



Missouri Department of Natural Resources

AGENDA

Missouri Soil and Water Districts Commission
Lincoln University
South Campus Conference Center
Lorenzo Greene Hall
900 Leslie Boulevard, Suite C
Jefferson City, Missouri 65101
October 30, 2013
9:00 a.m. to 1:00 p.m.

A. CALL TO ORDER

B. MINUTES OF THE PREVIOUS MEETING

1. August 14, 2013 Closed session
2. August 14, 2013 Open Session

C. MISSOURI DEPARTMENT OF NATURAL RESOURCES

1. Department Update
2. Nutrient Loss Reduction Strategy

D. SOIL AND WATER CONSERVATION PROGRAM DIRECTOR'S COMMENTS

1. FY14 Cost-Share/AgNPS SALT Fund Status
2. Supplemental Cost-Share Allocation
3. FY15 Cost-Share Needs Assessment
4. Health Insurance Update
5. Area Meeting Conservation Practices Summary
6. Pike SWCD Pilot Forestry Practice Update
7. Plan for the Future Subcommittees Updates
8. Our Missouri Waters Update
9. Missouri Association Soil and Water Conservation Districts 2012 Resolution

E. REQUESTS/REVIEW

1. Supervisor Appointments
(If a supervisor request is received in advance of meeting, it may be presented to the commission at that meeting.)
 - A. Washington Soil and Water Conservation District

F. REPORTS

1. University of Missouri
2. Department of Conservation
3. Department of Agriculture
4. Natural Resources Conservation Service
5. Missouri Association of Soil and Water Conservation Districts

G. PUBLIC COMMENTS

H. SUGGESTED DATE(S) OF NEXT MEETING(S)

Tentative meeting dates: December 16, 2013

I. Lincoln University South Campus Tour

J. ADJOURNMENT

Those wishing to address the commission on any of the above issues need to contact a program staff member, Christa Moody or sign up on the comment card at the commission meeting.

If you have any questions regarding this meeting, special accommodation needs, or would like a copy of any material provided at the commission meeting, please contact Christa Moody at 573-751-1172.

Soil & Water Districts Commission may go into closed session at this meeting if such action is approved by a majority vote of the commission members who constitute a quorum to discuss legal, confidential, or privileged matters under § 610.021(1), RSMo 2000; personnel actions under §610.021(3); personnel records or applications under §610.021(13), records under § 610.021(14), or audit issues under § 610.021(17), which are otherwise protected from disclosure by law.



SOUTH CAMPUS CONFERENCE CENTER

Lorenzo Greene Hall

900 Leslie Boulevard, Suite C, Jefferson City, MO 65101

Telephone: (573) 681-5206

DIRECTIONS TO SOUTH CAMPUS CONFERENCE CENTER

From Highway 54 East:

Take the Stadium Boulevard/Tanner Bridge Road exit. At the end, turn left onto Christy Drive. At the stop light, turn right onto Stadium Boulevard. Proceed past the high school stadium on the left. At the roundabout, turn right onto Leslie Boulevard. The next intersection is Leslie Boulevard and Chestnut Street (there is no stop light/sign). Lorenzo Greene Hall is the first building on the right with a sign displayed in front. A strip mall is located across the street. The South Campus Conference Center is in Suite C.

From Highway 54 West:

Take the Jefferson Street/Stadium Boulevard exit. At the end of the exit, turn right onto Jefferson Street. At the stop light, turn right onto Stadium Boulevard. Proceed past the high school stadium on the left. At the roundabout, turn right onto Leslie Boulevard. The next intersection is Leslie Boulevard and Chestnut Street (there is no stop light/sign). Lorenzo Greene Hall is the first building on the right with a sign displayed in front. A strip mall is located across the street. The South Campus Conference Center is in Suite C.

From Highway 50/63 Heading West:

Take the Clark Avenue exit. Turn left onto Clark Avenue. Clark Avenue turns into Moreau Drive. Proceed approximately 1 mile and turn right onto Leslie Boulevard. Proceed about ½ mile and Lorenzo Greene Hall is on the left before the intersection of Leslie Boulevard and Chestnut Street. If you reach the roundabout, please return to Leslie Boulevard and it is the first building on the right. The South Campus Conference Center is in Suite C.

From Highway 50/63 Heading East:

Take the Highway 50/63 exit (Lake of the Ozark/Fulton/Columbia), at the top, immediately turn right onto Highway 54 West exit (Lake Ozark). Proceed about ¾ of a mile and take the Jefferson Street exit. At the end of the exit, turn right onto Jefferson Street. At the stop light, turn right onto Stadium Boulevard. Proceed past the high school stadium on the left. At the roundabout, turn right onto Leslie Boulevard. The next intersection is Leslie Boulevard and Chestnut Street (there is no stop light/sign). Lorenzo Greene Hall is the first building on the right with a sign displayed in front. A strip mall is located across the street. The South Campus Conference Center is in Suite C.

LORENZO GREENE HALL SOUTH CAMPUS CONFERENCE CENTER MAP



South Campus Conference Center Map – building is indicated with the purple star



Missouri Department of Natural Resources

MINUTES

MISSOURI SOIL AND WATER DISTRICTS COMMISSION

Missouri State Fairgrounds

Lowell Mohler Assembly Hall/National Guard Armory

Room 129

Sedalia, Missouri

August 14, 2013

COMMISSION MEMBERS PRESENT: H. Ralph Gaw, Gary Vandiver, Thomas Bradley, and Richard Fordyce

EX-OFFICIO MEMBERS: Dr. JON HAGLER, DEPT. OF AGRICULTURE: Judy Grundler; BOB ZIEHMER, DEPT. OF CONSERVATION: Clint Dalbom; SARA PARKER PAULEY, DEPT. OF NATURAL RESOURCES: Robert Stout; DEAN THOMAS PAYNE, UNIVERSITY OF MISSOURI: David Baker

ADVISORY MEMBERS PRESENT: SOIL & WATER CONSERVATION PROGRAM: Colleen Meredith; ATTORNEY GENERAL'S OFFICE: Tim Duggan; NRCS: J.R. Flores; MASWCD: Kenny Lovelace

STAFF MEMBERS PRESENT: Christa Moody, James Plassmeyer, Ken Struempf, Bill Wilson, Colette Weckenborg, Theresa Mueller

OTHERS PRESENT: DISTRICTS: Gasconade: Diana Mayfield; Jefferson: George Engelbach; MISSOURI DEPARTMENT OF NATURAL RESOURCES: Kurt Boeckmann, Van Beydler; MISSOURI FARM BUREAU: Kelly Smith; MSWCDEA: Sandy Stratman; MASWCD: Beverly Dometrorch; OTHER: Mrs. Barbara Gaw, Mrs. Mary Bradley

A. CALL TO ORDER

Chairman Richard Fordyce called the meeting to order, in Sedalia, Missouri, at the Conference room at 1:36 p.m. H. Ralph Gaw, Thomas Bradley, Gary Vandiver and Richard Fordyce, were present, which made a quorum.

B. MINUTES OF THE PREVIOUS MEETING

1. June 28, 2013 Minutes

Thomas Bradley made a motion to approve the minutes of the June 28, 2013 Commission meeting. H. Ralph Gaw seconded the motion. When asked by the chair, Gary Vandiver, H. Ralph Gaw, Thomas Bradley, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

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2. July 15, 2013 Minutes

Gary Vandiver made a motion to approve the minutes of the July 15, 2013 meeting. Thomas Bradley seconded the motion. When asked by the chair, Gary Vandiver, H. Ralph Gaw, Thomas Bradley, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

C. CLOSED SESSION

Thomas Bradley made a motion to go into closed session at 1:39 p.m. pursuant to statute, Gary Vandiver seconded the motion. A poll vote was taken. H. Ralph Gaw, Gary Vandiver, Thomas Bradley and Richard Fordyce voted in favor of the motion. The Commission adjourned into closed session.

Richard Fordyce reconvened to open session at 2:10 p.m. Chairman Fordyce thanked Judy Grundler and other staff from Missouri Department of Agriculture for making arrangements to allow the Commission to meet during the State Fair.

H. Ralph Gaw stated that no formal actions were taken during the Closed Session. Mr. Gaw made a motion to absolve Mrs. Shirley Elliott from the obligation to pay back the Soil and Water Conservation Program the sum of \$2,850.13. Thomas Bradley seconded the motion. A poll vote was taken. Gary Vandiver, Thomas Bradley, H. Ralph Gaw and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

H. Ralph Gaw made a motion to prohibit Daniel and/or Harry Lehenbaur from participating in any Soil and Water Conservation Programs under the Soil and Water Districts Commission jurisdiction. Thomas Bradley seconded the motion. A poll vote was taken. Gary Vandiver, Thomas Bradley, H. Ralph Gaw, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

D. MISSOURI DEPARTMENT OF NATURAL RESOURCES

1. Department Update

Robert Stout presented information on the Missouri Department of Natural Resources efforts in watershed management planning, Our Missouri Waters. This has been a central priority of the department for the last year and a half. The goals of this effort are to look at each watershed in a holistic and systematic way, beginning with an analysis of its issues and challenges and to share information with all partners and stakeholders within the department, external agencies, and most critically with the citizens who live, work and recreate in the watershed. The citizens in each watershed will be able to identify their priorities, and these priorities will be used as a basis for prioritizing the department's resources to address the issues identified as most important.

This effort involves looking at the range of issues in the watershed, such as community water and wastewater infrastructure, water supply needs and point and nonpoint source pollution. The department is reaching out to everyone that has an interest in a watershed to participate in this process to help identify where resources need to be directed, and the agricultural sector is an important partner in the process. The Soil and Water Conservation Program is one of the resources that the department has to address priorities

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on agricultural lands in the watershed. The department appreciates the good working relationship with the Soil and Water Conservation Districts and that they can participate in this effort.

There are three summits this year, the first one was held in the Spring River, the second is on September 10th in Brunswick in the Lower Grand watershed, the final summit will be in the Big River watershed on October 9th.

Judy Grundler encouraged those in agriculture to participate in these summits.

Mr. Stout stressed that the Our Missouri Waters process will enable state and federal entities to work together with the same information and focus resources on the same priorities.

Richard Fordyce stated that the Soil and Water Conservation Program and the Soil and Water Districts have been focused on agricultural land and soil conservation which by its very nature creates improved water quality. Mr. Fordyce wanted to be sure that involving the Soil and Water Conservation Program would not include an expectation to change the scope of the program or the Commission and move away from the things that have made this program so popular and successful. Mr. Stout responded that we want bring information to the table and get the Commission's input and ideas to address issues and to share information in the watersheds.

E. MISSOURI ATTORNEY GENERAL'S OFFICE

Tim Duggan stated he has no updates.

F. SOIL AND WATER CONSERVATION PROGRAM DIRECTOR'S COMMENTS

1. FY14 Cost-Share/AgNPS SALT Fund Status

Ken Struempf presented the Fiscal Year (FY)14 Cost-Share and SALT fund status. As of August 12, 2013 there was \$24,916,948 allocated; \$7,289,362 obligated; and \$1,278,328 paid of the FY14 cost-share funds. The FY14 SALT cost-share, as of August 12, 2013, has \$1,090,557 allocated, \$315,762 obligated and \$22,921 paid. Currently there are 20 active projects across the state. The final projects and the AgNPS SALT program will be completed in 2015.

2. FY14 Cost-Share Fall Supplemental

Ken Struempf presented the proposed process and timeline for the FY14 cost-share supplemental allocations. Two supplemental allocations are proposed for this fall. Both supplemental allocations would be directed towards the Grazing Management, Irrigation Management, Sensitive Areas, Animal Waste Management, Sheet, Rill and Gully Erosion and Woodland Erosion resource concerns. Nutrient and Pest is not included because the time frame to approve applications is in April, so no additional funding is provided.

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The first supplemental would be based on the obligated plus pending totals on the Master Fund Status Report at the close of business on Tuesday, October 15, 2013.

The second supplemental would be based on obligated only at the close of business December 13, 2013.

Sandy Stratman asked if the program staff would look at district funds to possibly make the first supplemental earlier than October, for example Sheet / Rill and Gully for Maries Soil and Water Conservation District (SWCD) is currently all obligated. This could possibly help several districts to continue implementing conservation efforts. Colleen Meredith stated that the program staff did discuss a September date but the districts and landowners would have been unprepared for such an early supplemental, but the possibility of an earlier supplemental will be looked at for next year.

After discussion, Thomas Bradley made a motion to show support for the FY 14 Cost-Share Fall supplemental timeline. H. Ralph Gaw seconded the motion. Gary Vandiver, Thomas Bradley, H. Ralph Gaw and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

3. **FY13/14 Budget**

Colette Weckenborg presented the FY13/14 Budget update. The FY13 total budget for the program is \$51,955,440 with a total expended amount of \$44,103,164. Sixty-nine percent of the \$44,103,164, went to landowners and 31 percent was program and district administrative costs.

Ms. Weckenborg presented a chart from 2007 to 2013 showing the soils and water sales tax deposits versus total expenditures.

The FY14 Governor's recommended budget totals \$46,875,738. Of that amount it is projected that 64 percent will go to landowners and 36 percent will support program and district operations.

4. **Cooperative Working Agreements**

Colleen Meredith presented an update on the Cooperative Working Agreement. To date, all Soil and Water Districts have signed the Cooperative Working Agreement and submitted by the deadline. Ms. Meredith also wanted to thank all the districts for sending them in.

5. **Tech II Certification**

Colleen Meredith presented the Technician II (Tech II) Certification update. The Tech II Certification that is conducted by Lincoln University is currently being revised to include training in specific areas, along with the testing. It is projected to begin testing in November and the training in February. Training will include grazing and nutrient management, and in addition some of the skills that are needed for baseline certification will be incorporated in these trainings. Because of the addition of training and other components into the contract, it is taking

longer to finalize the contract. The baseline test is planned to be offered up to four times a year and the grazing and nutrient management test up to three times a year. The tests will be held in Jefferson City but the training sessions will be held regionally. The training will include field training and web-based modules.

6. Area Meetings

Colleen Meredith presented the Area Meetings update. There were eight Area meetings held around the state. Ms. Meredith listed the attendance at each area meeting and stated that Jim Plassmeyer would be presenting a report at a future Commission meeting on the compiled results from the Plan for the Future Practices Presentations. Richard Fordyce stated he attended two of the meeting and there were good discussions at each meeting. H. Ralph Gaw stated he attended three area meetings and was impressed with the people in attendance and their interest in soil conservation.

