	30	0-30	1
<i>Aster occidentalis</i> (western aster)	5	0-1	2
<i>Barbarea orthoceras</i> (American wintercress)	3	0-3	1
<i>Calystegia sepium</i> (hedge bindweed)	2	0-3	4
<i>Campanula rapunculoides</i> (creeping bellflower)	1	0-1	1
<i>Capsella bursa-pastoris</i> (shepherd's-purse)	1	0-1	1
<i>Carum carvi</i> (caraway)	1	0-1	1
<i>Carduus nutans</i> (musk thistle)	5	0-10	2
<i>Centaurea maculosa</i> (spotted knapweed)	21	0-60	6
<i>Chenopodium album</i> (lambsquarter)	1	0-3	3
<i>Chenopodium</i> spp. (goosefoot)	1	0-1	1
<i>Cicuta maculata</i> (spotted water-hemlock)	7	0-10	3
<i>Cirsium arvense</i> (Canada thistle)	15	0-60	45
<i>Cirsium</i> spp. (thistle)	1	0-1	2
<i>Collomia linearis</i> (narrow-leaf collomia)	1	0-1	1
<i>Convolvulus arvensis</i> (field morning glory)	5	0-20	5
<i>Conyza canadensis</i> (horseweed)	1	0-1	1
<i>Coreopsis tinctoria</i> (common bugseed)	20	0-20	1
<i>Cynoglossum officinale</i> (common hounds-tongue)	17	0-60	5
<i>Descurainia pinnata</i> (pinnate tansymustard)	1	0-1	1
<i>Echinocystis lobata</i> (wild cucumber)	1	0-3	1
<i>Epilobium ciliatum</i> (common willow-herb)	4	0-10	7
<i>Epilobium paniculatum</i> (autumn willow-herb)	1	0-1	1
<i>Epilobium</i> spp. (willow-herb)	3	0-3	1
<i>Erysimum cheiranthoides</i> (wormseed wallflower)	3	0-3	1
<i>Euphorbia esula</i> (leafy spurge)	11	0-20	4
<i>Filago arvensis</i> (field filago)	1	0-1	1
<i>Fragaria virginiana</i> (Virginia strawberry)	1	0-1	1



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Table 56 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Gaillardia aristata</i> (blanket-flower)	3	0-3	1
<i>Galium aparine</i> (goose-grass)	10	0-20	2
<i>Galium boreale</i> (northern bedstraw)	2	0-3	2
<i>Galium triflorum</i> (sweetscented bedstraw)	35	0-70	2
<i>Galium trifidum</i> (small bedstraw)	10	0-20	3
<i>Geranium viscosissimum</i> (sticky geranium)	1	0-1	1
<i>Geum macrophyllum</i> (large-leaved avens)	7	0-20	3
<i>Glycyrrhiza lepidota</i> (American licorice)	15	0-50	21
<i>Helenium autumnale</i> (sneezeweed)	1	0-3	6
<i>Helianthus nuttallii</i> (Nuttall's sunflower)	2	0-3	2
<i>Heracleum lanatum</i> (cow-parsnip)	10	0-20	3
<i>Humulus lupulus</i> (common hop)	3	0-3	1
<i>Hypericum perforatum</i> (common St. John's-wort)	1	0-3	3
<i>Iris missouriensis</i> (rocky mountain iris)	1	0-1	2
<i>Iris pseudacorus</i> (yellow iris)	1	0-1	2
<i>Kochia scoparia</i> (summer cypress)	3	0-3	1
<i>Lactuca scariola</i> (prickly lettuce)	4	0-20	5
<i>Lathyrus</i> spp. (peavine)	1	0-1	1
<i>Lobularia maritima</i> (sweet alyssum)	1	0-1	1
<i>Lychnis alba</i> (white campion)	1	0-1	1
<i>Lycopus americanus</i> (cut-leaved water horehound)	3	0-3	1
<i>Lycopus asper</i> (rough bugleweed)	1	0-1	1
<i>Lysimachia ciliata</i> (fringed loosestrife)	14	0-20	3
<i>Lysimachia thysiflora</i> (tufted loosestrife)	1	0-1	1
<i>Medicago lupulina</i> (black medic)	1	0-3	4
<i>Medicago sativa</i> (alfalfa)	1	0-1	4
<i>Melilotus alba</i> (white sweet-clover)	7	0-40	8
<i>Melilotus officinalis</i> (yellow sweet-clover)	5	0-20	7
<i>Mentha arvensis</i> (field mint)	6	0-20	27
<i>Myosotis scorpioides</i> (common forget-me-not)	10	0-10	1
<i>Oenothera villosa</i> (common evening primrose)	1	0-1	1
<i>Perideridia gairdneri</i> (Gairdner's yampah)	1	0-1	1

Table 56 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Phacelia hastata</i> (silverleaf phacelia)	1	0-1	1
<i>Physostegia parviflora</i> (purple dragonhead)	2	0-3	2
<i>Plantago major</i> (common plantain)	3	0-10	4
<i>Polygonum amphibium</i> (water smartweed)	26	0-80	7
<i>Polygonum lapathifolium</i> (willow weed)	30	0-60	2
<i>Polygonum sawatchense</i> (sawatch knotweed)	1	0-1	2
<i>Potentilla anserina</i> (common silverweed)	28	0-40	3
<i>Potentilla</i> spp. (cinquefoil)	1	0-1	1
<i>Potentilla gracilis</i> (slender cinquefoil)	1	0-1	3
<i>Potentilla paradoxa</i> (bushy cinquefoil)	7	0-10	2
<i>Prunella vulgaris</i> (self-heal)	3	0-3	1
<i>Ranunculus macounii</i> (Macoun's buttercup)	1	0-1	1
<i>Rorippa curvipes</i> (blunt-leaved yellowcress)	1	0-1	1
<i>Rorippa</i> spp. (yellowcress)	2	0-3	2
<i>Rorippa palustris</i> (marsh yellowcress)	3	0-10	4
<i>Rorippa sylvestris</i> (creeping yellowcress)	20	0-20	1
<i>Rudbeckia laciniata</i> (tall coneflower)	10	0-10	1
<i>Rumex crispus</i> (curly dock)	4	0-20	17
<i>Rumex maritimus</i> (golden dock)	3	0-3	1
<i>Rumex salicifolius</i> (willow dock)	1	0-1	1
<i>Salsola iberica</i> (Russian thistle)	3	0-3	1
<i>Senecio hydrophilus</i> (alkali-marsh butterweed)	20	0-20	1
<i>Silene cserei</i> (smooth catchfly)	20	0-20	1
<i>Sisymbrium altissimum</i> (tumblemustard)	2	0-3	2
<i>Sisymbrium loeselii</i> (Loeselii tumblemustard)	10	0-10	1
<i>Sisyrinchium</i> spp. (blue-eyed grass)	1	0-1	1
<i>Sium suave</i> (hemlock water-parsnip)	1	0-3	3
<i>Smilacina stellata</i> (starry Solomon-plume)	2	0-3	4
<i>Solidago canadensis</i> (Canada goldenrod)	13	0-60	16

