

Appendix 3
CHERRY RIVER MONITORING

MONITORING FORM

FOREST: Monongahela

PROJECT NAME: Cherry River

SITE/LOCATION: All Even aged regeneration harvest

MONITORING OBJECTIVE: To determine if stocking is at acceptable level following harvest and associated treatments. For Shelterwood harvests, to determine if/when the second harvest may be scheduled.

MONITORING TYPE: Implementation & effectiveness

PRIORITY: Moderate

PARAMETERS: N/A

METHODOLOGY: 1375th acre or 100th acre plots are used to record number and height of woody species. Data is summarized to provide the percent stocking and percent stocking in oak/mast species – narrative documentation. Additional surveys are done if certification of successful stocking is not possible by the third year, but the unit is progressing.

FREQUENCY/DURATION: First and third growing seasons after harvest.

VARIANCE LIMITS: Greater than 80% of the plots should have acceptable/desirable seedlings. Percentage of plots stocked with oak should equal the oak percentage of the existing stand as shown in table 3-16 on p. 3-67 of the EA, if less than 50%, or otherwise reach fifty percent.

CORRECTIVE MEASURES: Plant and tube oak seedlings and/or plant American chestnut after first and third year surveys, if needed to enhance mast production. In some cases, desirable seedlings may be overtopped by less desirable ones. Release work should be scheduled between 8-15 years after the harvest, in such cases.

REPORT: Stocking surveys and percentage stocking are reported annually. Certification of adequate stocking should occur by 5 years after harvest. In the shelterwood units, certification would occur within five years of the second harvest.

PROJECTED COST: \$45/acre for all surveys, including certification.

PERSONNEL NEEDED: Forestry technician, Forester, or Silviculturist

RESPONSIBLE OFFICIAL: District Ranger

PREPARED BY: Jane Bard

DATE: June, 2006

ENVIRONMENTAL DOCUMENT/TIMBER SALE CONTRACT CERTIFICATION

Sale Wide Mitigation or Management Requirements	
Sale Wide Mitigation or Management Requirement	Matching Contract Clause/ Responsible Official Signature
Water Quality	
<p>Perennial streams would be protected with a 100 foot riparian buffer width on each side of the channel, with no harvesting of trees within the buffer width except as necessary to meet riparian or aquatic resource management needs, or other limited objectives (such as road crossings). Intermittent streams with a watershed area of 50 acres or more would have no timber harvesting within 100 feet either side of the channel. Intermittent streams with less than a 50 acre watershed area would have no timber harvesting within 50 feet either side of the channel. And all ephemeral streams would have no harvesting within 25 feet either side of the channel. Buffer widths may be adjusted based on interdisciplinary review and site specific field investigation. Riparian buffers shall, at a minimum, encompass the riparian area defined on the basis of soils, vegetation and hydrology and the ecological functions and values associated with the riparian area.</p>	
<p>Forest Plan filterstrip guidance should be followed for all functioning stream channels (perennial, intermittent and ephemeral) within or adjacent to areas of harvesting, or when near or crossed by ground disturbing activities (roads, skid roads and landings, etc.)</p>	
<p>Filterstrip guidance that appears in Appendix R of the MNFLMP should be used as the standard of protection. Filterstrip width would be a minimum of 100 feet. On several soil categories as shown in the soils effects section of this document, the filterstrip would be 150 or 200 feet wide. Filterstrip width may be modified during implementation by an interdisciplinary review process.</p> <p>Skid roads and log landings should be located to minimize soil and filterstrip disturbance, avoid or limit the</p>	

number of functioning stream channel crossings, utilize existing old skid routes, and avoid the steeper and wetter areas within the units and areas of disturbance to the maximum extent practical. Blading skid roads in wet soils should be held to cuts less than 18 inches deep in the soil profile as much as possible.	
In conventional harvest units, overland skidding should be used wherever practical, especially in those areas of the more gentle terrain when soil and wetness conditions will support it, in order to avoid or reduce the construction of bladed skid roads.	
Skid roads should be promptly closed and rehabilitated prior to final acceptance for the harvest units they serve. Rehabilitation actions could include all or a selection of the following: drainage dip installation (waterbars and dips), removal of structures such as culverts and temporary bridges, channel restoration at crossings, decompaction (ripping of primary skid roads), outsloping, and revegetation by seeding and mulching. Use of annual grasses for seeding is permissible. These measures would be required to help stabilize soil, disperse surface runoff, and reduce the potential for sediment and stormflow effects.	
The Normal Operating Season specified in the timber sale contract should be from May 1 to November 20.	
Winter season activities in ground-based yarding (skidding) harvest units should only be authorized after an interdisciplinary review of the affected areas, to include an assessment of soil and water resource concerns and risks.	
Timber activities (skidding and log hauling) outside the normal operating season in the timber contract (winter operations) should be closely administered, to limit or control activities that may damage roads and soil to those times and conditions when damaging amounts of erosion and sedimentation will not occur, or can otherwise be effectively controlled. Response to any developing road problems may include additional spot stone in the problem areas, other road maintenance such as grading and cleaning drainage structures, and sale shutdown until suitable conditions are obtained.	
Helicopter service landings will implement and follow all requirements of State regulations pertaining to protection against spills of hazardous substances, and response to accidental spills.	
All National Forest roads on which timber hauling may occur outside the normal operating season should be designed to a 4 season standard. New and reconstructed road design and resource protection measures should be determined by the resource conditions and site sensitivity identified during field investigation of the proposed road alignment. More sensitive sections should be constructed to a higher standard, and may include	