G. REQUESTS/REVIEWS

1. Supervisor Appointments

a. Douglas SWCD

Jim Plassmeyer presented the Douglas SWCD supervisor appointment. The Douglas SWCD board requested that Mr. Joel Norris be appointed to complete the unexpired term of Mr. Hollis D. Smith, who passed away. Mr. Norris and the board chairman have signed the Verification of Supervisors Eligibility form, verifying the candidate meets the qualifications to serve on the board.

Gary Vandiver made a motion to approve the appointment of Mr. Joel Norris to complete the unexpired term of Mr. Hollis D. Smith to the Douglas County SWCD Board of Supervisors. Thomas Bradley seconded the motion. When asked by the chair, H. Ralph Gaw, Thomas Bradley, Gary Vandiver, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

b. Howard SWCD

Jim Plassmeyer presented the Howard SWCD supervisor appointment. The Howard SWCD board would like to appoint Mr. Oran Boulden to complete the unexpired term of Mrs. Elizabeth Brown, who has resigned. Mr. Oran Boulden and the board chairman have signed the Verification of Supervisor Eligibility form, verifying the candidate meets the qualifications to serve on the board.

Chairman Fordyce commented that Liz Brown had previously served many years as chair of the Commission.

H. Ralph Gaw made a motion to approve the appointment of Mr. Oran Boulden to complete the unexpired term of Mrs. Elizabeth Brown to the

Howard County SWCD Board of Supervisors. Thomas Bradley seconded the motion. When asked by the chair, Gary Vandiver, Thomas Bradley, H. Ralph Gaw, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

2. Harrison SWCD Request for Variance on Reseedings

Jim Plassmeyer presented the Harrison SWCD request for variance on reseeding. The Harrison county SWCD Board requested a variance to provide cost-share assistance to James Robert and Joanne Cook for reseeding a DSL-01 Permanent Vegetative Cover Establishment practice.

The Harrison SWCD provided cost-share assistance to Mr. James Cook in the amount of \$5,486.59 on 42.3 acres that included two contracts (SGE 001-12-0002 and SGE 001-12-0003). James Robert and Joanne Cook (the new owners of the property) have requested permission to reseed the 42.3 acres in the two fields that were originally seeded in the Spring 2012. On July 17, 2013 the District Technician II and the Natural Resources Conservation Service staff confirmed the seeding was not adequate and required reseeding.

The Commission cost-share policy states: documentation of the failed seeding must be contained in the board meeting minutes within one year of the practice completion date. If the reseeding is approved, cost-share assistance cannot be approved for the lime and fertilizer components.

After discussion, Thomas Bradley made a motion to approve the Harrison SWCD board's request and allow cost-share assistance for the DSL-01 reseeding for both contracts in the amount of \$3,424.07. Gary Vandiver seconded the motion. H. Ralph Gaw, Gary Vandiver, Thomas Bradley, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

3. Pike SWCD Request to Develop a New Practice in the Woodland Erosion Resource Concern

Mr. Rick Merritt, a board member, presented the Pike SWCD request to develop a new practice in the Woodland Erosion Resource concern. Mr. Merritt shared a statewide concern about forestry; a third of Missouri is covered in forest land and the majority is owned by private landowners with little or no management. Pike SWCD has identified over 600 landowners with 40 acres or more of forest. These landowners were invited to a workshop with a 10 percent attendance. This workshop showed a large interest in forestry management in Pike SWCD. Mr. Merritt stated that Missouri has 15 million acres of forest with most owned by private landowners, and how do you reach that many landowners? One

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organization cannot do this project; it has to be a joint effort with all the partners. Missouri Department of Conservation owns five percent and the Missouri State Parks owns fifteen percent. Healthy woods will equal healthy soil and water.

Mr. Rick Merritt proposed that the Commission adopt a pilot practice for Forestry Management only in Pike SWCD. After discussion the Commission directed Mr. Merritt to develop a proposal to bring back at a future meeting.

H. REPORTS

1. University of Missouri

Mr. David Baker presented the report for the University of Missouri. Mr. Baker thanked the staff for being included at the area meetings. Mr. Baker stated that Extension is in the process of restructuring into seven administrative regions and developing a campus and off-campus staffing plan.

Mr. Baker stated Congress has not finalized a new Farm Bill or the FY14 USDA Budget. This has resulted in a lot of unknowns concerning funding for the states related to extension and research both at MU and Lincoln.

Mr. Baker also invited the Commission to attend the last three major field days sponsored by UMC. Mr. Baker reviewed the dates for the three remaining major field days.

Also, Mr. Baker stated they are in the process of setting up an in-service session for staff for cover crops.

2. Department of Conservation

Clint Dalbom presented the report for the Department of Conservation. Mr. Dalbom reported on flooding and damage at Missouri Department of Conservation fish hatcheries, upcoming public meetings on white tailed deer health (listed on the Conservation web page), dove hunting season, and feral hogs.

3. Department of Agriculture

Judy Grundler presented the report for the Department of Agriculture. Ms. Grundler reported on the Emerald Ash Borer survey to be completed the first week of September. At that time they will evaluate the results for any modifications to the quarantine areas which limit the movement of firewood out of these areas.

A survey was conducted this year on the Thousand Canker Disease of Black Walnut. There was no evidence found in Missouri of this disease.

Ms. Grundler also reported on Gypsy Moth, crop conditions, drought conditions, fire ants and recovery funding for flood damage.

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4. Natural Resources Conservation Services

J.R. Flores presented the Natural Resources Conservation Service's report. Mr. Flores reported on area meetings, Farm Bill update, Environmental Quality Incentives Program (EQIP), high tunnels, and the upcoming State Technical Committee meeting that was held on July 26, 2013, at the Bradford Farm.

Mr. Flores reviewed preliminary data from 2010 for the NRCS National Resources Inventory that is done every five years. Based upon preliminary data, Missouri's erosion rate shows a 7.6 percent increase in Missouri's erosion rate which is the first increase in 25 years. Prior to the soil and water sales tax the rate of erosion was 10.7 tons per acre in 1982 and after the tax it declined to 5.2 tons per acres per year. In 2007 it was 5.2 tons per acre, but it increased to 5.6 tons per acre by 2010. This could be due to more cropland acres being farmed. Mr. Flores said when they have more information, he would bring it back to the Commission.

5. Missouri Association of Soil and Water Conservation Districts

Kenny Lovelace presented the Missouri Association of Soil and Water Conservation Districts report. Kenny Lovelace thanked J.R. Flores for the kind comments he relayed at each Area meeting. Mr. Lovelace commented on Technician II certification, area meetings, cover crops, and training conference dates.

I. PUBLIC COMMENTS

Beverly Dometorch addressed the Commission asking about information on the health insurance. Colleen Meredith stated that the program office has received information from the insurance provider and when finalized will be sent to the districts. Ms. Dometorch also thanked Commissioner Gaw for his comments on education.

George Engelbach addressed the Commission about Jefferson SWCD watersheds concerns, pollinator meeting, warm season grasses, and terraces using dry hole structures as outlets.

Diana Mayfield from the Gasconade SWCD requested to present a Cooperative Conservation Partnership Initiative for Commission consideration. The Gasconade SWCD grant request for streambank protection was approved for a five year project and an estimated cost of \$200,000. Initially they had set a landowner limit of \$20,000; however, once actual projects had been surveyed and costs estimated, the district petitioned NRCS to revise the plan and raise the landowner limit to \$40,000. NRCS provided additional funds when available. The grant states that the SWCD and Missouri Department of Conservation (MDC) will try to provide either in-kind work or cost-share funding, if available, not-to-exceed the 75 percent threshold for cost-share. The grant is also contingent on EQIP funding availability.

In 2011, the district established their first project on the Bourbeuse River – 4th order stream. There was 1,076 cubic yards of rock rip-rap placed in 4 rock weirs and a rock blanket in between each weir. State average cost was \$76,611.20 at \$71.20 per cubic yard. The Landowner received \$40,000 from NRCS and \$5,000 from the SWCD

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The landowner actually spent \$61,290.55, which brings the percentage received to 73 percent.

In 2012 the district established two separate projects, the first being just a rock blanket on the Dry Fork Creek – 4th order stream. There was 235 cubic yards of rock rip-rap was placed in a rock blanket. The state average cost was \$12,784 at \$54.40 per cubic yard. The landowner received \$9,889.56 from NRCS which met the 75 percent cost-share maximum.

The third project was also on the Dry Fork Creek, again a 4th order stream. There was 1,750 cubic yards of rock rip-rap placed in 3 rock weirs and rock blanket to cover the bank. The state average cost was \$95,200 at \$54.40 per cubic yard. The landowner received \$71,615.40 from NRCS which met the 75 percent cost-share maximum. This landowner will be following up with a Riparian Forest Buffer.

The districts 4th and final project is finally designed and ready for financial planning. It is also a 4th order stream located on the Bourbeuse River. The state average cost is \$51.16 per cubic yard. The 75 percent rate is \$38.37 per cubic yard. The design calls for 1,400 cubic yards at 75 percent cost-share, totaling \$53,718. NRCS is contracting for \$40,000, leaving \$13,718.

The Streambank Stabilization Practice maximum is \$5,000. The district currently has \$15,000 in our Sensitive Area Resource Concern.

We are requesting a variance to provide this landowner with the additional funding of \$13,718 to meet the 75 percent cost-share. The landowner will be providing \$17,906 in out-of-pocket expenses, with this variance request; otherwise his costs would rise to \$26,624.

After discussion, H. Ralph Gaw made a motion to approve the variance, to exceed the \$5,000 limit, and to provide this landowner with the additional funding of \$13,718 to meet the 75 percent cost-share utilizing the \$15,000 in the Sensitive Area Resource Concern. Gary Vandiver seconded the motion. Thomas Bradley, Gary Vandiver, H. Ralph Gaw, and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

J. SUGGESTED MEETING DATE(S) FOR NEXT MEETING

The suggested Soil and Water Districts Commission meeting is October 30, 2013, in Jefferson City.

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ADJOURNMENT

H. Ralph Gaw made a motion to adjourn open session at 4:50 pm. Thomas Bradley seconded the motion. A poll vote was taken. Gary Vandiver, Thomas Bradley, H. Ralph Gaw and Richard Fordyce voted in favor of the motion and the motion carried unanimously.

Respectfully submitted,

Colleen Meredith, Director
Soil and Water Conservation Program

Approved by:

Richard Fordyce, Chairman
Missouri Soil and Water Districts Commission

/clm

DRAFT

Master Fund Status Summary

District	Allocated	Obligated	%Obligated	# Contracts	Contract Payment	% Contract Payment	# Contract Payments	Pending
FY: 2014 Fund Code:R Project:AWM - ANIMAL WASTE MANAGEMENT	\$920,000.00	\$266,654.80	28.98%	13	\$76,988.20	8.37%	3	\$46,861.00
FY: 2014 Fund Code:R Project:CC - COVER CROP	\$55,000.00	\$33,697.50	61.27%	23	\$0.00	0.00%	0	\$16,500.00
FY: 2014 Fund Code:R Project:GM - GRAZING MANAGEMENT	\$3,889,250.00	\$1,572,641.13	40.44%	610	\$261,078.26	6.71%	78	\$508,082.97
FY: 2014 Fund Code:R Project:IM - IRRIGATION MANAGEMENT	\$1,102,122.00	\$454,074.38	41.20%	127	\$168,570.48	15.30%	32	\$168,792.39
FY: 2014 Fund Code:R Project:NP - NUTRIENT & PEST MANAGEMENT	\$905,371.00	\$446,147.61	49.28%	489	\$0.00	0.00%	0	-\$1,591.00
FY: 2014 Fund Code:R Project:PM - PEST MANAGEMENT	\$0.00	\$0.00	0.00%	0	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:R Project:SA - SENSITIVE AREAS	\$2,177,788.00	\$462,854.14	21.25%	199	\$44,231.16	2.03%	46	\$213,022.38
FY: 2014 Fund Code:R Project:SGE - SHEET AND RILL / GULLY EROSION	\$18,187,167.80	\$9,186,639.31	50.51%	1954	\$3,661,205.77	20.13%	626	\$1,412,900.93
FY: 2014 Fund Code:R Project:WE - WOODLAND EROSION	\$1,322,363.00	\$383,257.73	28.98%	131	\$68,089.91	5.15%	17	\$71,129.62
Subtotal for R	\$28,559,061.80	\$12,805,966.60	44.84%	3546	\$4,280,163.78	14.99%	802	\$2,435,698.29
FY: 2014 Fund Code:SN Project:BDSP-31 - BUFFER SINKHOLE IMP	\$15,600.00	\$0.00	0.00%	0	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN083 - LOWER COLE CAMP								

Master Fund Status Summary

<u>District</u>	<u>Allocated</u>	<u>Obligated</u>	<u>%Obligated</u>	<u># Contracts</u>	<u>Contract Payment</u>	<u>% Contract Payment</u>	<u># Contract Payments</u>	<u>Pending</u>
	\$35,000.00	\$9,118.70	26.05%	8	\$3,145.50	8.99%	2	\$0.00
FY: 2014 Fund Code:SN Project:SN085 - GRAYS CREEK								
	\$44,770.00	\$40,714.25	90.94%	11	\$26,889.15	60.06%	4	\$0.00
FY: 2014 Fund Code:SN Project:SN086 - MIDDLE FORK SALT RIVER								
	\$49,000.00	\$29,250.61	59.70%	3	\$26,370.61	53.82%	2	\$0.00
FY: 2014 Fund Code:SN Project:SN087 - LOWER LOUTRE								
	\$33,500.00	\$4,803.93	14.34%	8	\$0.00	0.00%	0	\$17,689.04
FY: 2014 Fund Code:SN Project:SN088 - LITTLE MARIES CREEK								
	\$36,225.00	\$15,052.00	41.55%	5	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN089 - PEMISCOT CLAY ROOT								
	\$68,700.00	\$17,716.36	25.79%	10	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN090 - SALT FORK CREEK								
	\$57,000.00	\$35,159.91	61.68%	6	\$9,300.78	16.32%	1	\$5,082.66
FY: 2014 Fund Code:SN Project:SN091 - ST. JOHN'S BAYOU								
	\$54,000.00	\$7,855.78	14.55%	1	\$7,855.78	14.55%	1	\$0.00
FY: 2014 Fund Code:SN Project:SN093 - HURRICANE CREEK AND LITTLE WHITEWATER								
	\$74,000.00	\$17,717.26	23.94%	3	\$10,000.00	13.51%	1	\$0.00
FY: 2014 Fund Code:SN Project:SN094 - BYRD CREEK								
	\$21,700.00	\$10,684.43	49.24%	5	\$0.00	0.00%	0	\$1,295.57
FY: 2014 Fund Code:SN Project:SN095 - UPPER BIG CREEK								
	\$75,000.00	\$26,683.93	35.58%	23	\$0.00	0.00%	0	\$2,529.39
FY: 2014 Fund Code:SN Project:SN096 - CROWLEY'S RIDGE								