Table S6 (cont.)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
<i>Solidago gigantea</i> (late goldenrod)	6	0-20	6
<i>Solidago</i> spp. (goldenrod)	2	0-3	2
<i>Solidago missouriensis</i> (Missouri goldenrod)	2	0-3	3
<i>Solidago occidentalis</i> (western goldenrod)	8	0-10	3
<i>Sonchus arvensis</i> (field milk-thistle)	12	0-20	2
<i>Sonchus asper</i> (prickly sowthistle)	1	0-1	1
<i>Sonchus oleraceus</i> (common sow-thistle)	3	0-3	1
<i>Stachys palustris</i> (swamp hedge-nettle)	1	0-1	2
<i>Tanacetum vulgare</i> (common tansy)	18	0-60	8
<i>Taraxacum laevigatum</i> (red-seeded dandelion)	1	0-1	1
<i>Taraxacum officinale</i> (common dandelion)	1	0-3	10
<i>Thalictrum dasycarpum</i> (purple meadowrue)	1	0-1	2
<i>Thalictrum</i> spp. (meadowrue)	1	0-1	1
<i>Thalictrum venulosum</i> (veiny meadowrue)	1	0-1	1
<i>Thlaspi arvense</i> (field pennycress)	1	0-1	1
<i>Tragopogon dubius</i> (goat's beard)	1	0-1	1
<i>Trifolium pratense</i> (red clover)	1	0-1	1
<i>Trifolium repens</i> (white clover)	1	0-3	3
<i>Typha latifolia</i> (common cattail)	15	0-1	5
<i>Urtica dioica</i> (stinging nettle)	6	0-1	8
<i>Veronica americana</i> (American speedwell)	1	0-3	2
<i>Veronica anagallis-aquatica</i> (water speedwell)	1	0-1	1
<i>Veronica scutellata</i> (marsh speedwell)	1	0-1	1
<i>Verbascum thapsus</i> (common mullein)	1	0-1	4
<i>Xanthium strumarium</i> (common cocklebur)	3	0-3	5
Ferns and Allies			
<i>Equisetum arvense</i> (field horsetail)	22	0-90	23
<i>Equisetum fluviatile</i> (water horsetail)	2	0-3	3
<i>Equisetum hyemale</i> (common scouring-rush)	4	0-10	3
<i>Equisetum laevigatum</i> (smooth scouring-rush)	1	0-3	7

SOILS

Soils are Entisols or rarely Mollisols, and consist of thin sandy loams overlying deep sand, gravel, or cobbles (Brichta 1987). Surface soils are usually moist in the spring and early summer; subsoils remain saturated throughout the growing season. Coarse textured soils, moderate stream gradients, and high coarse fragment contents throughout the soil profile provide an environment that produces a rapid movement of highly aerated groundwater. This type of substrate is important to many floodplain communities.

ADJACENT COMMUNITIES

Wetter communities are usually absent. Adjacent drier communities include the *Populus trichocarpa* (black cottonwood), *Populus angustifolia* (narrowleaf cottonwood), *Populus deltoides* (Great Plains cottonwood), *Salix geyeriana* (Geyer willow), and *Poa pratensis* (Kentucky bluegrass) types. Upland communities are dominated by conifers and shrubs and grasses such as *Artemisia tridentata* (big sagebrush), *Artemisia cana* (silver sagebrush), *Sarcobatus vermiculatus* (black greasewood), *Agropyron smithii* (western wheatgrass), and *Festuca idahoensis* (Idaho fescue).

MANAGEMENT INFORMATION

Additional management information can be found in Appendix A.

Livestock

Forage production is low to occasionally moderate because of the high densities of *Salix exigua* (sandbar willow) stems. Dense stands limit livestock access.

Overuse by livestock will result in a reduced vigor by the willows present, as illustrated by highlining, clubbing, or dead clumps. With continued overuse, willows show a sharp decline in vigor and may be eventually eliminated from the site. However, release from heavy grazing pressure will allow it to reestablish itself, provided it has not been totally removed from the site.

Frisina (1991) states that for a grazing program to be successful, it must meet the basic biological requirements of the plants such as photosynthesis, food storage, reproduction, and seedling establishment. In order to meet these requirements, long periods of rest are needed. It is during long growing season rest periods that the essential biological processes of food production and storage, reproduction, and

seedling establishment take place. In some instances, additional periods of rest may be required to either improve or maintain a plant community.

Wildlife

Stands of this community type provide excellent thermal and hiding cover for many species of wildlife. *Salix exigua* (sandbar willow) is normally not as heavily browsed as other willow species. Beaver tends to heavily utilize *Salix exigua* (sandbar willow).

Fisheries

The *Salix exigua* (sandbar willow) community type typically provides only limited amount of overhanging shade due to the up right growth form of this species. The importance of willows in streambank protection for fisheries can not be emphasized enough. The herbaceous understory aids in filtering out sediments during high flows thereby contributing to the overall building of the streambanks. Some stands may be so dense as to hinder most forms of recreational fishing. If fishing access is important, dense stands may be opened by the use of livestock as a management tool.

Fire

The use of fire in this type as an improvement technique has been little studied. However, limited information indicates this type tends to sprout vigorously following fire. Quick, hot fires result in more sprouts than slower fires, which are potentially more damaging to the willows and tend to result in fewer sprouts.

Soil Management and Rehabilitation Opportunities

Soil compaction is usually not a problem on coarse textured soils and substrates. Fine textured soils are subject to compaction when moist. Unlike most other willows, *Salix exigua* (sandbar willow) can send up individual stems from a complex underground root system, making it an excellent woody species for stabilizing streambanks. Woody species provide the greatest amount of streambank protection. Herbaceous species rarely afford sufficient stream bank protection. Management should emphasize the importance of willows in protecting the streambank.

Salix exigua (sandbar willow) is a pioneering species commonly located along irrigation ditches, cutbanks, and wet areas adjacent to roads. It has an excellent capability to rapidly colonize and spread on disturbed areas, making it

useful in streambank stabilization and revegetation projects at low to mid elevations. Once *Salix exigua* (sandbar willow) has stabilized soils, other shrub and herbaceous species become established. Because of this characteristic, it would be wise for farmers, ranchers, and other land managers to maintain these stands. Once degradation occurs, rapid erosion of the streambank can occur with devastating results.

Salix exigua (sandbar willow) is highly adapted to most forms of disturbance. It is a prolific sprouter and will reestablish itself following release from heavy grazing pressure: provided it has not been totally removed from the site.

Revegetating degraded sites or exposed sand/gravel bars is feasible using *Salix exigua* (sandbar willow). Cuttings should be rooted and grown in a nursery to insure survival. *Salix exigua* (sandbar willow) produces an abundance of roots along the entire stem. Cuttings are best taken in the spring from dormant two to four year old wood. Cuttings 30-50 cm (12-20 in) long and >1 cm (0.5 in) in diameter produce the best results. Roots and shoots from cuttings can be expected to appear 10 days after planting.

Recreational Uses and Considerations

Recreational opportunities are limited because of dense thickets and large mosquito populations.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

Two additional classification systems that are being used to describe/define riparian and wetland ecosystems are listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = scrub-shrub; Subclass = broad-leaved deciduous; Water Regime (nontidal) = saturated to temporarily flooded.

USDA Soil Conservation Service Range Site

Classification (USDA Soil Conservation Service 1983)

Eastern Glaciated Plains, 10-14 inch Precipitation Zone = subirrigated range site, wet meadow range site; Western Glaciated Plains, 10-14 inch Precipitation Zone = subirrigated range site, wet meadow range site; Eastern Sedimentary Plains, 10-14 inch Precipitation Zone = subirrigated



range site, wet meadow range site; Eastern Sedimentary Plains, 15-19 inch Precipitation Zone = subirrigated range site, wet meadow range site; Western Sedimentary Plains, 10-14 inch Precipitation Zone = subirrigated range site, wet meadow range site; Foothills and Mountains, 10-14 inch Precipitation Zone = subirrigated range site, wet meadow range site; Foothills and Mountains, 15-19 inch Precipitation Zone = subirrigated range site, wet meadow range site; Foothills and Mountains, 20 inch Plus Precipitation Zone = subirrigated range site, wet meadow range site; Northern Rocky Mountain Valley Bottoms, West of the Continental Divide, 10-14 inch Precipitation Zone = subirrigated range site, wet meadow range site; Northern Rocky Mountain Valleys, West of the Continental Divide, 15-19 inch Precipitation Zone = subirrigated range site, wet meadow range site; Northern Rocky Mountain Parks, West of the Continental Divide, 20 inch Plus Precipitation Zone = subirrigated range site, wet meadow range site.