<p>such mitigation as additional surface stone, culverts and ditches, and rock armoring at culvert outfalls. More routine sections of the alignment may be constructed with less mitigation, but should still be designed to protect soil and water resources, and would utilize road surfacing with stone and the appropriate drainage control structures. Additional surface stone should be applied whenever problem areas start to develop, such as rutting of the road surface. All exposed soil should be revegetated to stabilize the soil and reduce erosion.</p>	
<p>Road maintenance or repair should occur as soon as possible and practical, when rutting or other road damage occurs as a result of the timber harvesting activities. This may include the placement of additional stone surfacing, grading, cleaning drainage structures, and other measures as necessary to protect the road, and minimize soil erosion and sedimentation.</p>	
<p>Road design and maintenance mitigation should include improved and additional drainage structures (dips and/or culverts), grading, spot surfacing with stone in the dips, wet spots and areas prone to rutting, and suspension of hauling when soils are too wet to support the truck traffic, as needed.</p>	
<p>In coordination and cooperation with the State, where possible implement some or all of the following road improvements on WV94/5 to reduce sediment delivery to Morris Creek: additional culverts for ditchline relief; increase the size of some existing road culverts (to reduce plugging); armor ditchlines with small rip-rap; gravel surfacing on portions of the road nearest headwater channels; and stabilize small gullies below the road at culvert discharge points.</p>	
<p>Temporary roads should be promptly closed and rehabilitated prior to final acceptance for the harvest units they serve. Rehabilitation actions could include all or a selection of the following: drainage dip installation (waterbars and dips), removal of structures such as culverts and temporary bridges, channel restoration at crossings, decompaction (ripping of primary skid roads), outsloping, and revegetation by seeding and mulching. Use of annual grasses for seeding is permissible. These measures would be required to help stabilize soil, disperse surface runoff, and reduce the potential for sediment and stormflow effects.</p>	
<p>Wildlife and Vegetation</p>	
<p>Leave all shagbark hickory, and den trees in all harvest units; retain all cull trees, and snags unless they pose a safety hazard.</p>	
<p>Leave all topwood and slash scattered throughout clearcuts.</p>	

Use bulldozer for clearing of wildlife openings from July 15 through October 15, unless clearing could be scheduled to avoid an additional period of soil disturbance.	
Planting and/or tubing of oak seedlings may be used to increase the number of mast producing species, if stocking surveys indicate little diversity. Blight resistant American chestnut trees or seeds may be planted, if available.	
Use native species in the seed mixes and use non-invasive, non-persistent species as temporary cover to revegetate disturbed areas, where possible. Relatively weed free mulch such as straw or coco fiber mats could be used in place of hay, where possible	
If butternut trees are found in any of the harvest units, they should not be removed unless a safety hazard	
Tree felling in all helicopter logging units would be prohibited during the period between and including April 1 and November 14, without further consultation with the USFWS.	
Public Safety, Recreation and Scenery	
A closure order would be issued to restrict public use of National Forest lands when helicopter flights are on-going.	
Signs and flaggers would be used to warn and/or stop traffic when helicopter flights are near open public roads.	
Road cut slopes would be revegetated where needed to eliminate the visual distraction of exposed soil and erosion.	
All sites described as being eligible to the NRHP or unevaluated, and which are near or adjacent to logging activities are marked and they would be avoided during all phases of project implementation. If tree felling occurs adjacent to these resources, either directional felling away from the site would be implemented, or a buffer comprising the height of the nearest possible fell, plus one-half, would be established.	
If additional cultural resources are encountered during project implementation, work in that portion of the project area would cease, and the Forest Archaeologist would be contacted.	
A prohibition on felling, conventional and helicopter skidding and hauling during the first week of WV deer gun hunting season will be included in the timber sale contract.	