Master Fund Status Summary

<u>District</u>	<u>Allocated</u>	<u>Obligated</u>	<u>%Obligated</u>	<u># Contracts</u>	<u>Contract Payment</u>	<u>% Contract Payment</u>	<u># Contract Payments</u>	<u>Pending</u>
	\$44,655.00	\$7,856.77	17.59%	4	\$2,747.06	6.15%	1	\$2,271.69
FY: 2014 Fund Code:SN Project:SN097 - PEARSON CREEK								
	\$62,000.00	\$11,494.00	18.54%	8	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN098 - WARM FORK OF SPRING RIVER								
	\$51,450.00	\$4,469.00	8.69%	17	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN099 - HEATHS CREEK								
	\$66,505.00	\$9,980.96	15.01%	3	\$5,590.85	8.41%	1	\$2,913.62
FY: 2014 Fund Code:SN Project:SN100 - ELK FORK SALT RIVER & COON CREEK								
	\$37,300.00	\$0.00	0.00%	0	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN101 - CROOKED RIVER								
	\$70,000.00	\$50,471.21	72.10%	3	\$40,000.00	57.14%	2	\$0.00
FY: 2014 Fund Code:SN Project:SN102 - SOUTH WYACONDA								
	\$55,432.00	\$30,394.43	54.83%	4	\$13,718.47	24.75%	2	\$0.00
FY: 2014 Fund Code:SN Project:SN103 - LOWER HEADWATERS OF JAMES RIVER								
	\$73,740.00	\$24,993.38	33.89%	11	\$0.00	0.00%	0	\$0.00
FY: 2014 Fund Code:SN Project:SN104 - CLARK / WOLF CREEK								
	\$64,980.00	\$60,800.43	93.57%	4	\$47,202.83	72.64%	1	\$0.00
Subtotal for SN	\$1,090,557.00	\$415,217.34	38.07%	137	\$192,821.03	17.68%	18	\$31,781.97

Master Fund Status Summary

Master Fund Status Summary (2014)

Subtotal for R	\$28,559,061.80	\$12,805,966.60	44.84%	3546	\$4,280,163.78	14.99%	802	\$2,435,698.29
Subtotal for SN	\$1,090,557.00	\$415,217.34	38.07%	137	\$192,821.03	17.68%	18	\$31,781.97
Report Totals	\$29,649,618.80	\$13,221,183.94	44.59%	3683	\$4,472,984.81	15.09%	820	\$2,467,480.26



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

MEMORANDUM 2014-004

DATE: August 22, 2013

TO: All Soil and Water Conservation Districts

FROM:  Colleen Meredith, Director
Soil and Water Conservation Program

SUBJECT: Fiscal Year 2014 (FY14) Supplemental Allocations

At the August 14, 2013 Soil and Water Districts Commission (Commission) meeting, the Commission supported two supplemental allocations for the 2014 Fiscal Year (FY). Both supplemental allocations will provide funds in the following resource concerns; Grazing Management, Irrigation Management, Sensitive Areas, Animal Waste Management, Sheet/Rill and Gully Erosion and Woodland Erosion.

The first supplemental will be based on the Obligated plus Pending totals from the Missouri Soil and Water Information Management System (MoSWIMS) Master Fund Status Report, which will be generated at close of business on **Tuesday, October 15, 2013**. To be eligible for the supplemental funds in the above resource concern categories, districts must have 70 percent in Obligated plus Pending of the original FY14 allocation. An analysis of the data will be performed and allocations will be compiled and loaded into MoSWIMS as soon as possible after close of business on October 15th. An email will be sent to districts that allocations have been loaded and letters with the allocation amounts will follow.

The second supplemental will be based on Obligated totals only from the Master Fund Status generated at the close of business on **Friday, December 13, 2013**. To be eligible for the second supplemental allocation in any resource concern category, districts must have 80 percent of the funds obligated. As with the first supplemental, an analysis will be conducted and allocations compiled and loaded into MoSWIMS after the close of business on December 13th, with an email and letters to follow.

If you have any questions, please contact your district coordinator. Thank you.

CM:tm



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

October 22, 2013

Board of Supervisors

Conservation District

Dear Supervisors:

The Soil and Water Districts Commission at their August 14, 2013 meeting, concurred with the program to provide two supplemental allocations for Fiscal Year (FY) 2014. Districts that qualified for the first supplemental received an additional allocation for each resource concern, provided the obligated and pending contracts met or exceeded 70 percent of the original allocation for that resource concern, as of close of business on Friday, October 15, 2013.

All districts meeting the 70 percent threshold in a resource concern received at least the resource minimum established for the completion of one practice. A supplemental resource maximum allocation ensures that funding is available for as many districts as possible to move forward toward the goals defined by their local needs assessment. The following table provides the resource minimum and maximum allocations.

FY14 MID-YEAR SUPPLEMENTAL ALLOCATION

Resource Concern	Resource Minimum	Resource Maximum
Animal Waste	\$ 25,000.00	\$ 50,000.00
Grazing Management	\$ 10,000.00	\$ 25,000.00
Irrigation Management	\$ 10,000.00	\$ 20,000.00
Sensitive Areas	\$ 10,000.00	\$ 20,000.00
Sheet, Rill, & Gully	\$ 10,000.00	\$ 35,000.00
Woodland Erosion	\$ 10,000.00	\$ 20,000.00

Eighty soil and water conservation districts qualified for the mid-year supplemental allocation. This letter is to inform you that your district qualified for the first the supplemental allocation based on Obligated plus Pending cost-share funds as of Tuesday October 15, 2013. The following table shows the progress achieved by resource concern for your district.

County Soil and Water Conservation District		
Resource Concern	% Obligated + Pending	Mid-Year Supplemental Allocation
Animal Waste	0.00%	\$0.00
Grazing Management	70.66%	\$25,000.00
Irrigation Management	0.00%	\$0.00
Sensitive Areas	130.79%	\$20,000.00
Sheet, Rill, & Gully	99.97%	\$20,000.00
Woodland Erosion	21.49%	\$0.00
	Total:	\$65,000.00

The Soil and Water Districts Commission indicated that they will review the status of the district contracts at their meeting on October 30, 2013. The Commission may take further action due to the interruptions caused by the government shutdown. Districts are encouraged to continue to work toward the threshold of 70 % obligated plus pending prior to the Commission's consideration on October 30th.

The second FY14 Supplemental Allocation is planned for districts that are obligated at a minimum of 80 percent at the close of business on Friday, December 13, 2013. For additional information please see MEMO 2014-004 FY14 Supplemental Allocations.

If you have any questions, please contact your district coordinator. Thank you.

Sincerely,

SOIL & WATER CONSERVATION PROGRAM



Colleen Meredith
Director

CM/AF:clm



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

MEMORANDUM 2014-005

DATE: September 09, 2013

TO: All Soil and Water Conservation Districts

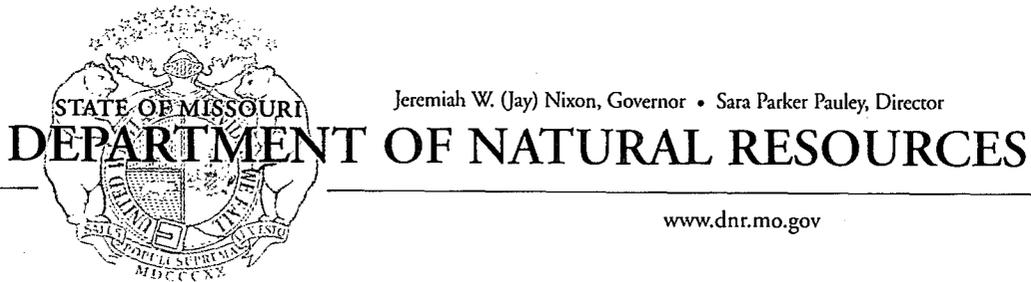
FROM: ^{BP} Colleen Meredith, Director
Soil and Water Conservation Program

SUBJECT: Fiscal Year 2015 Needs Assessment Process

To assist the Commission in allocating cost-share funds for fiscal year (FY) 2015, it is time for districts to update their Needs Assessments. The due date for submission of the Needs Assessments is November 1, 2013. A change has been made for submission of the narrative portion of the Needs Assessment in order to standardize the information and improve the process for submittal. To complete the Needs Assessment Narrative, a fillable form and instructions are located on the Intranet site. The board signed narrative will need to be submitted to your district coordinator by close of business November 1, 2013. This narrative should support the requested dollar amounts entered into the Needs Assessment in MoSWIMS.

Districts that determine their resource needs have not changed from FY14, can resubmit similar numbers for FY15. For district staff unfamiliar with the Needs Assessment process or those who would like a refresher, please reference the background information and narrative template located at <http://swcd.mo.gov/internal/needsassessment.htm>. District staff should validate the numbers in MoSWIMS to make certain it is an accurate reflection of the district's needs requests in the various resource concern areas.

The Needs Assessment Process requires both the narrative and entry into MoSWIMS to be complete. If you have questions or require assistance with the Needs Assessment process, please contact your district coordinator or Alan Freeman at alan.freeman@dnr.mo.gov or 573-751-1373. Thank you.



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

MEMORANDUM 2014-007

DATE: October 18, 2013

TO: All Soil and Water Conservation Districts

FROM:  Colleen Meredith, Director
Soil and Water Conservation Program

SUBJECT: Fiscal Year 2014 (FY14) Supplemental Cost-Share Allocation, Termination Date Extensions for Contracts Affected by the Government Shutdown, and Extension of FY15 Needs Assessment Deadline

FY14 Supplemental Cost-Share Allocation

Per memorandum 2014-004, districts with 70 percent Obligated plus Pending on the Master Fund Status Report in MoSWIMS, at close of business on October 15, 2013, were eligible for supplemental funds within each resource concern category which met the minimum requirements. The Soil and Water Conservation Program loaded supplemental cost-share allocations on October 17, 2013 into MoSWIMS. Many districts were above 90 percent obligated in multiple resource concern areas, therefore, the supplemental allocations were provided as planned to allow for continued planning and implementation of conservation practices.

The Soil and Water Districts Commission indicated that they will review the status of district contracts at the October 30, 2013 meeting, and may take further action due to interruptions caused by the government shutdown. Districts are encouraged to continue to work toward the threshold of 70 percent Obligated plus Pending prior to the Commission's consideration on October 30th.

Termination Date Extensions for Contracts Affected by the Government Shutdown

All contracts that have a termination date that expires during October 2013 may be extended administratively without signatures by the landowner and board, at the district's discretion. The district needs to work with their coordinator to have administrative change orders entered into MoSWIMS. Please be reminded that practices must be started before a termination date can be extended. A special note will be entered by program staff as these change orders are developed.

October 18, 2013
Memorandum 2014-007
Page two

FY15 Needs Assessment Deadline

The Needs Assessment deadline that was established in Memorandum 2014-005 has been moved from November 1, 2013 to November 25, 2013 to allow more time to gather the necessary information.

Thank you for your efforts and patience during the government shutdown. We appreciate the dedication shown by staff and boards in continuing to work as much as possible during this time. Please contact your coordinator if you have any questions.



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

MEMORANDUM 2014-006

DATE: September 18, 2013

TO: All Soil and Water Conservation Districts

FROM: ^{JB} Jim Boschert, Planner III
Soil and Water Conservation Program

SUBJECT: Calendar Year 2014 Health Insurance

For calendar year 2014 the Soil and Water Districts Commission will continue to provide health insurance grant allocations to soil and water conservation districts for select plans offered through Missouri Consolidated Health Care Plan (MCHCP). Soil and Water Conservation District Boards with employees that are employed for at least 1,000 hours from eligible funds, may participate in either the MCHCP PPO600 or the PPO1000 plan.

The cost of the PPO600 plan remains at \$601.08 per month for employee only coverage. The program will continue to provide \$560.08 per employee per month or \$6,720.96 per year to the district board in semi annual allotments.

The other health insurance option available to SWCD employees is the PPO1000. The cost of the PPO1000 plan is \$533.63 per month for employee only coverage. The program will provide \$492.63 per employee per month or \$5,911.56 per year to the district board in semi-annual allotments.

For calendar year 2014 both health insurance plans provided by the Soil and Water Conservation Program require a \$41.00 per month premium copay for district staff electing to participate.

As has been stated in previous years, management from MCHCP has strongly cautioned the program and asked us to inform the district supervisors to refrain from covering the cost of the district employee's portion of health care cost, due to increased utilization of the health insurance. Such an approach will serve to drive up the cost of health care for all the districts. If the district supervisors decide to pay the employee expenses, then the

Memo 2014-0006
September 18, 2013
Page two

health insurance monthly premiums will need to be renegotiated at a higher cost for all 114 districts.

MCHCP will provide information on open enrollment to the districts in the near future. Open enrollment for SWCD employees is October 7th – November 8th. Please remember if your district has employees that choose not to participate in the MCHCP health insurance plans offered, they will still need to complete the open enrollment forms and indicate that they do not wish to participate. For specific information regarding the PPO600 and the PPO1000 plans please refer to the MCHCP website at mchcp.org.

As was stated in the MCHCP letter dated July 24, 2013 to all districts, “MCHCP is working to ensure your medical plan benefits are compliant with the Affordable Care Act (ACA). The federal government provides resources at www.healthcare.gov to assist you and your employees.”

If you have any questions, please contact Jim Boschert at the Soil and Water Conservation Program, P.O. Box 176, Jefferson City, Missouri 65102-0176 or by phone at 573-522-3320. Thank you.