OTHER STUDIES

Similar *Salix exigua* (sandbar willow) community types have been described by Norton and others (1981; Greys River, Wyoming), Mutz and Queiroz (1983; southeastern Idaho), Tuhy and Jensen (1982; central Idaho), Youngblood and others (1985b; eastern Idaho and western Wyoming), Padgett and others (1989; Utah and southeastern Idaho), Chadde and others (1988; northern Yellowstone National Park), and Szaro (1989; Arizona and New Mexico). Undergrowth composition varied widely but was often composed of introduced grasses such as *Agrostis stolonifera* (redtop), *Poa palustris* (fowl bluegrass), and *Poa pratensis* (Kentucky bluegrass).

Salix geeyeriana/*Calamagrostis canadensis* Habitat Type (Geyer Willow/Bluejoint Reedgrass Habitat Type)

SALGEY/CALCAN (SAGE2/CACA4)

Number Of Stands Sampled = 32

Note: The *Salix geeyeriana* (Geyer willow) habitat type includes all combinations of *Salix geeyeriana* (Geyer willow) and *Salix boothii* (Booth willow) due to similarities in environmental conditions and management concerns.

LOCATION AND ASSOCIATED LANDFORMS

The *Salix geeyeriana*/*Calamagrostis canadensis* (Geyer willow/bluejoint reedgrass) habitat type is a major type at mid to moderately high elevations throughout the mountains and foothills of Montana. However, *Salix geeyeriana* (Geyer willow) is essentially absent from northwestern Montana where *Salix drummondiana* (Drummond willow) is the dominant willow. The *Salix geeyeriana*/*Calamagrostis canadensis* (Geyer willow/bluejoint reedgrass) habitat type occupies streamside sites along major drainages and tributaries. Sites are also located near springs and seeps. Wetter sites may be dominated by the *Salix geeyeriana*/*Carex rostrata* (Geyer willow/beaked sedge) habitat type. The *Salix geeyeriana* - *Salix boothii* (Geyer willow - Booth willow) dominated types occupy intermediate elevations in comparison to the *Salix lutea* (yellow willow) dominated types which occupy lower foothills, and the *Salix drummondiana* (Drummond willow) dominated types which occupy the higher elevation sites (Fig. 35). Sites for the *Salix geeyeriana*/*Calamagrostis canadensis* (Geyer willow/bluejoint reedgrass) habitat type range in elevation from 1,469 to 2,234 m (4,820 to 7,330 ft).

VEGETATION

The overstory is dominated by *Salix geeyeriana* (Geyer willow) and *Salix boothii* (Booth willow). *Calamagrostis canadensis* (bluejoint reedgrass) and/or *Calamagrostis stricta* (narrow-spiked reedgrass) are the dominant undergrowth species. A variety of forbs are present, including *Geum macrophyllum* (large leaved avens), *Pyrola asarifolia* (pink wintergreen), *Galium trifidum* (small bedstraw), and *Epilobium ciliatum* (common willow-herb) (Table 57).



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and others 1985b). Bank undercutting and sloughing may occur, especially when soils are wet or stands weakened by excessive grazing.

Recreational Uses and Considerations

If stands are extensive, this community type may provide good campground locations. Overstory aspen provide shade in an often otherwise treeless environment. However, successful aspen reproduction is likely to be reduced or eliminated by trampling. Fencing of selected areas to allow suckers to grow is recommended.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

Two additional classification systems that are being used to describe/define riparian and wetland ecosystems are listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = forested wetland; Subclass = broad-leaved deciduous; Water Regime (nontidal) = temporarily flooded to intermittently flooded

USDA Soil Conservation Service Range Site Classification (USDA Soil Conservation Service 1983)

Comparable range site(s) could not be determined.

OTHER STUDIES

Similar grazing influenced *Populus tremuloides*/*Poa pratensis* (quaking aspen/Kentucky bluegrass) community types have been described for southeastern Idaho and western Wyoming by Youngblood and Mueggler (1981), Mueggler and Campbell (1982), and Chadde and others (1988).

Populus trichocarpa/*Cornus stolonifera* Community Type (Black Cottonwood/Red-Osier Dogwood Community Type)

X POPTRI/CORSTO (POTR6/COST4)
Number Of Stands Sampled = 21

LOCATION AND ASSOCIATED LANDFORMS

The *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type is a major type at

low to mid elevations throughout the mountains and foothills of Montana. *Populus trichocarpa* (black cottonwood) is the dominant cottonwood species that occurs west of the Continental Divide. *Populus angustifolia* (narrowleaf cottonwood) and *Populus deltoides* (Great Plains cottonwood) are restricted to areas east of the Continental Divide. Sites range from 610 to 2,013 m (2,000 to 6,600 ft). The type occurs on alluvial terraces of major streams and rivers, and around lakes and ponds. In central and eastern Montana *Populus trichocarpa* (black cottonwood) tends to occur at higher elevations than *Populus angustifolia* (narrowleaf cottonwood), which in turn occurs at higher elevations than *Populus deltoides* (Great Plains cottonwood). Stands may be broad and extensive, or they may be relatively narrow stringers (Fig. 24 and 30).

VEGETATION

This type is characterized by an overstory of cottonwoods over a potentially dense and diverse group of undergrowth shrubs and herbaceous plants. *Populus deltoides* (Great Plains cottonwood) and *Populus angustifolia* (narrowleaf cottonwood) may be present but are subordinate to *Populus trichocarpa* (black cottonwood).

Cornus stolonifera (red-osier dogwood) is the diagnostic shrub for this type. Other shrub species present include *Rosa* species (rose). A wide variety of herbaceous species are present including *Smilacina stellata* (starry Solomon-plume) (Table 44).

Table 44. Average canopy cover, range of canopy cover, and constancy for species recorded in stands of the *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type that are relatively undisturbed by livestock or wildlife (number = 4 stands)

Species	% Can. Cov.		
	Avg.	Rng.	Con.
Trees			
<i>Picea</i> spp. (spruce)	3	0-3	25
<i>Populus trichocarpa</i> (black cottonwood)	53	40-60	100
Shrubs			
<i>Alnus incana</i> (mountain alder)	10	0-10	25
<i>Clematis ligusticifolia</i> (western virgins-bower)	1	0-1	25
<i>Cornus stolonifera</i> (red-osier dogwood)	43	20-60	100



Table 44 (cont.)

Species	% Can. Cov. Avg. Rng. Con.		
<i>Crataegus columbiana</i> (Columbia hawthorn)	10	0-10	25
<i>Crataegus douglasii</i> (black hawthorn)	3	0-3	25
<i>Prunus virginiana</i> (common chokecherry)	40	0-40	25
<i>Rhamnus alnifolia</i> (alder buckthorn)	10	0-10	25
<i>Ribes americanum</i> (black currant)	20	0-20	25
<i>Ribes</i> spp. (currant)	3	0-3	25
<i>Rosa</i> spp. (rose)	10	0-10	25
<i>Rosa woodsii</i> (woods rose)	5	0-10	75
<i>Salix lutea</i> (yellow willow)	1	0-1	25
<i>Salix planifolia</i> (planeleaf willow)	3	0-3	25
<i>Symphoricarpos albus</i> (common snowberry)	3	0-3	25
Graminoids			
<i>Agrostis stolonifera</i> (redtop)	3	0-3	25
<i>Carex bebbii</i> (Bebb's sedge)	3	0-3	25
<i>Deschampsia cespitosa</i> (tufted hairgrass)	1	0-1	25
<i>Elymus glaucus</i> (blue wildrye)	1	0-1	25
<i>Phleum pratense</i> (common timothy)	3	0-3	25
<i>Poa compressa</i> (Canada bluegrass)	10	0-10	25
<i>Poa palustris</i> (fowl bluegrass)	3	0-3	25
<i>Poa pratensis</i> (Kentucky bluegrass)	5	0-10	50
Forbs			
<i>Achillea millefolium</i> (common yarrow)	1	0-1	25
<i>Actaea rubra</i> (baneberry)	20	0-20	25
<i>Allium cernuum</i> (nodding onion)	1	0-1	25
<i>Arctium lappa</i> (great burdock)	1	0-1	25
<i>Arnica chamissonis</i> (meadow arnica)	3	0-3	25
<i>Aster occidentalis</i> (western aster)	10	0-10	25
<i>Chenopodium glaucum</i> (oakleaf goosefoot)	1	0-1	25
<i>Cirsium arvense</i> (Canada thistle)	2	0-3	50
<i>Cirsium vulgare</i> (bull thistle)	1	0-1	25
<i>Fragaria virginiana</i> (Virginia strawberry)	3	0-3	25
<i>Galium triflorum</i> (sweetscented bedstraw)	2	0-3	50
<i>Genm macrophyllum</i> (large-leaved avens)	1	0-1	25
<i>Heracleum lanatum</i> (cow-parsnip)	1	0-1	25
<i>Lysimachia ciliata</i> (fringed loosestrife)	1	0-1	25

Table 44 (cont.)