ENVIRONMENTAL DOCUMENT/TIMBER SALE CONTRACT CERTIFICATION

Unit Specific Crosswalk							Unit Specific Mitigation or Management Requirements	
Unit # in EA/EIS/ Decision	Unit # in Contract	Acres in EA/EIS/ Decision		Harvest Rx in EA/EIS Decision	Harvest Rx in Contract	Location in EA/EIS/ Decision Matches Location in Contract? Y/N	Unit Specific Mitigation or Management Requirement from EA/EIS	Matching Contract Clause/ Responsible Official Signature
C48/S52		25		CC, 2Xvines SP			Restriction on number of units open at one time	
C48/S66		13		CC, vines SP				
C48/S57		23		CC, SP				
C62/S22		25		CC, SP				
C62/S52		23		CC, 2Xvines SP				
C62/S58 C62/S65		24		CC, 2Xvines SP				
C48/S21		18		SW,				
C48/S21		18		SWRem SP				
C62/S66 (S)		21		SW vines				
C62/S66 (S)		21		SWRem SP				
C62/S66 (N)		25		SW vines,				
C62/S66 (N)		25		SWRem SP				

Unit Specific Crosswalk							Unit Specific Mitigation or Management Requirements	
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62/5		20		STS				
62/5		31		STS				
62/15		30		STS				
48/57		10		WLSav w. Maint				
48/35		13		Thin				
48/37		13		Thin				
48/46		13		Thin				
48/52		63		Thin			Drop W. edge as shown on EA map; restriction on number of units open at one time; Harvest restricted to NOS only; Skid road closeout within 7 days of FS acceptance; emphasis on wet weather shutdown and temp waterbars; vertical rolling of skid roads; silt fence below fills along skid road stream crossings	
48/62		15		Thin			Restriction on number of units open at one time; Harvest restricted to NOS only; Skid road closeout within 7 days of FS acceptance; emphasis on wet weather shutdown and temp waterbars; vertical rolling of skid roads; silt fence below fills along skid road stream crossings	

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48/64		38		Thin			Restriction on number of units open at one time; Harvest restricted to NOS only; Skid road closeout within 7 days of FS acceptance; emphasis on wet weather shutdown and temp waterbars; vertical rolling of skid roads; silt fence below fills along skid road stream crossings	
48/66		9		Thin				
48/69		5		Thin				
48/70		11		Thin				
48/76		13		Thin				
48/77		23		Thin				
62/8		25		Thin			Drop W. side below FR913; Harvest restricted to NOS only; Skid road closeout within 7 days of FS acceptance; emphasis on wet weather shutdown and temp waterbars; vertical rolling of skid roads; silt fence below fills along skid road stream crossings	
62/11		35		Thin			Restriction on number of units open at one time; Harvest restricted to NOS only; Skid road closeout within 7 days of FS acceptance; emphasis on wet weather shutdown and temp waterbars; vertical rolling of skid roads; silt fence below fills	

Unit Specific Crosswalk							Unit Specific Mitigation or Management Requirements	
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							along skid road stream crossings	
62/18		12		Thin			Restriction on number of units open at one time	
62/20		10		Thin			Restriction on number of units open at one time	
62/58		8		Thin				
62/65		92		Thin				
62/66		38		Thin				
48/17		45		Thin			Helicopter logging	
48/18		29		Thin			Helicopter logging	
48/42		54		Thin			Helicopter logging	
48/43		23		Thin			Helicopter logging	
48/46		14		Thin			Helicopter logging	
48/52		7		Thin			Helicopter logging	
48/61		10		Thin			Helicopter logging	
48/65		6		Thin			Helicopter logging	
48/67		4		Thin			Helicopter logging	
48/71		67		Thin			Helicopter logging	
48/76		17		Thin			Helicopter logging	
48/87		34		Thin			Helicopter logging	
61/2		76		Thin			Helicopter logging	
61/9		74		Thin			Helicopter logging	

Unit Specific Crosswalk							Unit Specific Mitigation or Management Requirements	
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62/21		4		Thin			Helicopter logging	
62/22		14		Thin			Helicopter logging	
62/29		49		Thin			Helicopter logging	
62/30		23		Thin			Helicopter logging	
62/32		50		Thin			Helicopter logging	
62/37		21		Thin			Helicopter logging	
62/39		34		Thin			Helicopter logging	
62/40		15		Thin			Helicopter logging	
62/52		65		Thin			Helicopter logging	
62/58		8		Thin			Helicopter logging	
62/59		18		Thin			Helicopter logging	
62/60		10		Thin			Helicopter logging	
62/65		1		Thin			Helicopter logging	
62/66		66		Thin			Helicopter logging	
62/67		32		Thin			Helicopter logging	
62/68		16		Thin			Helicopter logging	
62/69		29		Thin			Helicopter logging	
62/70		17		Thin			Helicopter logging	
62/80		35		Thin			Helicopter logging	

I certify that the mitigation measures and management requirements from the Cherry River Environmental Document (EA/EIS) have been incorporated in to the _____ timber sale contract.

Responsible Official

DATE