Adair County Soil & Water Conservation District
2410 S. Franklin St., Kirksville, MO 63501
Phone: (660) 665-3274 ext. 3
Fax: (660) 665-0266

RECEIVED

September 12, 2013

SEP 18 2013

Soil & Water Conservation Program
Attn: Soil & Water District Commission
P.O. Box 176
Jefferson City, MO 65102

BY: _____

Dear Commission:

We are writing this letter to ask the Commission to add the Warm Season Grass seeding component back to the Cost Share Component list. It is our understanding the component was excluded from the list due to the lack of use.

Our county is primarily a cool season grass area; however there has been an increased trend towards warm season grass in the last two years. We have only had two practices use warm season grass instead of cool season grass, but our drill has been used four times in the last year to plant native warm season grass.

After the drought we experienced during the last two years, we were able to witness the durability and sustainability of native warm season grasses and prairie forbes on an Adair County landowner's property. This landowner has been very active in educating landowners on the benefits of using warm season grasses vs. cool season grasses and implementing many stands of warm season grasses in the county and surrounding counties.

Normally, we have a climate to support cool season grasses and the county has had much success with it. However, we cannot dismiss the success we have seen with warm season grass during the last two years. Since Cost Share is a state wide program meant to help as many landowners as possible, we would like for the commission to add back the Cost Share components for warm season grasses. This would allow landowners more options of choosing seedings that would better meet their needs and future plans.

Sincerely,

Shawn Robertson, Chairman
Adair County Soil & Water Conservation District



Lawrence County
Soil and Water Conservation
District

10763G Highway 39
Mt. Vernon, MO 65712
Phone: 417-466-7682, Ext. 3

August 19, 2013

RECEIVED

AUG 20 2013

Soil and Water Conservation Districts Commission
P.O. Box 176
Jefferson City, MO 65102

BY: _____

Dear Commissioners,

We are in support of adding a warm season grass seeding component back to the cost-share component list.

Warm season grass plantings in our county have been declining over the past few years. We feel this may be a direct result of not having a reasonable component rate for planting warm season grass seed, which is considerably more expensive than its cool season counterpart.

Sincerely,
Lawrence Co. Soil and Water Conservation District

A handwritten signature in cursive script that reads "John Wheeler".

John Wheeler, Chairman

cc: Oregon Co. SWCD

Oregon County Soil & Water Conservation District

Rt. 2 Box 2924 Alton, MO 65606 (417-778-7561 Ext 3)

September 19, 2013

Department of Natural Resources
Soil and Water Program Office
PO Box 176
Jefferson City, MO 65102-0176

Dear Program Office,

The Oregon County Soil and Water Conservation District Board of Supervisors are sending this letter requesting an opportunity to be placed on the October 30, 2013 commission meeting agenda. We would like to speak to the Soil and Water Commissioners regarding the importance of the Warm Season Grass component(s) and why the component(s) should be added to the soil and water cost-share component list.

If you have any questions please feel free to contact our office at 417-778-7561 Ext. 3. We thank you for considering this request!

Sincerely,



Oregon County Soil and Water
Conservation District
Board of Supervisors



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

October 23, 2013

Board of Supervisors
Oregon County Soil and Water
Conservation District
Route 2 Box 2924
Alton, MO 65606

Dear Supervisors:

Thank you for your letter dated September 19, 2013, requesting individual warm season grass components for State Cost-Share. This request is for components in addition to the established grouped seeding components.

The Commission approved the use of grouped seeding components beginning in FY 2010 based upon Code of State Regulation 10 CSR 70-5.020(3) Funding Determination and Limits, which states, "*In the event that the landowner wishes to construct or implement practices over and above the size or scope determined by a qualified technician to be of minimum and necessary need for soil and water conservation, the board shall provide cost-share assistance on only that part of the practice necessary for soil and water conservation purposes*".

Currently landowners can choose any seed type or combination of seed types that meet Natural Resources Conservation Service Standards and Specifications for conservation practices which require seeding to control erosion. This enables landowners to select seeding mixtures that best fit the needs of their operation. Reimbursement for the seeding component of these practices is based upon the grouped seeding component price for that practice. Grouped seeding components were developed based on the minimum and necessary extents needed to control erosion. For example, the cost-share rate for Pasture Seeding is \$107.93 per acre, which is based on average costs for cool-season grass/legume seed, seedbed preparation, and seeding method (broadcast or no-till). At 75 percent cost-share, the landowner is eligible to receive \$80.95 per acre seeded. Landowners that choose a lower cost seed combination such as orchardgrass (\$1.88/lb.) and red clover (\$2.13/lb.) will receive a higher reimbursement rate for the seed portion of the grouped component than selection of smooth bromegrass (\$2.93/lb.) and alfalfa (\$4.12/lb.). Cool season grasses and legume costs were averaged to develop a seed cost in the component grouping because it is the least cost means to prevent erosion. Memorandum 2009-031 discusses the use of grouped seeding components in more detail.

There is a high level of interest for seeding warm season grasses as indicated in letters received from several soil and water conservation districts that are requesting a warm season grass component. Warm season grasses may be seeded by landowners currently through cost-share, but as stated above, the reimbursement is based on cool season grass and legume costs. To assist landowners with the additional costs of establishing native warm season grasses, the Missouri Department of Conservation (MDC) has funding available to provide incentives in addition to state cost-share funds. Landowners who include native warm season grasses in their seeding mixture could receive an additional MDC incentive ranging from \$50 to \$150 per acre. Please refer to Memorandum 2013-006 for detailed information on the MDC incentives available for seeding practices.

Although warm season grasses are not a specific cost-share component, landowners who choose to seed native warm season grasses in a pasture seeding could receive a total cost-share payment of \$130.95 to \$230.95 per acre by utilizing both state cost-share and MDC incentives for their warm season grass seeding.

The interest by districts for warm season grass and other components for cost-share practices that are not currently available was part of a presentation at the Area Meetings this summer and will be further considered as part of the Plan for the Future Conservation Practices Subcommittee.

Your suggestions to improve the program for landowners in your district are appreciated. Input from all districts is welcome and essential for developing future plans. If you have further questions, please contact your district coordinator, Jennifer Pellett, at the Department of Natural Resources, Southeast Regional Office, 2155 North Westwood Blvd, Poplar Bluff, MO 63901, or by phone at 573-840-9438. Thank you.

Sincerely,

SOIL AND WATER CONSERVATION PROGRAM



Colleen Meredith
Program Director

CM:dab

FOREST MANAGEMENT PLAN (106)

October 22, 2013

Property Information

Original Preparation Date: August 17th, 2012

New <u>X</u>	Update <u> </u>	Revision <u> </u>
<u>Owner's Name:</u>	<u>NRCS/FSA Farm Information:</u>	
<u>Address:</u>	Contract#:	
<u>Phone:</u>	Farm#:	
C:	Tract#:	
H:	Planned Acres: ~109.2	
<u>County:</u>	Unplanned Acres: ~144.3	
Pike	Total Acres: ~253.5	
<u>Location:</u>		
Township		
Range		
Sections		

Required Signatures

I certify that this FOREST MANAGEMENT Plan meets the requirements of the federal Forest Stewardship Program.

Plan Preparer

Date

I certify that this FOREST MANAGEMENT Plan meets the requirements of the federal Forest Stewardship Program.

Forestry Regional Supervisor

Date

I certify that this FOREST MANAGEMENT Plan meets the requirements of the USDA Environment Quality Incentives (EQIP) Program and/or the Quality Criteria for forest activity plans in Section III of the USDA NRCS Field Office Technical Guide.

Technical Service Provider

TSP Number

Date

I certify that this FOREST MANAGEMENT Plan meets the requirements of the USDA Environment Quality Incentives (EQIP) Program and/or the Quality Criteria for forest activity plans in Section III of the USDA NRCS Field Office Technical Guide.

District Conservationist

Date

I have reviewed this plan and approve its content.

Landowner

Date

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Attachments

- Soils Report – Forestland Productivity
- Forest Stand Improvement Job Sheet (JS-666)
- Crop Tree Management Information Sheet (IS-MO666ctm)

Location Map



Landowner Objectives

objectives are to manage this property in a manner that will protect and enhance the farm's natural resources.

Some of his current objectives are:

- Enhanced wildlife habitat for a wide range of species, particularly whitetail deer and turkey
- Become increasingly knowledgeable regarding the current structure of the forest and the possible management options for the forest
- Increased productivity of the existing forest for timber production
- Improve forest species composition over time by managing regeneration
- Protection and improvement of all natural resources

Forest Health and Protection

Your property and forests are valuable assets and should be protected from damaging forces if at all possible. Some of these forces include: wildfires, grazing, insect damage and diseases. Some common practices that could help improve your forest health might include fencing, fire lines and surveillance for insect and disease damage.

Boundaries - Well maintained boundaries are one of the easiest, yet most underutilized, means of protecting your property. By having a readily apparent boundary, you are assuring that inadvertent trespass and associated detrimental activities will be kept to a minimum. Two common and effective ways of maintaining one's boundary are by establishing a fence, or by using purple paint or signage to mark the perimeter of your property. All 3 methods, if installed properly, are legal boundary markers against trespass.

Wildfires - Fire can be a very useful tool in natural resource management, but it can also be one of the most harmful. This difference depends on your management objectives and the timing and intensity of the fire. Generally, it is a good idea to eliminate fire from your woods if you are managing the forest for timber production, as fire is likely to lower the timber value of your trees. A proactive approach to discouraging fire is to maintain fire lines and trails to prevent any unintended fire from reaching your woods.

Insects and Disease - Recently, there have been many instances of disease and insect outbreaks across the nation. Missouri is not immune to these afflictions. There are several different diseases and insects currently affecting Missouri's forest, with more sure to follow. These are, for the most part, natural occurrences and have occurred throughout history. However, there are several exotic or introduced agents that are currently of concern. It is important that you remain observant, especially during the growing season, for any type of unhealthy tendencies in your woods. Following is a list of common symptoms to be on the lookout for:

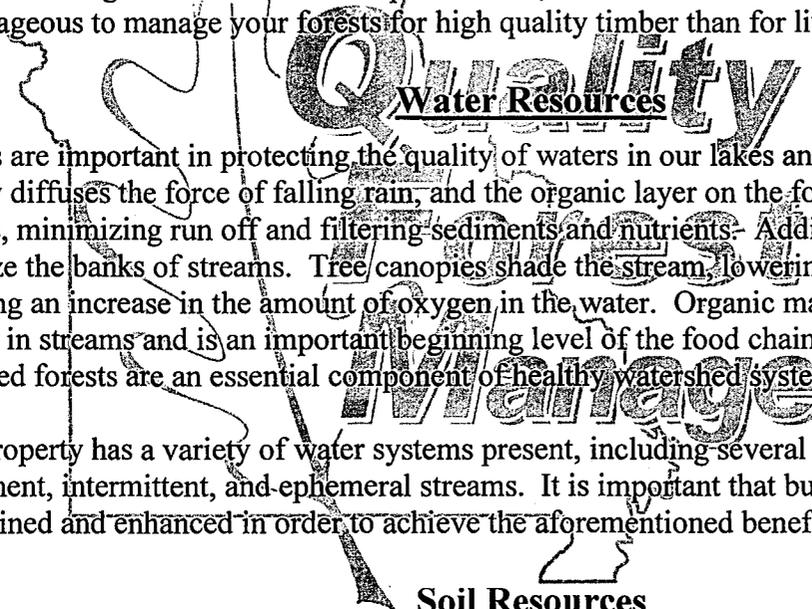
- Pockets of dead or dying trees
- Defoliation during the growing season
- Yellowing, browning, or wilting of a large portion of a tree's leaves

If you should happen to observe any of these symptoms, contact your Forester as soon as possible. Many times, it is too late for the trees that have already been affected; however, there may be steps that will prevent the further spread of an outbreak.

Remember that the best way to guard against insects and disease is to keep your woods healthy and vigorous through a regular regime of thinning and harvest to help remove poor quality and unhealthy trees that might serve as a host for these agents.

Livestock Grazing - Livestock grazing can significantly reduce your forest's ability to produce high quality timber. Grazing introduces considerable risk to existing trees in the form of soil compaction, stem damage, and increased erosion potential. Ninety percent of a tree's feeder roots lie in the upper 6 inches of soil. Soil compaction from grazing can eliminate the air space in the soil that these roots need, effectively suffocating them.

Studies have shown that in average situations, it would take 17 acres of woods to provide the equivalent forage benefit of 1 acre of pasture. So, from an economic standpoint it is much more advantageous to manage your forests for high quality timber than for livestock grazing.



Forests are important in protecting the quality of waters in our lakes and streams. A forest canopy diffuses the force of falling rain, and the organic layer on the forest floor acts as a natural sponge, minimizing run off and filtering sediments and nutrients. Additionally, tree roots help stabilize the banks of streams. Tree canopies shade the stream, lowering water temperature and allowing an increase in the amount of oxygen in the water. Organic matter from forests provides habitat in streams and is an important beginning level of the food chain. Therefore, properly managed forests are an essential component of healthy watershed systems.

This property has a variety of water systems present, including several ponds and a network of permanent, intermittent, and ephemeral streams. It is important that buffers along waterways be maintained and enhanced in order to achieve the aforementioned benefits.

Soil Resources

Soils are the foundation on which trees grow, so it is important to manage the right tree species on the correct soils. Doing so will lead to a healthier, more productive forest.

A soils map is provided and soils reports are also attached. Refer to your county soil survey for additional descriptions of the soils on your property. This can be obtained from your local USDA/NRCS office, or on the internet at soildatamart.nrcs.usda.gov.

Wildlife Resources

A healthy forest system comprises more than just timber production, it is also built around the complex interactions of other plant, animal, and insect species. A quality forest will provide habitat in which a wide variety of plants and animals can thrive. The forest components other than the trees must be considered before determining the proper management strategy for your forest. Most landowners are interested in a combination of objectives for their forest.

Fortunately, many of the tree species that are important in timber production are also very desirable for wildlife habitat. In the end, your specific management goals will be the guide for the ongoing management of your forest system.

Limited resources such as growing space, available sunlight, water, and nutrients determine the productivity of individual trees and the stand as a whole. All of the trees in a forest compete for these limited resources; therefore, it is important to remember that more trees are not always better. It is a common occurrence that a forest will experience greater overall wood and mast production after removing a portion of the trees than it would have with all of the original trees. It is important to determine which trees in the stand are desirable based on your management objectives so the undesirable trees can be removed. This thinning will free up resources for the remaining "crop" trees, making the stand more productive and allowing more sunlight to reach the forest floor. The extra water and nutrients now available, coupled with the increased light, will lead to a flush of ground-layer growth that can be beneficial to many types of wildlife. These areas of thick regeneration are not always considered aesthetically pleasing, however this stage offers more food and habitat opportunities than at any other time in the succession of a forest. For more information on wildlife management, refer to the Missouri Department of Conservation publication "Wildlife Management for Missouri Landowners," available upon request from your local MDC personnel.