Species	% Can. Cov. Avg. Rng. Con.		
<i>Medicago lupulina</i> (black medic)	1	0-1	25
<i>Medicago sativa</i> (alfalfa)	3	0-3	25
<i>Mentha arvensis</i> (field mint)	10	0-10	25
<i>Myosotis laxa</i> (small-flowered forget-me-not)	1	0-1	25
<i>Psoralea esculenta</i> (Indian bread-root)	1	0-1	25
<i>Scutellaria galericulata</i> (marsh skullcap)	1	0-1	25
<i>Senecio foetidus</i> (sweet-marsh butterweed)	1	0-1	25
<i>Smilacina stellata</i> (starry Solomon-plume)	3	0-3	75
<i>Solidago canadensis</i> (Canada goldenrod)	1	0-1	25
<i>Taraxacum ceratophorum</i> (horned dandelion)	1	0-1	25
<i>Taraxacum officinale</i> (common dandelion)	1	0-1	25
<i>Urtica dioica</i> (stinging nettle)	1	0-1	25
<i>Vicia</i> spp. (vetch)	1	0-1	25
Ferns and Allies			
<i>Equisetum laevigatum</i> (smooth scouring-rush)	1	0-1	75
<i>Equisetum sylvaticum</i> (wood horsetail)	40	0-40	25

SUCCESSIONAL INFORMATION

The *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type represents a mid-seral stage of primary succession.

Primary Successional Stages

Cottonwoods are a pioneering species that requires moist, barren, newly deposited alluvium that is exposed to full sunlight. In general, these sites represent point bars, side bars, mid channel bars, delta bars, and islands. Since cottonwoods do not regenerate in their own shade and require moist, barren, fully exposed, newly deposited alluvial material as a suitable seedbed, they are considered a seral species and do not represent the climax community (PNC) for the site. Many stands may appear to have limited regeneration, especially in the open areas. However, it is important to understand that these young seedlings and saplings represent



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sprouts (asexual reproduction) and not establishment by seeds (sexual reproduction). These sprouts may help prolong the life span of the stand, but will not perpetuate or maintain the stand. In time the cottonwood stand will be replaced by a later successional stage.

The erosional and depositional pattern of a river helps maintain the diversity of plant communities on the floodplain. The distribution of various communities depends on the way the river meanders. In turn, the rate of meandering determines the proportion of floodplain communities considered to be in the pioneer or early seral, mid-seral, late seral, or climax (PNC) stage of succession. Where the river meanders frequently, few stands progress to later successional stages. Near the outer edges of the floodplain, the effect of the river is less pronounced, allowing later successional stages to develop. Typically, rivers meander like a whip or snake across their floodplain. Lateral movement of the river initiates a dynamic series of vegetation events. As water moves downstream, it erodes established banks, typically covered with riparian or wetland vegetation in different stages of development, on outside curves and deposits fresh alluvial materials on the point bars of inside curves. Each new deposit of alluvium forms a distinct band or terrace with each band being even aged and with gaps in ages between the bands. The ages of the bands are progressively older on older terraces. As the river moves away from sites of previous deposition and continues to downcut, the amount of soil water recharge from channel seepages decreases, making these sites (terraces) drier. If certain portions of the floodplain remain undisturbed for a long enough period of time, their relief with respect to the river may increase to a point where they are only rarely flooded, if at all. These terraces are considered old or mature alluvial terraces and can continue development toward climax (PNC) without the modifying influences of floods (Hansen 1989).

Early Seral Stage—The *Populus trichocarpa*/Recent Alluvial Bar (black cottonwood/Recent Alluvial Bar) community type is an early seral stage.

Mid-Seral Stage—If disturbance (either human-caused or natural) does not eliminate the stand, the *Populus trichocarpa*/Recent Alluvial Bar (black cottonwood/Recent Alluvial Bar) community type will progress to the relatively undisturbed mid-seral stage called the *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood)

community type. Normally, the understory of a pole to mature *Populus trichocarpa* (black cottonwood) stand is dominated by conifers such as *Pinus ponderosa* (ponderosa pine), *Pseudotsuga menziesii* (Douglas fir), *Abies grandis* (grand fir), *Picea* (spruce), *Thuja plicata* (western red cedar), *Tsuga heterophylla* (western hemlock), *Abies lasiocarpa* (subalpine fir), and *Juniperus scopulorum* (Rocky Mountain juniper). As the *Populus trichocarpa* (black cottonwood) overstory matures, becomes open, and finally, becomes decadent, the conifers are ready to replace them.

Late Seral to Climax (PNC) Stage—As the cottonwood stand dies, primary succession toward other communities will occur unless flooding deposits new sediments suitable for cottonwood seedlings. In the absence of sediment deposition, at low to mid elevations succession continues from the *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type to wetland habitat types dominated by conifers such as *Pinus ponderosa* (ponderosa pine), *Pseudotsuga menziesii* (Douglas fir), *Abies grandis* (grand fir), *Picea* (spruce), *Thuja plicata* (western red cedar), *Tsuga heterophylla* (western hemlock), *Abies lasiocarpa* (subalpine fir), and *Juniperus scopulorum* (Rocky Mountain juniper). In other instances, this community type may be successional to the *Salix geyeriana*/*Calamagrostis canadensis* (Geyer willow/bluejoint reedgrass) habitat type or the *Salix lutea*/*Calamagrostis canadensis* (yellow willow/bluejoint reedgrass) habitat type, depending upon elevation.

Secondary Successional Stages

The presence or absence of a particular understory community may aid in determining the degree of disturbance (both present and historical disturbance) on a particular site. On sites that are relatively undisturbed, the understory of the *Populus trichocarpa* (black cottonwood) community will contain a diverse, dense shrub layer dominated by *Cornus stolonifera* (red-osier dogwood), *Amelanchier alnifolia* (western serviceberry), *Prunus virginiana* (common chokecherry), and various species of *Salix* (willows) and *Ribes* (currants and gooseberries). This stage is called the *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type. With moderate levels of grazing or browsing, there will be an increase in *Symphoricarpos occidentalis* (western snowberry) and *Rosa* species (rose), with a corresponding decrease in both the abundance and canopy cover of *Cornus stolonifera* (red-osier dogwood).

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Amelanchier alnifolia (western serviceberry), *Prunus virginiana* (common chokecherry), and various species of *Ribes* (currants and gooseberries). If grazing or browsing pressures continue, the more desirable shrubs will be eliminated leaving *Symphoricarpos occidentalis* (western snowberry) and *Rosa* species (rose) which can form a nearly impenetrable understory. This stage of disturbance-caused succession is called the *Populus trichocarpa*/ *Symphoricarpos occidentalis* (black cottonwood/ western snowberry) community type. If the disturbance is severe enough, ALL shrubs can be eliminated and the understory will be converted to a herbaceous one dominated by species such as *Poa pratensis* (Kentucky bluegrass), *Phleum pratensis* (common timothy), *Bromus inermis* (smooth brome), and a variety of "weedy" forbs (e.g., the *Populus trichocarpa* Herbaceous [black cottonwood/ Herbaceous] community type). During the process of converting from a diverse, dense shrub understory to a herbaceous understory, the stand will open up resulting in a drier site. Finally the stand becomes decadent with the stand's appearance becoming one of widely spaced, dying cottonwoods. The site now has become so open and dry that the site's potential may have changed to one capable of supporting a variety of upland types. The presence of conifers and upland shrub species will usually indicate the site's potential. However, conversion may be slow due to heavy grazing pressures and the sod forming characteristic of herbaceous species. Remnant shrubs and grasses, if present will help indicate the potential undergrowth composition.