Recreational and Aesthetic Resources

Practices that affect the timber and wildlife components of your property will also affect the recreational and aesthetic resources. It is important to realize that to maximize long term health and productivity of your forest and wildlife, there may be some short term sacrifices in what most individuals find to be aesthetically pleasing woods. Areas that have been recently thinned or harvested will have an abundance of "brushy" growth for the next 10-15 years. While this may not be the park-like setting some people associate with a healthy forest, it provides excellent cover and forage opportunities for wildlife. Additionally this "brush" will contain the seedlings and saplings that will become the forest for the next generation.

Threatened and Endangered Species

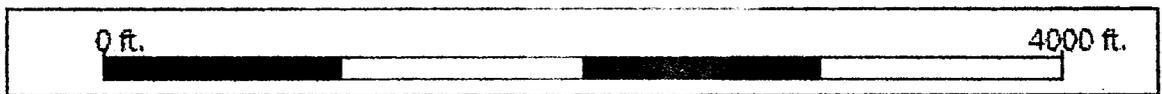
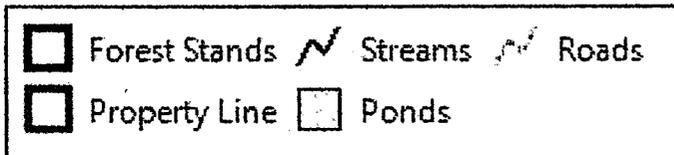
There were no threatened or endangered species recorded on this property, as identified by the NRCS Heritage Database. If threatened or endangered species are found, it would be advisable to alter your management practices to favor these species.

One endangered species that can be present in Missouri forests between April 1 and September 30 is the Indiana bat. These bats will roost under the loose bark of dead trees as well as under the shaggy bark of hickories. Avoid destroying potential habitat during the period stated above. Harvesting or cutting trees greater than 9" DBH must be limited to before April 1 or after September 30 to ensure the protection of this species.

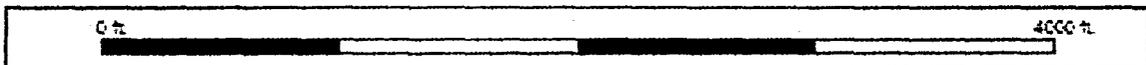
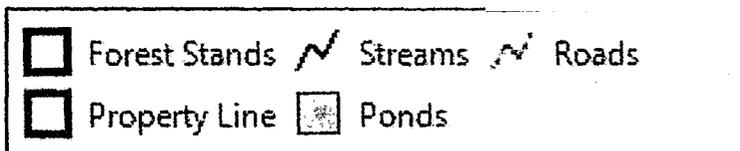
Archeological, Cultural, and Historical Sites

There are no known archeological, cultural or historical sites on this property.

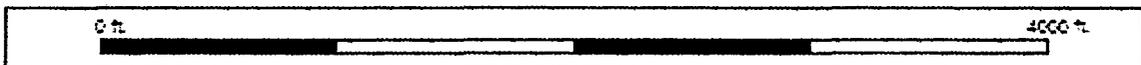
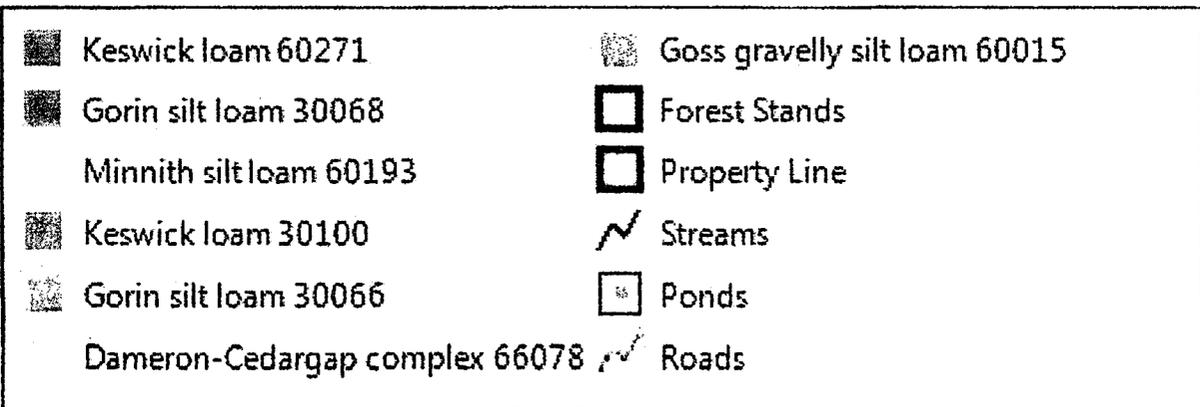
Conservation Plan: Forest Stand Map



Conservation Plan: Forest Acres Map



Conservation Plan: Forest Soils Map



Timber Stand Information

All Stands

1. Different tree species like ash and oaks are dead and dying from unknown causes. Contact the state plant pathologist to conduct a site visit to identify why trees are dying.
2. In conjunction with the practices referenced for the property, edge feathering could be performed in all of the stands bordering open ground on the property (NRCS Practice Code 645). This practice creates a thick, "brushy" strip between wooded areas and open areas. This practice is designed to create habitat for small game species such as rabbit and quail (See attached job sheet).
3. There are areas where grape vines are becoming a problem by covering tree canopies. While conducting forest management activities, it would be beneficial to crop trees to have the grape vines cut and chemically treated. Grape vines may be left in less desirable trees, as they provide valuable soft mast in the canopy layer for migrating song birds and other wildlife.
4. During the site visit, multiple pairs of wood ducks were seen on the property. It would be advisable to retain cavity/den trees for wood duck nesting habitat in stands in or bordering the river floodplain.
5. Multiflora rose, prickly ash, and buckbrush are common throughout the property. These species are not terribly thick in any one area, but can become so. It may be beneficial to remove these species via foliar chemical application or cutting.
6. Several management recommendations suggest reducing the Basal Area to below B-level stocking. While B-level is the generally accepted level to reduce a stand to during a non-commercial thinning, reducing the Basal Area further will result in a more open stand, with more brushy new growth and fewer undesirable stems. In some situations, such as glade, savanna, or open woodland management, the desired ecosystem requires reducing the Basal Area to sometimes well below B-level stocking.

Stand 1, 8.5 ac

Sample Plots: 4

<i>Slope:</i>	5-10%		BA/ac.	TPA	Avg. DBH		B-Level	C-Level	
<i>Aspect:</i>	E		<i>Total:</i>	70.0	863	3.9	<i>Stocking %:</i>	55	33
<i>Site Index:</i>	58		<i>AGS:</i>	22.5	82	7.1	<i>BA/ac.:</i>	55.3	42.1
<i>Stocking %:</i>	78		<i>UGS:</i>	25.0	770	2.4	<i>TPA:</i>	495	161
<i>Merch. Vol./ac.:</i>	2,317 bd-ft		<i>Mature:</i>	17.5	0	0.0	<i>Avg. DBH:</i>	4.5	6.9
<i>Merch. TPA:</i>	19		<i>Cull:</i>	5.0	3	17.5			
<i>Merch. BA/ac.:</i>	33		<i>Cavity:</i>	0.0	--	--			
			<i>Snag:</i>	0.0	--	--			
<i>Top 5 spp. by BA:</i>		Oak-White (12.5), Elm-American (12.5), Hickory-Shagbark (10.0), Oak-Black (7.5), Walnut-Black (7.5)							
<i>Top 5 spp. by TPA:</i>		Elm-American (573), Hickory-Shagbark (127), Redbud (57), Oak-White (39), Ash-Green (31)							

Management Focus:

1) Thin stand for aesthetics 2) Manage overstory for mature trees for hard mast production for wildlife and aesthetics

Soils and Topography:

- Gorin silt loam, 5 to 9 percent slopes, eroded
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 58

Description of Management Unit Condition:

- *Overstory:* Composed of scattered large saw-log black oak and shingle oak with small saw log shingle oak, white oak, walnut, and hickory
- *Understory:* Open, with sapling to pole sized ash, elm, hickory and redbud. Grape vine is a problem.
- *Regeneration:* Poor, with little good oak regeneration, mainly undesirable elm and ash
- *Dominant Size Class:* Large saw log
- *Invasive Species:* None noted
- *Accessibility:* Good, due to the proximity of the landowner's house, pasture and forest trails
- *Past Use:* Grazed/harvested forest
- *Current Use:* Grazed timber, with planned fencing to manage for aesthetics and wildlife habitat

Management Recommendations:

- *Primary Recommendation:* Light FSI-remove 25sqft of BA. Focus on removing elm and ash, while managing for oak, hickory and walnut.
- *Alternative Option:* Leave this stand to naturally mature at this time, do not fence out livestock. Re-evaluate this area in 10 years.

Observations/Comments:

Fencing out livestock is pertinent in conducting forest management practices. After fencing is complete, conduct a light FSI to remove undesirable elm and ash. Try to eliminate grapevine from the stand. Focus on thinning the understory to create an open, park like forest for aesthetics. Focus forest management activities on a mixed oak, hickory, and walnut overstory.

Stand 2, 9.7 ac.

Sample Plots: 3

		BA/ac.	TPA	Avg. DBH	B-Level	C-Level		
Slope:	5-12%							
Aspect:	SE	Total:	105.0	607	5.6	Stocking %:	56	40
Site Index:	58	AGS:	65.0	81	12.1	BA/ac.:	76.4	57.5
Stocking %:	98	UGS:	20.0	493	2.7	TPA:	95	62
Merch. Vol./ac.:	5,163 bd-ft	Mature:	10.0	0	0.0	Avg. DBH:	12.1	13.0
Merch. TPA:	40	Cull:	10.0	29	8.0			
Merch. BA/ac.:	65	Cavity:	0.0	--	--			
		Snag:	0.0	--	--			
Top 5 spp. by BA:		Hickory-Shagbark (25.0), Oak-Northern Red (20.0), Oak-Bur (15.0), Walnut-Black (10.0), Hackberry (10.0)						
Top 5 spp. by TPA:		Hackberry (458), Hickory-Shagbark (39), Mulberry-Red (25), Oak-Shingle (25), Oak-Bur (21)						

Management Focus:

1) Manage for timber production focusing on walnut and mixed oak 2) Manage for wildlife habitat through hard mast production and good, thick regenerating understory for cover

Soils and Topography:

- Gorin silt loam, 5 to 9 percent slopes, eroded
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 58

Description of Management Unit Condition:

- **Overstory:** Composed of small saw log hickory, red oak, bur oak, hackberry and walnut
- **Understory:** Open, with sapling to pole size hackberry and hickory
- **Regeneration:** Moderate, with some mixed oak trees sprouting
- **Dominant Size Class:** Small saw log
- **Invasive Species:** None noted
- **Accessibility:** Good, due to forest trails and pasture access
- **Past Use:** Grazed/ harvested forest
- **Current Use:** Grazed timber, with planned fencing to manage for timber production and wildlife habitat

Management Recommendations:

- **Primary Recommendation:** Light FSI-remove 20sqft/ac of BA. Focus on removing hackberry, elm, ash, and thinning culls and suppressed trees. Manage for oak, hickory and walnut. Re-evaluate this stand in 5 years to identify if a harvest is needed.
- **Alternative Option:** Leave this stand to naturally mature at this time, do not fence out livestock. Re-evaluate this area in 10 years.

Observations/Comments:

Stand 2 is growing good quality oak and walnut trees. The stand can be harvested now, but it is recommended that a light FSI be conducted first. The goal of this treatment is to manage for regeneration of good trees rather than undesirable trees. By removing undesirable (hackberry) trees, cull trees and suppressed trees the canopy is opened up and regeneration is managed (favoring oaks and walnuts). After the FSI good regeneration should begin to take place and create a thick understory. Re-evaluate this stand 5 years from time of FSI completion to determine if regeneration has advanced. If so, harvest this stand. Goal BA in this stand is 70.0sqft/ac.

Stand 3, 19.8 ac.

Sample Plots: 5

		BA/ac.	TPA	Avg. DBH	B-Level	C-Level
Slope:	0-3%					
Aspect:	Flat					
Site Index:	72					
Stocking %:	80					
Merch. Vol./ac.:	4,922 bd-ft					
Merch. TPA:	35					
Merch. BA/ac.:	60					
		<i>Total:</i>	88.0	444	6.0	
		<i>AGS:</i>	40.0	35	14.5	
		<i>UGS:</i>	26.0	403	3.4	
		<i>Mature:</i>	16.0	0	0.0	
		<i>Cull:</i>	6.0	1	33.2	
		<i>Cavity:</i>	0.0	--	--	
		<i>Snag:</i>	0.0	--	--	
		<i>Stocking %:</i>			56	40
		<i>BA/ac.:</i>			70.2	58.0
		<i>TPA:</i>			218	63
		<i>Avg. DBH:</i>			7.7	13.0
<i>Top 5 spp. by BA:</i>		Hackberry (40.0), Sycamore (20.0), Walnut-Black (10.0), Elm-American (8.0), Maple-Sugar (4.0)				
<i>Top 5 spp. by TPA:</i>		Hackberry (402), Elm-American (21), Sycamore (6), Maple-Sugar (6), Walnut-Black (6)				

Management Focus:

1) Manage for walnut timber production - 2) Maintain a riparian buffer for uptake of stream pollutants from livestock and stream bank stabilization

Soils and Topography:

- Dameron - Cedargap complex, 0 to 3 percent slopes, occasionally flooded
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 72

Description of Management Unit Condition:

- *Overstory:* Composed of small saw log walnut and hackberry with scattered large saw log sycamore
- *Understory:* Open, with sapling to pole size sugar maple, hackberry, elm and scattered buckeye
- *Regeneration:* Poor, mainly undesirable trees growing due to occasional flooding and shaded overstory
- *Dominant Size Class:* Small saw log
- *Invasive Species:* None noted
- *Accessibility:* Moderate, with good access from the west side of the stand but a stream cuts off the east side of the stand (foot traffic only)
- *Past Use:* Harvested forest (40+ years ago)
- *Current Use:* Forest for timber production and riparian buffer

Management Recommendations:

- *Primary Recommendation:* Light FSI: Prune and Release on walnuts - Maintain at least 48 crop trees/ac. Prune crop trees up to at least 16ft.
- *Alternative Option:* Leave this stand to naturally mature at this time. Re-evaluate this area in 10 years.