Once the stand has converted from a shrub-dominated understory to one that is dominated by a variety of introduced herbaceous species, the ability to return the site to its former state (shrub-dominated) is very difficult. (It may be possible, but it will require a drastic change in management and may be very costly in terms of both labor and money.) Therefore, if a manager wants to maintain the stand in a shrub-dominated understory state, the most cost effective method is to change the management on the site **BEFORE** the site is too degraded.

SOILS

Soils are typically Entisols (Fluvents), usually up to 1 m (39 in) of mineral soil overlying river gravel and/or cobbles. Inceptisols and Mollisols can also be found on older sites of relatively longer stability where time has allowed more development to occur. Soil texture varies from loam to

coarse sand. Water tables usually drop below 1 m (39 in) of the soil surface in summer, but soils can remain moist due to capillary action. Redox concentrations (mottles) are common in these soils as evidence of a fluctuating water table. Soils are generally well drained with low available water. Coarse textured soils, moderate stream gradients, and high coarse fragment contents throughout the soil profile provide an environment that produces a rapid movement of highly aerated groundwater. This type of substrate is important to many floodplain communities.

ADJACENT COMMUNITIES

Adjacent wetter communities may be dominated by a variety of types including the *Salix exigua* (sandbar willow) and the *Salix lasiandra* (Pacific willow) community types, or the *Typha latifolia* (common cattail) and *Eleocharis* (spikesedge) dominated habitat types. Adjacent drier communities may be dominated by a variety of *Populus trichocarpa* (black cottonwood) types, or by a variety of upland species.

MANAGEMENT INFORMATION

Additional management information can be found in Appendix A.

Livestock

Forage production ranges from low to moderate due to the dense nature of the stands. Stands in good to excellent health (condition) often support dense thickets of shrubs, limiting the amount of available forage. *Cornus stolonifera* (red-osier dogwood) is considered an "ice cream" plant by livestock and wildlife. Its utilization is a direct indication of past and current use levels. In some areas, livestock browsing of *Cornus stolonifera* (red-osier dogwood) may be quite high.

Most sites are presently subjected to heavy grazing pressures because of their topographic location and ease of access. With moderate to heavy prolonged grazing pressures, most shrubs will be eliminated leaving the shrubs *Symphoricarpos occidentalis* (western snowberry) and *Rosa woodsii* (woods rose) as the dominate understory. At this point, the stand has been converted to the *Populus trichocarpa*/ *Symphoricarpos occidentalis* (black cottonwood/ western snowberry) disturbance-caused community type. If disturbance is severe, the shrubs will also be eliminated and the stand has converted to the *Populus trichocarpa*/ Herbaceous (black cottonwood/ Herbaceous) disturbance-caused community type (see the discussion under the Seral Stages section).

Timber

Due to the favorable moisture relationship of this type, timber productivity for the associated cottonwoods and conifers ranges from low to moderate. Complete stand removal may result in a shrub-dominated community with extremely limited cottonwood regeneration except for occasional sprouting from stumps.

Wildlife

The *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type provides valuable cover, shade, and food for a variety of species. Big game use may be high, depending upon the time of year. The spreading crown of *Populus trichocarpa* (black cottonwood) provides sites for huge platform like stick nests of bald eagles and ospreys (Arno and Hammerly 1984) and for great blue herons (Parker 1980). Canada geese occasionally use the nests previously built by bald eagles and osprey. A variety of birds and mammals, such as woodpeckers, great horned owls, wood ducks, and raccoons, nest in trunk cavities. *Populus trichocarpa* (black cottonwood) and *Cornus stolonifera* (red-osier dogwood) are often eaten by moose (Costain 1989) and used by beaver for food and building materials (Allen 1983). Understory species provide food and cover for waterfowl, small birds, and mammals (Dittberner and Olson 1983).

Fisheries

The stream side location of the *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type is very important in providing thermal cover, debris recruitment, and streambank stability. Its importance can not be emphasized enough (see discussion in the Soil Management and Rehabilitation Opportunities section). *Cornus stolonifera* (red-osier dogwood) and associated shrub species are excellent in controlling erosion along streams. This is particularly important on the higher gradient streams where scouring by seasonal flooding is possible.

Fire

The *Populus trichocarpa*/*Cornus stolonifera* (black cottonwood/red-osier dogwood) community type is susceptible to fire during the late summer and fall. *Populus trichocarpa* (black cottonwood) and associated shrubs are adapted to light and in some instances to moderate intensity fires and may produce new sprouts following burns. The ability of cottonwoods to produce new sprouts following fire seems to

be dependent upon three criteria: 1) The particular species of cottonwood present in the stand. In general, *Populus angustifolia* (narrowleaf cottonwood) has a greater sprouting capability than *Populus trichocarpa* (black cottonwood) which in turn has a greater sprouting capability than *Populus deltoides* (Great Plains cottonwood). 2) The age of the trees in the stand. As the trees mature, the sprouting potential tends to decrease proportionally. As the trees reach the decadent stage of development, the sprouting potential is severely limited. 3) The location of the water table. In general, the higher the water table throughout the growing season, the greater the ability for sprouts to survive. Therefore, if a manager wants to extend the life span of a stand of cottonwoods, fire *MAY BE* used as a tool in the pole to early mature stage of development. If fire is used to rehabilitate a stand, it is imperative that the stand be excluded from all livestock grazing for at least five years and that browsing by wildlife be closely monitored.

Cornus stolonifera (red-osier dogwood) and the associated shrub species can survive all but the most severe fires that remove duff and cause extended heating of the upper layer of soil. After a fire, the shrubs sprouts from the surviving rhizomes or stolons (runners) (Fischer and Bradley 1987).

Soil Management and Rehabilitation Opportunities

Coarse textured soils are not as susceptible to compaction problems. This community type is subject to recurring scouring by floods and alluvium deposition. However, stands are relatively stable because of the strong rooting action of the associated species. Management should emphasize the importance of the understory shrub layer in streambank stabilization. This is particularly important on higher gradient stream channels where scouring by seasonal flooding occurs.

Managers should maintain a buffer strip of the *Populus trichocarpa* (black cottonwood) dominated community types adjacent to rivers and streams. These buffer strips reduce sedimentation, stabilize streambanks, and slow flood waters.

If the stand still has a fairly high water table, a dramatic change in management (i.e. elimination of livestock grazing and close monitoring of wildlife impacts) *MAY* allow the remnant shrub population to sprout and re-invade the stand. However, if the water table has dropped dramatically and the shrubs have been completely eliminated, the opportunity to



reestablish a shrub understory dominated by desirable shrubs may be lost.

Where revegetation with woody species is wanted, desirable shrubs such as *Cornus stolonifera* (red-osier dogwood), *Amelanchier alnifolia* (western serviceberry), *Prunus virginiana* (common chokecherry), and various species of *Salix* (willows) and *Ribes* (currants and gooseberries) may be well adapted to planting on disturbed sites. Rooted cuttings or nursery grown seedlings are easily established on moist, well drained soils. Growth rates are rapid and the roots of established seedlings effectively stabilize recent bare alluvium. Remember: If the canopy cover of the trees in the stand has opened up too much and/or the water table has been lowered dramatically, the success of revegetation with desirable woody species will be low.

For rehabilitation of stands by the use of fire, see the discussion in the Fire Management section about the limitations of fire as a tool for rehabilitation. If fire is to be used to rehabilitate a stand, it is imperative that the stand be excluded from all livestock grazing for at least five years and that browsing by wildlife be closely monitored.