Observations/Comments:

This bottomland stand is stocked with good quality walnut trees. A light FSI is recommended on this stand. Conduct a crop tree release with pruning (prune and release) to reduce competition providing walnut trees with more room to grow. Release walnut trees on at least three sides. Allowing at least 10 ft of open sky between crowns. Crop trees should then be pruned up to at least 16ft. When FSI is complete, crop trees will be spaced 30' X 30' apart. Crop trees will benefit from a prune and release by growing faster, healthier and straighter while becoming more valued in the future. For more information see attached crop tree release information sheet and FSI JS666.

Stand 4, 35.0 ac.

Sample Plots: 6

<i>Slope:</i>	0-14%	BA/ac.	TPA	Avg. DBH	B-Level	C-Level		
<i>Aspect:</i>	S	<i>Total:</i>	100.0	811	4.8	<i>Stocking %:</i>	56	38
<i>Site Index:</i>	56	<i>AGS:</i>	56.7	79	11.5	<i>BA/ac.:</i>	69.0	54.9
<i>Stocking %:</i>	101	<i>UGS:</i>	30.0	708	2.8	<i>TPA:</i>	255	75
<i>Merch. Vol./ac.:</i>	3,469 bd-ft	<i>Mature:</i>	3.3	0	0.0	<i>Avg. DBH:</i>	7.0	11.6
<i>Merch. TPA:</i>	37	<i>Cull:</i>	10.0	22	9.1			
<i>Merch. BA/ac.:</i>	52	<i>Cavity:</i>	0.0	--	--			
		<i>Snag:</i>	0.0	--	--			
<hr/>								
<i>Top 5 spp. by BA:</i>	Oak-White (33.3), Hickory-Shagbark (23.3), Oak-Black (6.7), Maple-Sugar (6.7), Oak-Northern Red (6.7)							
<i>Top 5 spp. by TPA:</i>	Hickory-Shagbark (301), Oak-Shingle (153), Oak-White (110), Maple-Sugar (90), Elm-American (84)							

Management Focus:

1) Manage for timber production focusing on mixed oak and hickory 2) Manage for wildlife cover and hard mast producing trees

Soils and Topography:

- Keswick loam, 9 to 14 percent slopes
- Keswick loam, 5 to 9 percent slopes, eroded
- Dameron - Cedargap complex, 0 to 3 percent slopes, occasionally flooded
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 56

Description of Management Unit Condition:

- *Overstory:* Composed of small saw log white oak, black oak, red oak and hickory
- *Understory:* Open, with sapling to pole size sugar maple and elm
- *Regeneration:* Poor, with mainly undesirable sugar maple and elm sprouting
- *Dominant Size Class:* Small saw log
- *Invasive Species:* None noted
- *Accessibility:* Good, due to pasture access
- *Past Use:* Grazed/ harvested forest
- *Current Use:* Grazed timber, with planned fencing to manage for timber production and wildlife habitat

Management Recommendations:

- *Primary Recommendation:* Medium FSI-remove 31sqft/ac of BA. Focus on removing maple, elm, thin culls and suppressed trees. Manage for oak and hickory. Goal BA/ac is 69.0sqft/ac
- *Alternative Option:* Leave this stand to naturally mature at this time, do not fence out livestock. Re-evaluate this area in 10 years.

Observations/Comments:

Stand 4 has some very good quality mixed oak species present. Fencing out livestock is pertinent for timber and wildlife goals. After fencing is complete, conduct a medium FSI. FSI should focus on removing undesirable trees like maple and elm, thinning cull trees and suppressed trees. After undesirable, cull trees and suppressed trees are removed and/or thinned focus on good crop tree spacing. When the FSI treatment is complete, the stand should be stocked with well spaced mixed oak and hickory trees. Crop trees will have more resources to utilize and room to grow. Natural regeneration of oaks and hickory trees will begin to occur with the increased amount of sunlight in the stand. For more information on FSI, see attached FSI JS666.

Stand 5, 7.3 ac.

Sample Plots: 3

		BA/ac.	TPA	Avg. DBH	B-Level	C-Level
Slope:	5-12%					
Aspect:	N					
Site Index:	55					
Stocking %:	82					
Merch. Vol./ac.:	4,062 bd-ft					
Merch. TPA:	32					
Merch. BA/ac.:	53					
		Total:	90.0	436	6.2	
		AGS:	33.3	33	13.6	
		UGS:	23.3	376	3.4	
		Mature:	26.7	0	0.0	
		Cull:	6.7	16	8.8	
		Cavity:	0.0	--	--	
		Snag:	0.0	--	--	
					Stocking %:	56
					BA/ac.:	60.1
					TPA:	56
					Avg. DBH:	14.0

Top 5 spp. by BA: Oak-White (36.7), Hickory-Shagbark (20.0), Oak-Northern Red (10.0), Ironwood (6.7), Oak-Shingle (3.3)

Top 5 spp. by TPA: Ironwood (306), Hickory-Shagbark (53), Oak-White (18), Redcedar-Eastern (17), Oak-Shingle (17)

Management Focus:

1) Manage for timber production focusing on mixed oak and hickory 2) Manage for wildlife cover and hard mast producing trees

Soils and Topography:

- Keswick loam, 5 to 9 percent slopes, eroded
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 55

Description of Management Unit Condition:

- **Overstory:** Composed of small-saw log white-oak, shingle-oak, red-oak and hickory
- **Understory:** Thicker, with sapling sized ironwood
- **Regeneration:** Poor, with mainly undesirable ironwood growing
- **Dominant Size Class:** Small saw log
- **Invasive Species:** None noted
- **Accessibility:** Good, due to pasture access and good forest trails
- **Past Use:** Grazed/ harvested forest
- **Current Use:** Grazed-timber, with planned-fencing to manage for timber production and wildlife habitat

Management Recommendations:

- **Primary Recommendation:** Light FSI-remove 20sqft/ac of BA. Focus on removing ironwood, cedar, thin culls and suppressed trees. Manage for oak and hickory.
- **Alternative Option:** Leave this stand to naturally mature at this time, do not fence out livestock. Re-evaluate this area in 10 years.

Observations/Comments:

Fencing out livestock is pertinent for timber and wildlife goals. After fencing is complete, conduct a light FSI. The FSI should focus on removing ironwood, cedar and thinning cull trees. Once the FSI treatment is complete, the stand will be left with a more open understory for good oak and hickory regeneration to take place. Monitor the stand over the years following the FSI to identify if a commercial oak thinning is needed. For more information on FSI, see attached FSI JS666.

Stand 6, 10.3 ac.

Sample Plots: 3

		BA/ac.	TPA	Avg. DBH	B-Level	C-Level
Slope:	5-12%					
Aspect:	S					
Site Index:	55					
Stocking %:	57					
Merch. Vol./ac.:	2,455 bd-ft					
Merch. TPA:	29					
Merch. BA/ac.:	40					
		Total:	63.3	207	7.5	
		AGS:	30.0	25	14.8	
		UGS:	20.0	165	4.7	
		Mature:	3.3	0	0.0	
		Cull:	10.0	16	10.7	
		Cavity:	0.0	--	--	
		Snag:	0.0	--	--	
Top 5 spp. by BA:		Hickory-Bitternut (20.0), Walnut-Black (10.0), Hackberry (10.0), Oak-Northern Red (6.7), Elm-American (6.7)				
Top 5 spp. by TPA:		Hickory-Bitternut (161), Hackberry (13), Elm-American (13), Walnut-Black (9), Hickory-Shagbark (6)				

Management Focus:

1) Manage for timber production focusing on red oak and walnut 2) Manage for hard mast production for wildlife food

Soils and Topography:

- Keswick loam, 5 to 9 percent slopes, eroded
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 55

Description of Management Unit Condition:

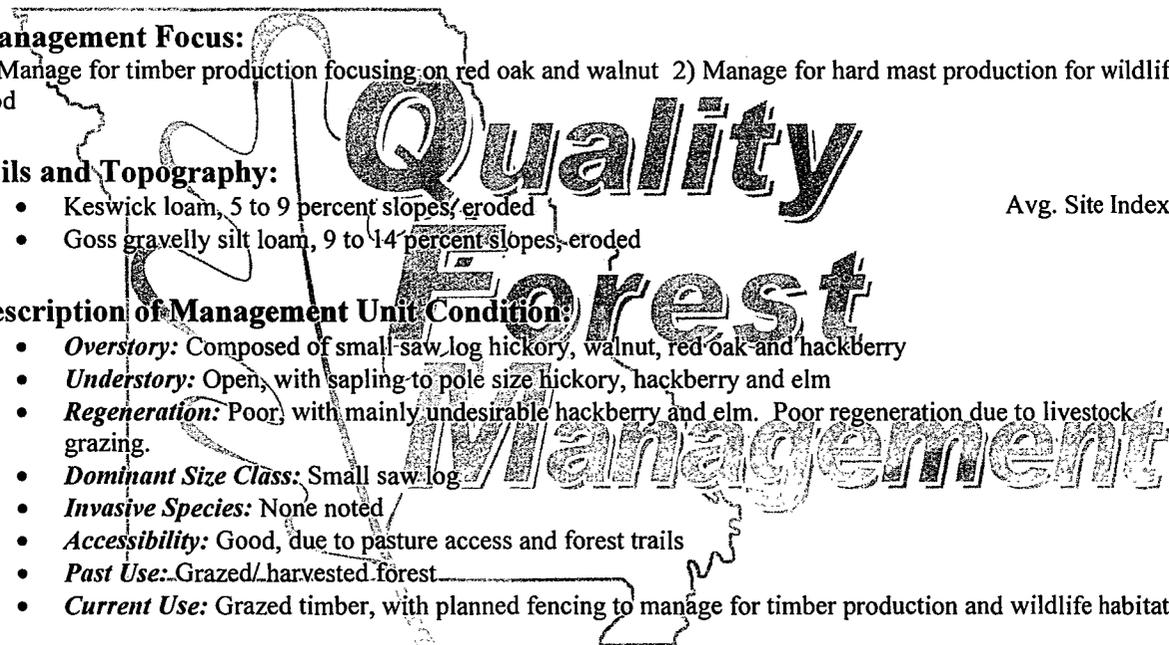
- **Overstory:** Composed of small saw log hickory, walnut, red oak and hackberry
- **Understory:** Open, with sapling to pole size hickory, hackberry and elm
- **Regeneration:** Poor, with mainly undesirable hackberry and elm. Poor regeneration due to livestock grazing.
- **Dominant Size Class:** Small saw log
- **Invasive Species:** None noted
- **Accessibility:** Good, due to pasture access and forest trails
- **Past Use:** Grazed/harvested forest
- **Current Use:** Grazed timber, with planned fencing to manage for timber production and wildlife habitat

Management Recommendations:

- **Primary Recommendation:** Leave- no management is needed at this time

Observations/Comments:

Leave no management is needed at this time. Stand is currently at B-level. Re-evaluate stand in 10 years



Stand 7, 4.4 ac.

Sample Plots: 3

		BA/ac.	TPA	Avg. DBH		B-Level	C-Level
Slope:	2-12%						
Aspect:	W						
Site Index:	58						
Stocking %:	87						
Merch. Vol./ac.:	3,634 bd-ft						
Merch. TPA:	34						
Merch. BA/ac.:	50						
		Total:	86.7	591	5.2		
		AGS:	43.3	40	14.1	Stocking %:	57
		UGS:	33.3	547	3.3	BA/ac.:	66.0
		Mature:	10.0	0	0.0	TPA:	72
		Cull:	0.0	--	--	Avg. DBH:	7.0
		Cavity:	0.0	--	--		11.9
		Snag:	0.0	--	--		
Top 5 spp. by BA:	Oak-White (33.3), Elm-American (13.3), Oak-Northern Red (13.3), Redbud (10.0), Hackberry (10.0)						
Top 5 spp. by TPA:	Elm-American (382), Redbud (115), Hackberry (51), Oak-White (32), Oak-Northern Red (5)						

Management Focus:

1) Manage for timber production focusing on white oak and red oak 2) Manage for hard mast production for wildlife food

Soils and Topography:

- Keswick loam, 9 to 14 percent slopes
- Gorin silt loam, 2 to 5 percent slopes
- Goss gravelly silt loam, 9 to 14 percent slopes, eroded

Avg. Site Index: 58

Description of Management Unit Condition:

- **Overstory:** Composed of small-saw log white oak, red oak and hackberry
- **Understory:** Open, with sapling to pole size elm, hackberry and redbud
- **Regeneration:** Moderate, with some good oak regeneration
- **Dominant Size Class:** Small saw-log
- **Invasive Species:** None noted
- **Accessibility:** Good, due to pasture access
- **Past Use:** Grazed/harvested forest
- **Current Use:** Grazed timber, with planned fencing to manage for timber production and wildlife habitat

Management Recommendations:

- **Primary Recommendation:** Light FSI: Remove 20sqft/ac of undesirable elm and hackberry. Goal BA is 66sqft/ac.
- **Alternative Option:** Leave this stand to naturally mature at this time. Re-evaluate this area in 10 years.

Observations/Comments:

Stand 7 has some good quality red and white oak present. It is recommended that a light FSI be conducted to thin undesirable trees and better space crop trees. Remove elm and hackberry from the stand first, and then thin remaining BA to 66sqft/ac. After the FSI, the stand should be left with well spaced crop trees. Regeneration will be managed more for good oak and hickory production rather than undesirable elm and hackberry. For more information on FSI, see attached FSI JS666.

Stand 8, 4.5 ac.