The following guidelines should be followed when attempting to revegetate sites with cuttings from cottonwoods (Swenson 1988): 1) Do not plant cottonwoods in saline or alkaline sites. 2) Select sites with substrates of sand, gravel, or small cobbles. Avoid sites that are classified as clays or have a thick clay layer. 3) Make cuttings from stands of open, young, rapidly growing trees, using only cuttings that are four years old or less. Remove the side branches, leaving only the tip and next two lower side branches. 4) Make the cuttings when the plants are completely dormant. 5) Soak the cuttings in water for 10 to 14 days. 6) Auger holes to a depth of the lowest anticipated growing season water table. 7) Place the cuttings in the augered holes the same day they are removed from the soak. Set the butt at the lowest anticipated growing season groundwater depth. Select cuttings of a length which provides 1 to 2 m (3 to 6 ft) of cutting to remain above the soil surface. 8) Back fill the holes carefully to avoid air pockets. 9) Place tree guards around the cuttings if rodent or rabbit damage is anticipated. 10) As buds begin to swell along the cuttings, wipe them off the lower two-thirds of the cutting. 11) Plantings must be excluded from livestock grazing and big game browsing for two to three growing seasons. Some beaver control may be needed.

Recreational Uses and Considerations

Because of its proximity to streams and rivers and its flat topography, recreational developments and transportation corridors are common within this type. Recreational opportunities are excellent for fishing, big game and waterfowl hunting, and observing a variety of bird species.

Care must be taken when locating structures within this type. Some campgrounds in Montana have been seriously damaged by floods or lost altogether.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

Two additional classification systems that are being used to describe/define riparian and wetland ecosystems are listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = forested wetland; Subclass = broad-leaved deciduous; Water Regime (nontidal) = temporarily flooded to intermittently flooded.

USDA Soil Conservation Service Range Site

Classification (USDA Soil Conservation Service 1983)

Western Glaciated Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site, wet meadow range site; Western Sedimentary Plains, 10-14 inch Precipitation Zone = overflow range site, subirrigated range site; wet meadow range site.

OTHER STUDIES

Similar communities have been reported for western Montana (Foote 1965), central Oregon (Kovalchik 1987), and central Idaho (Tuhy and Jensen 1982).

Appendix C

ADDITIONAL MAINTENANCE INFORMATION FOR RIPARIAN AND UPLAND AREA

Canyon River Development

This additional information was taken from the Canyon River Development Vegetation Management Plan (July 2001).



3.0 RIPARIAN VEGETATION MANAGEMENT AND MONITORING

Riparian vegetation will be managed according to the requirements of the Missoula County Riparian Resource Ordinance and the Canyon River Development (CRD) Riparian Resource Area Management Plan dated November 2000. The portions of the plan that cover riparian vegetation are discussed below.

3.1 Protection and Enhancement of Existing Riparian Vegetation

Vegetation management in CRD riparian areas will emphasize protection and enhancement of native vegetation. Vegetation management on the non-residential lot areas will be the responsibility of the golf course managers. All personnel will be given orientation training which includes the vegetation management restrictions outlined in this report. No live or dead trees will be removed except where they present a safety concern. Only very limited pruning of dead tree and shrub materials for aesthetic reasons will be allowed and will be limited to riparian edges adjacent to the trail and golf course features. No routine fertilization will occur within CRD riparian resource areas. Temporary spot fertilization may be used to improve the establishment and early growth of planted stock.

The CRD riparian resource area currently has relatively low plant diversity due to past management activities and non-native plant invasion. The river riparian zone has very few trees and therefore is missing an entire vegetation layer. This tree layer provides habitat for birds and other terrestrial wildlife as well as shade and woody debris for fish. The riparian shrub layer at CRD is dominated by chokecherry which provides cover, nesting sites, fruit and shade for many bird and animal species. However, an increase in diversity would significantly increase the wildlife habitat value of the riparian zone. In consideration of these issues, during golf course construction at least 100 riparian trees and 100 riparian shrubs will be planted throughout the existing river riparian zone.

In addition to the vegetation enhancement described in this section, golf course designers and future homeowners will be provided with **Appendix A** of this report which lists native trees, shrubs, grasses and forbs suited to this site. It is certain that native species will be incorporated into golf course design to provide screening, interest and aesthetics. Tree and shrub plantings will be most effective for wildlife if installed as dense, diverse thickets and not as scattered individual plants.

3.2 Weed Control for Riparian Vegetation

Weeds are a significant component of the CRD riparian vegetation. Several weeds on the state noxious list are present including leafy spurge, spotted knapweed, hound's-tongue, common tansy and Canada thistle. Other common weeds present are woolly mullein, tumble mustard and wild licorice. Although not often thought of as weeds, a number of non-native grasses also are present and occupy space that could support native plants with much higher aesthetic and wildlife values. These grasses include smooth brome, orchard-grass, Kentucky bluegrass, cheatgrass and timothy.



Weed management at CRD will emphasize an Integrated Pest Management (IPM) approach incorporating cultural, mechanical, chemical and biological control methods. Most, if not all of the following weed control methods will be incorporated into the weed control plan.

Cultural weed control methods:

- Minimizing disturbances
- Re-seeding disturbed areas immediately with native species
- Protecting and enhancing native vegetation, especially tree and shrub layers for shade
- Effective weed control on adjacent non-riparian areas.

Mechanical weed control methods:

- Hand-pulling
- Weed whipping
- Mowing
- Mulching.

Chemical weed control methods:

- Spot applications to individual plants or small areas
- Most effective chemicals approved for riparian areas
- Most effective chemicals for the target weeds
- Application at the most effective time.

Biological control methods:

- Release of weed control bioagents including insects and pathogens
- Grazing with weed control animals including goats and sheep
- Coordination with local weed district biocontrol programs.

The foundation of the CRD weed control program will be protection and enhancement of native vegetation. Keeping native plants healthy will solve much of the weed problem. Many of the CRD weeds, especially knapweed, can be controlled by shade. Others such as leafy spurge, hound's-tongue, tansy and Canada thistle are more shade tolerant and may require additional efforts. When weeds are at low levels, as they are across most of the CRD riparian area, they may be controlled with mechanical means as a maintenance task. The need for chemical control methods will likely be limited to special cases such as spurge patches, post-flood deposit invasion or other disturbances. Riparian weed control methods are evolving rapidly and efforts will be made to keep current through the Missoula Weed Control Board and Extension Service.

Chemical use, including pesticides and fertilizers, is a significant water quality concern within riparian areas. The close proximity to surface and groundwater combined with the presence of porous soils increases the potential for water impacts. Chemicals will be chosen that are less toxic and persistent and that target the specific weeds present. Applications will be made at the most effective time and re-seeding will follow to reduce the chance for weed regrowth. No chemicals will be stored or mixed within riparian areas. Workers will receive orientation training which includes the general intent and specific conditions of riparian resource management goals related to chemical use.

3.3 Monitoring Riparian Vegetation

The golf course managers will be responsible for executing this plan and maintaining CRD riparian resource areas. The CRD managers will review the plan in relation to permitted management actions, monitor the condition of riparian areas and ensure compliance. The Missoula Office of Planning and Grants may also choose to review riparian activities for plan compliance.

Monitoring activities will include an on-the-ground review of the entire CRD riparian resource area. This examination will note evidence of unauthorized road, trail, structure and fence construction as well as grazing. The CRD riparian resource area boundary will be examined and compared with **Figures 1 and 2** in this report. Changes will be noted and corrective action taken to halt activities not permitted in this plan.

The general vegetation health and integrity of the CRD riparian resource area will be monitored by examining key vegetation indicators. Key indicators of riparian vegetation health will include acreage, number of native plant species, coverage of native vegetation and coverage of weeds. Any decrease in riparian acreage will be noted and replaced in consultation with Missoula County officials. The total number of native plant species in each lifeform category (tree, shrub, graminoids, forbs) will be maintained at or above current levels as indicated in **Appendix A**. The coverage of native plant species will be maintained above 50% and the total coverage of all plant species will be maintained above 90% except on new flood deposits. The total coverage of weed species will be maintained below 25%. Key vegetation indicators will be evaluated by a qualified vegetation professional at least every 5 years.

4.0 UPLAND VEGETATION MANAGEMENT AND MONITORING

Upland CRD vegetation management will emphasize the protection of native species where present and the reintroduction of native species where non-natives are dominant. Common areas will be maintained by golf course personnel. All personnel including managers, supervisors and workers will be required to review this vegetation management plan.

The owners of individual lots will be responsible for vegetation on their properties. All lot purchasers will be made aware of this vegetation management plan and either provided a copy or access to one. All lot purchasers will be provided a copy of **Appendix A** which lists native species to plant.



4.1 Protection and Enhancement of Existing Upland Vegetation

All existing mature trees will be maintained except for those that prevent construction of golf course features or homes. It may be necessary to remove up to approximately 10 trees for golf course construction. It may also be necessary to remove up to 25 trees for home construction. Both golf course and home construction will attempt to incorporate existing mature trees into the final layout. For each tree removed, two of the same species will be planted. Additional trees will also be planted to enhance wildlife habitat, improve aesthetic appeal and provide shade or sound screening. Shrub and tree species for planting will be selected from the native plants identified in **Appendix A**. Additional native species may be used if they are identified by a local vegetation professional as capable of growth on this site.

4.2 Weed Control for Upland Vegetation

Weeds are a significant component of the CRD upland vegetation. Several weeds on the state noxious list are present including leafy spurge, spotted knapweed, hound's-tongue, common tansy and Canada thistle. Other common weeds present are woolly mullein, tumble mustard and dandelion. Although not often thought of as weeds, a number of non-native grasses also are present and occupy space that could support native plants with much higher aesthetic and wildlife values. These grasses include smooth brome, orchard-grass, Kentucky bluegrass, cheatgrass and timothy.

Weed management at CRD upland areas will emphasize an Integrated Pest Management (IPM) approach incorporating cultural, mechanical, chemical and biological control methods. Most, if not all of the following weed control methods will be incorporated into the weed control plan.

Cultural weed control methods:

- Minimizing disturbances
- Re-seeding disturbed areas immediately with native species
- Protecting and enhancing native vegetation especially tree and shrub layers for shade
- Effective weed control on adjacent areas.

Mechanical weed control methods:

- Hand-pulling
- Weed whipping
- Mowing
- Mulching.

Chemical weed control methods:

- Spot applications to individual plants or small areas
- Most effective chemicals approved for riparian areas
- Most effective chemicals for the target weeds
- Application at the most effective time.



Biological control methods:

- Release of weed control bioagents including insects and pathogens
- Grazing with weed control animals including goats and sheep
- Coordination with local weed district biocontrol programs.

The foundation of the CRD weed control program will be protection and enhancement of native vegetation. Keeping native plants healthy will solve much of the weed problem. Some CRD weeds such as knapweed can be reduced using shade and irrigation. Others such as leafy spurge, hound's-tongue, tansy and Canada thistle are more shade and water tolerant and require additional efforts.

Chemical use, including pesticides and fertilizers, is not a significant water quality concern at these upland areas. Surface water is separated from these upland sites by the riparian area which acts a buffer to runoff that may contain contaminants. Surface runoff is uncommon in these soils due to the relatively high surface infiltration rate and small size of typical storms. Storms which exceed the infiltration rate of this soil when vegetated are extremely rare. Groundwater in this upland area is much deeper than in the riparian areas (generally over 50ft). Soils are deep and moderately porous with sufficient water holding capacity to store a large rainfall.

Chemicals will be chosen that are less toxic and persistent and that target the specific weeds present. Applications will be made at the most effective time and re-seeding will follow to reduce the chance for weed regrowth. Weed control workers will receive orientation training which includes the general intent and specific conditions of riparian resource management goals related to chemical use.

4.3 Monitoring Upland Vegetation

The golf course managers will be responsible for executing this plan and maintaining CRD upland areas other than on individual homesites. The CRD managers will continually monitor riparian vegetation. The Missoula Office of Planning and Grants may also choose to review management activities for plan compliance.

Monitoring activities will include an on-the-ground review of the entire CRD upland area. This examination will note unhealthy or dead native plant materials as well as any large areas of non-native plantings.

The general vegetation health and integrity of the upland areas will be monitored by examining key vegetation indicators. Key indicators of upland vegetation health will include a high coverage of native species, ratio, acreage, number of native plant species, coverage of native vegetation and coverage of weeds. Any decrease in acreage will be noted and halted then replaced in consultation with Missoula County officials. The total number of native plant species in each lifeform category (tree, shrub, graminoids, forbs) will be maintained at or above current levels as indicated in **Appendix A**. The coverage of native plant species will be maintained above 50% and the total coverage of all plant species will be maintained above 90% except on



new flood deposits. The total coverage of weed species will be maintained below 50%. Key vegetation indicators will be evaluated by a qualified professional at least every 5 years.

5.0 GOLF COURSE VEGETATION MANAGEMENT AND MONITORING

All golf course management activities will be supervised by a professional superintendent familiar with all aspect of vegetation and water management including integrated pest management (IPM) and irrigation scheduling. Golf course management will follow the environmental principles of the Golf Course Superintendents Association of America (www.gcsaa.com) as presented in **Appendix B**. These principles were compiled by a diverse group of golf professionals, environmental organizations and government agencies. The golf course superintendent will ensure that all employees have an understanding of this vegetation management plan and their role in its implementation. All workers will be required to review this management plan and receive training on application methods, safety, spill protocol, label requirements and related subjects.

5.1 Golf Course Vegetation Management

Golf course vegetation management will emphasize native vegetation by minimizing the area of non-native turfgrasses and by using native species whenever possible. The golf course layout illustrated in **Figure 2** was designed to limit the area of non-native turfgrasses. Areas between these golf course features will be planted to both upland and riparian species identified in **Appendix A**. Riparian species will be maintained with appropriate irrigation. Where appropriate, riparian species may be maintained by lowering the ground surface elevation so plants have access to the water table. A total of 7-acres of riparian vegetation will be established by excavation, clay-lining, and irrigation. Native riparian and wetland vegetation will be used on these constructed riparian areas and on the fringe of the constructed lake.

5.2 Integrated Pest Management Plan

The golf course superintendent will conduct a pest management program based on the principles of integrated pest management (IPM). This program will include weed pests, insects and diseases. Weed management at CRD will incorporate cultural, mechanical, chemical and biological control methods. Examples of common IPM methods are listed below.

Cultural weed control methods:

- Minimizing disturbances
- Re-seeding disturbed areas immediately with desirable species
- Protecting and enhancing native vegetation especially tree and shrub layers for shade
- Effective weed control on adjacent areas.

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Mechanical weed control methods:

- Hand-pulling
- Weed whipping
- Mowing
- Mulching

Chemical weed control methods:

- Spot applications to individual plants or small areas
- Use the most effective chemicals for the target weeds
- Apply at the most effective time.

Biological control methods:

- Release weed control bioagents including insects and pathogens
- Graze with weed control animals including goats and sheep
- Coordinate with local weed district biocontrol programs.

The foundation of the CRD weed control program will be protection and enhancement of desirable vegetation. Keeping desirable plants healthy will solve much of the weed problem. When weed are at low levels, they may be controlled with mechanical means as a maintenance task. The need for chemical control methods will be reduced due to this integrated approach. When chemical control methods are employed, pesticides will be purchased in quantities that can be used quickly to reduce the amount stored and the potential for large spills.

Pesticides, including herbicides, insecticides and fungicides are a significant water quality concern especially where flooding may occur, where groundwater is shallow and where soils are porous. **Figure 2** illustrates three vegetation treatment areas.

Area A includes the lower riparian areas along the river and the 100 year floodplain. This area has sandy, porous soils, shallow groundwater and flooding. These soils have very low water and nutrient holding capacities. Pesticide applications will be minimized prior to and during high river stages (usually April-May). Pesticide application will also be minimized during high ground water levels (usually mid-May to Mid-June). Chemicals for use in this zone will be chosen that are less toxic and persistent and that target the specific weeds present. Applications will be made at the most effective time and re-seeding will follow to reduce the chance for weed regrowth. No chemicals will be stored or mixed within Zone A. No pesticide equipment will be washed in Zone A.