Sample Plots: 3

		BA/ac.	TPA	Avg. DBH	B-Level	C-Level
Slope:	5-10%					
Aspect:	E					
Site Index:	60					
Stocking %:	69					
Merch. Vol./ac.:	3,404 bd-ft					
Merch. TPA:	34					
Merch. BA/ac.:	50					
		Total:	76.7	297	6.9	
		AGS:	43.3	38	14.5	
		UGS:	10.0	193	3.1	
		Mature:	0.0	--	--	
		Cull:	23.3	67	8.0	
		Cavity:	0.0	--	--	
		Snag:	0.0	--	--	
					Stocking %:	57
					BA/ac.:	67.2
					TPA:	222
					Avg. DBH:	10.0
Top 5 spp. by BA:		Oak-Shingle (36.7), Sassafras (10.0), Oak-Pin (6.7), Oak-Bur (6.7), Elm-American (6.7)				
Top 5 spp. by TPA:		Elm-American (191), Oak-Shingle (54), Sassafras (40), Hackberry (5), Oak-Bur (3)				

Management Focus:

1) Provide a riparian buffer for future pond that will be constructed above the stand 2) Manage for timber production of oak and walnut trees

Soils and Topography:

- Minnith silt loam, 5 to 9 percent slopes, eroded
- Keswick loam, 5 to 9 percent slopes, eroded

Avg. Site Index: 60

Description of Management Unit Condition:

- **Overstory:** Composed of scattered large saw log bur oak and shingle oak with small saw log shingle oak, bur oak and hackberry
- **Understory:** Open, with sapling to pole size walnut, shingle oak, sassafras and elm
- **Regeneration:** Moderate, with shingle oak, walnut and bur oak
- **Dominant Size Class:** Small saw log
- **Invasive Species:** None noted
- **Accessibility:** Good, with pasture access on both sides of the stand
- **Past Use:** Grazed/harvested forest
- **Current Use:** Grazed timber, with planned fencing to manage for timber production and wildlife habitat

Management Recommendations:

- **Primary Recommendation:** Light FSI: crop tree release- Manage for 10 - 20 crop trees/ac. It is recommended to foliar spray buck brush, multi-flora rose, prickly ash and weeds around sprouting crop trees like oak and walnut. Goal BA is 60sqft/ac.
- **Alternative Option:** Leave this stand to naturally mature at this time, do not fence out livestock. Re-evaluate this area in 10 years.

Observations/Comments:

Fencing out livestock is pertinent for timber and wildlife goals. After fencing is complete, conduct a crop tree release which should focus on mixed oak and walnut. Release crop trees on four sides to ensure that trees have adequate space to grow. For more information on crop tree release, see attached crop tree management information sheet and FSI JS666.

Stand 9, 9.7 ac.

Sample Plots: 3

	Slope: 5-9%	Aspect: E	Site Index: 55	Stocking %: 62	Merch. Vol./ac.: 2,486 bd-ft	Merch. TPA: 30	Merch. BA/ac.: 43	BA/ac.	TPA	Avg. DBH	B-Level	C-Level
<i>Total:</i>	70.0	272	6.9								57	36
<i>AGS:</i>	33.3	29	14.5								64.9	46.9
<i>UGS:</i>	23.3	177	4.9								239	121
<i>Mature:</i>	0.0	--	--								7.1	8.4
<i>Cull:</i>	13.3	66	6.1									
<i>Cavity:</i>	0.0	--	--									
<i>Snag:</i>	0.0	--	--									

<i>Top 5 spp. by BA:</i>	Oak-Bur (13.3), Elm-American (13.3), Honeylocust (10.0), Oak-Shingle (6.7), Hickory-Shagbark (6.7)
<i>Top 5 spp. by TPA:</i>	Elm-American (167), Hackberry (38), Hickory-Shagbark (21), Hickory-Bitternut (10), Honeylocust (9)

Management Focus:

1) Maintain riparian buffer for water/stream quality and as a wildlife corridor 2) Manage for mixed oak and walnut trees for timber production and hard mast for wildlife food

Soils and Topography:

- Keswick loam, 5 to 9 percent slopes, eroded

Avg. Site Index: 55

Description of Management Unit Condition:

- Overstory:** Composed of scattered large saw log bur oak and shingle oak with small saw log hickory, shingle oak, honey locust and hackberry
- Understory:** Open, (due to livestock) with scattered sapling to pole sized elm, walnut, hickory, hackberry and honey locust
- Regeneration:** Poor, with mainly undesirable prickly ash, multi-flora rose and buckbrush growing/sprouting
- Dominant Size Class:** Large saw log
- Invasive Species:** None noted
- Accessibility:** Good, due to pasture access on both sides of stand
- Past Use:** Grazed/ harvested forest
- Current Use:** Grazed timber, with planned fencing to manage for timber production and wildlife habitat

Management Recommendations:

- Primary Recommendation:** Light FSI- Remove 20sqft/ac of hackberry, elm, honeylocust and cull trees. It is recommended to foliar spray buck brush, multi-flora rose, prickly ash and weeds around sprouting crop trees like oak and walnut. Goal BA is 50sqft/ac.
- Alternative Option:** Leave this stand to naturally mature at this time, do not fence out livestock. Re-evaluate this area in 10 years.

Observations/Comments:

Fencing out livestock is pertinent for timber and wildlife goals. After fencing is complete, conduct a light FSI to remove less desirable elm, honeylocust, hackberry and cull trees. Foliar spray prickly ash, buck brush, multi-flora rose, and around seedling crop trees (specifically walnut). These species can consume a stand making it impossible for good regeneration to occur. When foliar spraying, mix glyphosate at 10% with water to deaden said species. By conducting a FSI, removing all listed species above, good regeneration (oak and walnut) is being managed for. Oak, hickory and walnut trees that are left will naturally regenerate the stand. Continually monitor this stand to identify if future foliar treatments are needed. For more information on FSI, see attached FSI job sheet JS666.

RECORD OF DECISIONS SUMMARY/ACTIVITY SCHEDULE

To assist with meeting your individual objectives, the following planned practices and treatment activities will help achieve and insure sustained forest health, improve water quality, and increase wildlife habitat associated with your forest. The plan should be implemented according to the following prioritized schedule.

Stand	Acres	Practice Code or Treatment Activity	Treatment Details	Planned Date	Completed Date
1	8.5	FSI (PC 666)	Light FSI: Reduce BA by 25sqft/ac	Winter 2014	
2	9.7	FSI (PC 666)	Light FSI: Reduce BA by 20sqft/ac	Winter 2014	
3	19.8	FSI (PC 666)	Light FSI: CTR- Manage for 48 crop trees/ac	Winter 2012	
4	35.0	FSI (PC 666)	Medium FSI: Reduce BA by 31sqft/ac	Winter 2013	
5	7.3	FSI (PC 666)	Light FSI: Reduce BA by 20sqft/ac	Winter 2015	
6	10.3	Leave	Leave		
7	4.4	FSI (PC 666)	Light FSI: Reduce BA by 26.7sqft/ac	Winter 2015	
8	4.5	FSI (PC 666)	Light FSI: CTR- Manage for 10-20 crop trees/ac	Winter 2015	
9	9.7	FSI (PC 666)	Light FSI: Reduce BA by 20sqft/ac	Winter 2014	

- Maintain boundaries
- Maintain wildlife food plots and wildlife structures
- Maintain firebreaks/lines
- Monitor and control invasive species
- Review forestry plan for needed changes – update accordingly
- Keep good records

Within ten years: Re-inventory your forested acres with the assistance of a professional forester. Contact your agency forester or private consulting forester with any questions you have about implementing any part of this plan. Progress should be evaluated at least every five years to insure that management of your forest land is consistent with existing planning standards and your current objectives. This management plan is for a ten year period and should be updated in April, 2022.

Appendix II - Description of Forest Management Practices

- **Crop Tree Release (CTR) – (NRCS Practice Code 666)** – A form of Forest Stand Improvement. Release only targeted crop trees. Usually used on young, even-aged stands, or stands that contain only a small percentage of desirable trees. Instead of treating the entire stand, as in a traditional FSI treatment, only the competing trees around each crop tree are treated. When complete, each crop tree should have clear sky around its crown. In very young stands, the crop trees should not be released on all four sides of the canopy, as competition is essential to keep young trees growing tall and straight.
- **CTR** – See Crop Tree Release.
- **Edge Feathering – (NRCS Practice Code 645)** – Some areas can benefit from the creation of a transition zone between field and forest. This can be done by felling existing trees into the edge of the field. The result of these activities will be a “brushy” strip in which small game animals will be able to find security cover. Prior to edge feathering, the area to be covered by the downed trees should be sprayed with a non-selective herbicide, such as glyphosate, to remove fescue and further promote annual weeds and woody vegetation.
- **Environmental Harvest** – See Selective Harvest.
- **Forest Stand Improvement (FSI) – (NRCS Practice Code 666)** – Forest stands typically need thinning of undesirables and suppressed trees in order to promote the health and vigor of selected crop trees, or to encourage increased regeneration. Much like weeding a garden, identify desirable trees based on your management objectives and thin undesirable trees that are competing. Can be prescribed as light, medium, or heavy.
- **FSI** – See Forest Stand Improvement.
- **Glade Restoration – (NRCS Practice Code 643)** – Areas that show signs of a natural glade should be restored to a glade ecotype. Remove all fire intolerant species, and reduce the total canopy cover to <30%, utilizing the Forest Stand Improvement (666) practice. These areas should be burned on a 1-5 year rotation, depending on the specific requirements of the site. Supplemental seeding may be required if the native vegetation does not return following the re-introduction of fire.
- **Group Openings – (NRCS Practice Code 645)** – These openings have great benefit to a variety of wildlife species. They provide habitat that can be used by a number of species as forage, escape and bedding cover. Temporary openings will often regenerate with desirable oak species that need significant sunlight to thrive. These should occur where the existing timber is below average in quality. The openings should be a minimum of 2 times the height of the surrounding timber (ex. 70 foot canopy = 140 foot opening minimum). This will ensure that there is year-round sunlight reaching the forest floor in these areas.
- **Invasive Species Eradication – (NRCS Practice Code 666)** – Some stands can become overtaken by non-native, invasive species, such as bush honeysuckle, in the understory. These exotic species can prevent the germination/growth of all other species. The most cost-effective method for controlling these species is to foliar spray during the growing season (June-September). In conjunction with this, larger plants may need to be cut and chemically treated if they are too large to properly treat with handheld spray equipment. In order to get optimum long-term results, treatment will need to be repeated every couple of years until the seed bank is exhausted. Even at that point in time, periodic “touch-up” treatments will be necessary if there is a different seed source in the area.
- **Leave** – These areas are currently in acceptable condition. No management is recommended at this time.
- **Post Harvest Slashing – (NRCS Practice Code 384)** - Associated with any timber sale is damage, of some degree, to the residual stand. The function of this practice is to re-enter the stand after harvest and treat all damaged and non-merchantable timber. This will further release the residual crop trees from competition. Additionally, it will create a more open environment that will be conducive to desirable regeneration. For wildlife benefits, it is recommended to leave several den/cavity trees per acre. These trees are worth very little economically, but are essential habitat for a number of birds and small mammals. Slashing generally follows a Shelterwood or Seed Tree harvest.
- **Prescribed Burning – (NRCS Practice Code 338, 394 (Firebreaks))** – Prescribed fire is an essential management tool for maintaining Glade, Savanna, and Woodland Communities, and can, under certain circumstances, be beneficial in forest settings. This practice should only be completed by professionals or after completing training. If not done properly, burning a forest can result in significant damage to the standing timber, or escape into areas that were not intended to be burned.

- **Pruning – (NRCS Practice Code 660)** – Typically recommended for stands that contain a high number of desirable young trees, pruning can greatly help the potential of these trees to develop into high-value timber trees. Pruning can also help in maintaining tree health by removing dead and damaged branches. Improper pruning techniques can result in damage to the tree.
- **Regeneration Harvest** – It can be beneficial to deaden all trees in a given stand. This can be due to the stand being in a state of over-maturity, low quality, poor species composition, damaged from a natural disaster, or some combination thereof. A Regeneration Cut should be followed by Post-Harvest Slashing to deaden all remaining trees. Seed-Tree and Shelterwood harvests are types of Regeneration Harvests, in which increasingly higher numbers of trees are left to provide a seed source and protection for the new regeneration.
- **Riparian Buffer – (NRCS Practice Code 391)** – Areas along major streams should be maintained as a riparian (streamside) buffer. Timber management may still take place, however road construction and the use of mechanized equipment should be limited. Minimize the number of stream crossings and try to reduce the number of large trees falling into the waterway. Canopy/Basal Area should be maintained higher than other stands in order to provide shade to the stream and to minimize any erosion potential. Large trees near the stream bank may be left to add bank stability.
- **Savanna Restoration – (NRCS Practice Code 643)** – Areas displaying characteristics of a historical savanna ecosystem should be restored to such. Historically, these areas were subject to periodic fire that maintained this ecotype in a relatively open state (below 10-30% canopy closure). Select individual trees of fire tolerant species to leave as the residual stand utilizing the Forest Stand Improvement (666) practice. These areas should be burned on a 1-5 year rotation, depending on the specific requirements of the site. Supplemental seeding may be required if the native vegetation does not return following the re-introduction of fire. A healthy savanna is a very beneficial environment for a wide variety of wildlife.
- **Selective Harvest** – For use in maintaining an uneven-age stand. Stocking is usually maintained around the “B” level. Generally, mature trees are cut along with suppressed, damaged and undesirable trees. For most sites, the residual stand will be composed of desirable species of good quality in the small saw log size class (12”-18” DBH). These are the trees that will compose the next harvest. Additionally, by removing undesirable species with the periodic harvests in this system, species composition of the regenerating and pole-size classes should show a progression to a higher percent of desirable species. If done correctly, a selective harvest should be able to be repeated every 10-20 years in perpetuity.
- **Shelterwood Harvest** – See Regeneration Harvest.
- **Seed Tree Harvest** – See Regeneration Harvest.
- **Timber Stand Improvement (TSI)** – See Forest Stand Improvement.
- **Tree/Shrub Planting – (NRCS Practice Code 612, 490 (Site Preparation))** – It can be desirable to convert a field into a forest of particular tree species through planting. This allows for easier management of the young trees as they are growing than if the field was reclaimed by natural forest. Planting shrubs is an excellent way to improve brushy habitat and escape cover for small animals. This can be done as a transition from forest to field, or as a stand-alone area of cover.
- **Underplanting – (NRCS Practice Code 612)** - Due to the lack of desirable regeneration in some stands, it is recommended that select species be planted. Choose desirable species and plant in canopy gaps in areas where they occur naturally. Ex: Oaks – upland. Oak and Walnut – lower slopes.
- **Vine Removal – (NRCS Practice Code 666)** – Forest stands, especially those in a creek or river bottom, can have a large number of quality trees that are being suppressed by grape vines. If left untreated these vines can ultimately kill a tree, increase the potential for storm damage due to increased weight and leaf surface area at the top of the canopy. Vines growing on crop trees should be cut and treated with an approved herbicide to prevent resprouting. Vines may be left on less desirable trees to provide a valuable food resource for wildlife. Do not try to pull the vines out of the trees, as this can cause more harm than good. The dead vines do not affect the tree and will fall off as the attachment points decay. Some vines, such as poison ivy and virginia creeper, typically grow on interior branches instead of over the canopy of the tree, and therefore are not as detrimental as grape vines can be.
- **Woodland Restoration – (NRCS Practice Code 643)** – Can be thought of as a very open forest. Historically, these areas were subject to periodic fire that maintained this ecotype in a relatively open state (50-80% canopy closure). Select individual trees of fire tolerant species to leave as the residual stand utilizing the Forest Stand Improvement (666) practice. These areas should be burned on a 1-7 year rotation, depending on the specific requirements of the site. Supplemental seeding may be required if the

native vegetation does not return following the re-introduction of fire. A healthy woodland community is a very beneficial environment for a wide variety of wildlife.