Area B includes the majority of the site and is dominated by medium textured soils with moderate permeability. Nutrient and water holding capacities are moderate in this zone. Pesticide applications made at label rates are unlikely to present water quality impacts in this zone. Chemical mixing areas and equipment washing areas must be located away from wells and surface water features. Chemical storage areas should have secondary containment to reduce potential impacts to groundwater.

Area C is dominated by fine-textured, clay-rich soils that are relatively impermeable. These soils have very high water and nutrient holding capacities. It is very unlikely that groundwater contamination could ever originate from this zone due to the low soil permeability. Chemical mixing and equipment washing areas do not represent a risk to groundwater contamination in this zone.

The golf course superintendent will select pesticides based on effectiveness, low toxicity, low persistence and other factors that will provide adequate control but minimize environmental impacts. Examples of the pesticides contemplated for the CRD are listed below.

Trade Name	Active Ingredient	Use
Roundup Ultra	Glyphosate	Herbicide
Trimec	2,4-D	Herbicide
Turficide 400	PCNB	Herbicide
Scotts Proturf FFII	PCNB	Herbicide
Scotts Pro Turf Pythium Control	Methalaxyl	Fungicide
Scotts Pro Turf Fluid Fungicide	Thiophanate/iprodisone	Fungicide
Tordon	Picloram	Herbicide

5.3 Fertilization

Nitrogen and phosphorous are the most common elements that will be applied as fertilizer. Several other elements may be used occasionally including iron. Fertilizers will be applied at rates that will be quickly taken up by target plants and therefore prevent water quality concerns. Rates will be determined by the golf course superintendent based on visual evaluation of the turf combined with occasional plant tissue tests and other methods. Soil tests will be used to evaluate the need for fertilization other than nitrogen.

The Vegetation Treatment Zones illustrated in **Figure 2** also have implications for fertilization. Very minimal applications should be made in Zone A due to the porous soils, shallow groundwater, flooding potential and low nutrient holding capacity. Multiple small applications are preferable to single large applications in this zone to ensure plant uptake. Applications in Zones B and C are unlikely to present water contamination problems due to their moderate to high nutrient holding capacity.

5.4 Irrigation Scheduling

Golf course irrigation will be applied at rates equivalent to actual vegetation water use. Irrigation scheduling will be practiced in a manner that will evaluate vegetation water needs on a daily or weekly basis and adjust irrigation accordingly. Vegetation water needs may be determined in several ways. The most common modern method is to use a modern irrigation system combined with an onsite weather station that calculates crop water needs based on weather. Vegetation water needs may also be estimated using the average water consumption information as presented in the table below. These data represent long term averages for the Missoula area.

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Another method is to monitor soil moisture and apply irrigation water when soil moisture levels fall below 50% of the available water holding capacity.

Water Use in Inches

Unit	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
Monthly Average	2.00	3.80	5.70	7.40	6.00	3.00	.80
Weekly Average	.50	.90	1.40	1.90	1.50	.75	.20
Hot Week	.70	1.50	2.00	2.50	2.20	1.00	.30
Cool Week	.30	.50	1.00	1.30	.80	.50	.10
Daily Average	.10	.15	.20	.29	.21	.11	.03
Hot Day	.13	.20	.28	.36	.31	.14	.04
Cool Day	.06	.07	.14	.19	.11	.07	.01
Avg. Monthly Rainfall	1.00	1.00	1.80	1.00	.80	.70	.30

Irrigation rates will also be adjusted to complement pesticide applications. Many pesticides used on golf courses require a relatively dry condition during application followed by a deep watering cycle to move pesticides into the turf.

5.5 Monitoring Golf Course Vegetation

The golf course managers will be responsible for executing this plan. The CRD managers will continually monitor golf course vegetation. Records of all pesticide and fertilizer purchases and applications will be maintained and made available on request by the Missoula Office of Planning and Grants and other interested regulatory agencies. Records of irrigation applications and precipitation will also be maintained.

Monitoring activities will include an on-the-ground review of the entire CRD golf course including pesticide and fertilizer storage, mixing and washing areas. Record reviews may also be conducted to determine the amount of pesticides and fertilizers applied.

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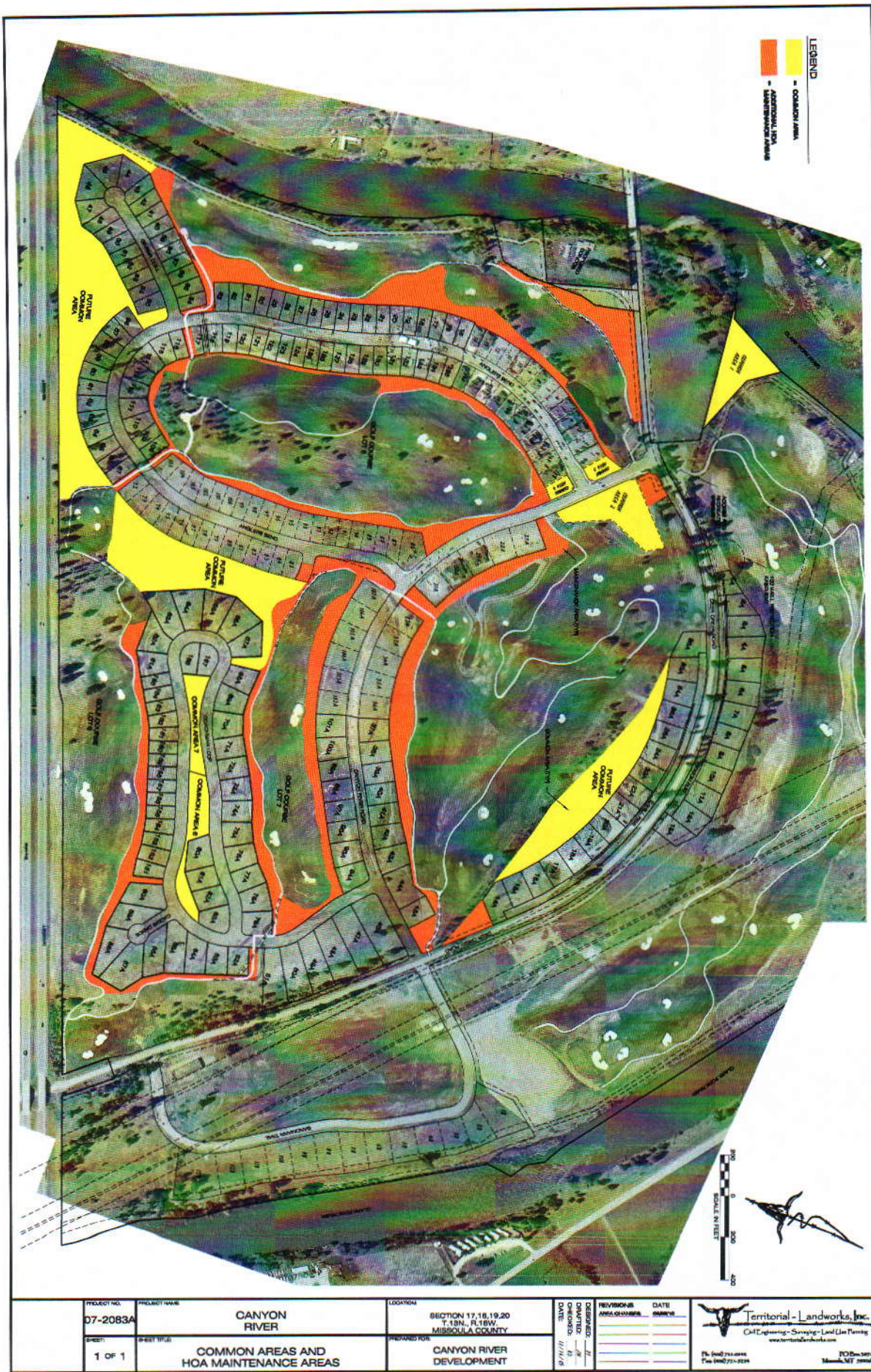


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