- **Woody Cover Control (WCC) – (NRCS Practice Code 645)** – This practice is used to control unwanted or undesirable woody trees or brush that are overtaking the desired habitat.

Appendix III - Definition of Forestry Terms

Acceptable Growing Stock (AGS): Trees of desirable species and form to achieve the management objectives for a given stand.

Ac.: Acre

Acre: An area of land containing 43,560 square feet, or 10 square chains.

Advance Regeneration: Seedlings and saplings that develop or are present in the understory.

Agroforestry: A land-use system that involves deliberate introduction or mixing of trees in crop and animal production.

AGS: Acceptable Growing Stock.

Aspect: The predominant direction that a slope faces (north, south, etc.).

Average Diameter: The diameter of the tree of average basal area in a stand, (the quadratic mean diameter).

B-Level: A measure of stocking of a stand in which all growing resources can be utilized when each tree is utilizing the maximum possible growing space. The minimum stocking level at which the stand is considered fully stocked.

BA: Basal-Area.

Basal Area: The cross-sectional area of a tree, in square feet, at 4.5 feet from the ground (at breast height). When the basal area of all the trees in a stand are added together, the result is expressed as square feet of basal area per acre, which is a measure of a stand's density.

Bd.-Ft.: Board Foot.

Biltmore stick: A graduated stick used to estimate tree diameter by holding it against the tree at breast height.

Board Foot: A unit for measuring wood volumes. It is commonly used to express the amount of wood in a tree, sawlog, or individual piece of lumber. A piece of wood 1 foot long, 1 foot wide, and 1 inch thick (144 cubic inches).

Bolt: A short log or a squared timber cut from a log, usually less than 8 feet long.

Browse: Twigs, leaves, and buds of plants, shrubs, and trees that are eaten by animals.

Buck: To saw felled trees into shorter lengths.

Buffer Strip: A protective strip of land or trees adjacent to an area requiring attention or protection. For example, a protective strip of unharvested trees along a stream.

C-Level: A measure of stocking of a stand in which the stand is expected to reach B-Level in 10 years if left to grow.

Cambium: The growing layer of cells beneath the bark of a tree from which new wood and bark develop.

Canopy: The more or less continuous cover of branches and foliage formed collectively by the tops, or crowns of adjacent trees.

Cavity Tree: See Den Tree.

Chain: A unit of linear measurement, which equals 66 feet.

Clearcut: A harvest and regeneration technique that removes all trees from an area at the same time, resulting in an even-aged stand.

Clinometer: An instrument for measuring the angle of slopes.

Co-dominant tree (crown class): Trees whose crowns form the general level of the forest canopy and receive full sunlight only from above.

Competition: The struggle for survival that occurs when organisms make similar demands on environmental resources.

Conifer: A cone-bearing tree with needles, such as pines, spruces, and firs, that produces wood commonly known as softwood.

Cord: A stack of wood and air containing 128 cubic feet. A standard cord measures 4 feet x 4 feet x 8 feet.

Crop Tree: A tree identified to be grown to maturity for the final harvest cut, usually on the basis of its location with respect to other trees and its timber quality.

Crown: The branches and foliage of a tree.

Cruise: A survey of forest land to locate timber and estimate its quantity by species, products, size, quality, or other characteristics; the estimate obtained in such a survey.

Cruiser Stick: See Biltmore Stick.

Cull: A tree of desirable species that should be removed due to crowding, suppression, poor form, or structural defect.

DBH: Diameter at Breast Height.

Defect: Any feature that lowers the utility or commercial value of timber. Defects include rot, crookedness, limb scars, cavities, and cracks.

Dendrology: The study of trees and their identifying characteristics.

Den Tree: A living tree with a cavity large enough to shelter wildlife. Also called cavity tree.

Diameter at Breast Height (DBH): The diameter of a tree at 4.5 feet above ground level

Diameter Tape: A specially graduated tape used to determine tree diameter when stretched around the circumference of the tree stem.

Dibble Bar: A flat or round metal tool used to make holes for planting tree seedlings.

Dominant Tree (crown class): Tree with its crown above the general level of the canopy that receives full sunlight from above and partial light from the sides.

Edge: The more or less well-defined boundary between two or more elements of the environment, e.g. a field adjacent to a woodland or the boundary between two different silvicultural treatments.

Epicormic Branch: A weak stem arising from the trunk or branch of a tree, often following exposure to increased light or fire. Epicormic sprouting can be an indicator of stress.

Even-Aged Management: Forest management with periodic harvest of all trees on part of the forest at one time or over a short period to produce stands containing trees all the same or nearly the same age.

Face Cord: A stack of wood and air 4 feet high and 8 feet long composed of logs of varying length.

Felling: The process of cutting standing trees.

Firebreak or Fireline: A natural or constructed barrier used to stop a fire from spreading.

Firsts and Seconds (FAS): The highest standard grade for hardwood lumber.

Forest: A plant community dominated by trees and other woody plants.

Forest Inventory: See Cruise.

Forest Management: The application of scientific and business principles to the conservation of forests to meet specific goals.

Forest Stand Improvement (FSI): A thinning made in forest stands to improve the overall composition, structure, condition, health, and growth of the residual trees, as well as to encourage regeneration of desirable species. Also known as Timber Stand Improvement.

Forest Type: A category of forest usually defined by its dominant vegetation. For example, the oak-hickory forest type.

Forester: A person who is responsible for the proper management of a forest, who has been educated in forestry at a college or university.

Fully Stocked: Range of stocking levels in which all growing space and resources in a stand can be utilized by the existing trees.

Girdling: Completely encircling the trunk of a tree with a cut that severs the bark and cambium of the tree. Herbicide is usually injected into the cut to ensure death of the tree.

Grading: Evaluating and sorting trees, logs, or lumber according to quality.

Habitat: The place where a plant or animal normally lives, such as a forest, prairie, or swamp.

Hardwood: A term describing broadleaf trees, usually deciduous, such as oaks, maples, and ashes.

Harvest: In general use, the removal of all or portions of the trees on an area. It can mean removing trees on an area to obtain income, to develop the environment necessary to regenerate the forest, and on occasion, to achieve special objectives, such as the development of wildlife habitat. Contrast this technique with intermediate cuttings.

Heal-in: To store young trees before planting by placing them in a trench and covering the roots with soil.

Height, merchantable: The commercial height above the ground at which a tree stem is saleable for a particular product.

Height, total: Tree height from the ground level to top.

High-grading: Cutting only the high-value trees from a forest property, leaving a stand of poor quality with decreased future timber productivity.

Hypsometer: A graduated stick used to estimate tree height. It is often combined with a Biltmore Stick.

Increment Borer: An auger-like instrument with a hollow bit that is used to extract cores from trees for growth and age determination.

Intermediate Cut: Removing immature trees from the forest sometime between establishment and stand harvest to improve the quality of the remaining forest stand. Contrast this technique with a harvest cut.

Intermediate Trees (crown class): Trees with crowns below the general level of the canopy that receive some sunlight from above but none from the sides.

Landing: A place where logs are taken to be loaded on trucks for transport to the mill.

Log Rules: A table showing estimated amount of lumber that can be sawed from logs of given lengths and diameters. Two log rules are commonly used in Missouri:

Doyle Rule is a simple formula rule used in the eastern and southern United States. It underestimates the amount of lumber in small logs and overestimates large logs.

International 1/4-inch Rule is a formula rule allowing 1/2 -inch taper for each 4 feet of length and 1/16-inch shrinkage for each one-inch board. This measure closely approximates the actual sawmill lumber tally.

Logger: An individual whose occupation is harvesting timber.

Lump Sum Timber Sale: Standing timber is sold for a fixed amount agreed upon in advance; the sale may cover a given acreage, tracts, certain species, or diameter classes of trees. Distinguished from a scale or unit sale in which payment is based on the amount harvested, e.g. so many dollars per thousand board feet.

Mast: Nuts of trees, such as oak, walnut, and hickory, that serve as food for many species of wildlife.

Mature Tree: A tree that has reached the desired size or age for its intended use.

MBF: Abbreviation for 1,000 board feet, using the Roman numeral M.

Merch: Merchantable.

Merchantable: The part of a tree or stand of trees that can be manufactured into a saleable product.

Multiple Use: Land management for more than one purpose, such as wood production, water, wildlife, water, recreation, forage, and aesthetics.

Overstocked: Forest stand condition in which too many trees are present for optimum growth. Not enough resources are available for each tree to obtain its minimum requirements.

Overstory: That portion of the trees in a stand forming the upper crown cover.

Overtopped: See suppressed trees.

Planting Bar: A hand tool used to plant seedlings. See dibble bar.

Plot Sample Cruise: A method of estimating standing timber, stocking, or volume whereby all trees are tallied on plots with fixed boundaries.

Point Sample Cruise: A method for estimating standing timber, stocking or volume without establishing sample plot boundaries. An instrument such as a prism or angle gauge is used to determine which trees will be counted at each point. Basal Area and Trees per Acre can be determined from these data. Also called variable plot sampling or prism cruising.

Pole Saw: A saw attached to a long pole for pruning tree limbs without using a ladder.

Pole Timber: Trees from 6 inches to 12 inches in diameter at breast height.

Prescribed Burn: To deliberately burn natural fuels under specific weather conditions, which allows the fire to be confined to a predetermined area and produces the fire intensity to meet predetermined objectives.

Props: In mining, round, squared or split timbers that support the roof.

Prism, Wedge: An instrument that incorporates a fixed angle and can be used to determine basal area. See point sample cruise.

Pruning: Removing live or dead branches from standing trees to improve wood quality.

Pulpwood: Wood cut primarily for manufacture of paper, fiberboard, or other wood fiber products.

Regeneration: Seedlings or saplings existing in a stand. The process by which a forest is renewed, either artificially by direct seeding or planting, or naturally by self-sown seeds and sprouts.

Regeneration Cut: Any removal of trees intended to assist regeneration already present or to make regeneration possible.

Release: To free trees from competition by cutting, removing, or killing nearby vegetation.

Riparian Zone: The area adjacent to or on the bank of rivers and streams. Identified by topography, vegetation, wildlife, and other characteristics unique to these locations.

Rotation: The number of years required to establish and grow trees to a specified size, product, or condition of maturity. For example, oaks may have an 80-year rotation for sawlogs, and scotch pine a 10 year rotation for Christmas trees.

Salvage Cut: Cutting dead trees, or trees damaged or dying due to pests, fire, ice damage, or disease, to recover economic value that would otherwise be lost.

Sapling: Trees from 2 inches to 6 inches in diameter at breast height.

Sample Plot: A group of trees in a fixed area selected for inclusion in forest inventory data.

Sawtimber: Trees at least 12 inches in diameter at breast height from which a sawed product can be produced. Small Sawtimber is considered 12"-18" DBH and Large Sawtimber is considered greater than 18" DBH.

Scale Stick: A flat stick calibrated so that log volumes can be read directly when the stick is placed on the small end of a standard length log.

Scaling: Estimating usable wood volume in a log.

Seed-tree Harvest: A harvest and regeneration method where nearly all trees are removed at one time except for scattered trees to provide seed for a new forest. Results in an even-aged stand. Sometimes used in Missouri to regenerate pine.

Seedlings: New trees less than 2 inches in diameter at breast height grown from seeds or sprouts. Also, trees grown in a nursery for one or more years.

Selection Harvest: Harvesting trees to regenerate and maintain a multi-aged structure by removing some trees in all size classes either singly or in small groups.

Shade Tolerance: The capacity of a tree to develop and grow in the shade of, and in competition, with other trees. An example of a tree with high shade tolerance is sugar maple.

Shake: A crack in a log that follows a growth ring. Very common in large cottonwood logs.

Shelterwood Harvest: A harvesting and regeneration method that entails a series of partial cuttings over a period of years in the mature stand. Early cuttings improve the vigor and seed production of the remaining trees. The trees that are retained produce seed and also shelter the young seedlings. Subsequent cuttings harvest shelterwood trees and allow the regeneration to develop as an even-aged stand.

Silviculture: The art and science of producing a forest to meet the objectives of the landowner.

Site: The area in which a plant or stand grows, considered in terms of its biological, climatic, topographical, and soil factors.

Site Index: An expression of forest site quality based on the height of a free-growing dominant or co-dominant tree at age 50 (or age 100 in the western United States).

Site Preparation: Preparing an area of land for forest establishment. May include clearing, chemical vegetation control, or prescribed burning.

Skid Trail: A road or trail over which equipment or horses drag logs from the stump to a landing.

Skidding: Pulling logs from where they are cut to a landing or mill.

Slash: The treetops and branches left on the ground after logging or as a result of a storm, fire, or pruning.

Slope: Degree of deviation of a surface from the horizontal, measured as a numerical ratio, as a percent, or in degrees. Expressed as a ratio, the first number is the horizontal distance (run) and the second number is the vertical distance (rise), as 2:1. A 2:1 slope is a 50 percent slope. Expressed in degrees, the slope is the angle from the horizontal plane, with a 90 degree slope being vertical (200%) and a 45 degree slope being a 1:1 slope (100%).

Snag: A standing dead tree. Valuable for wildlife.

Softwoods: See conifer.

Stand: A group of trees with similar characteristics, such as species, age, or condition that can be distinguished from adjacent groups. A stand is usually treated as a single unit in a management plan.

Stave Bolts: Material cut from the white oak group and used in the manufacture of wooden barrels.

Stocking: An indication of the number and size of trees in a stand in relation to the desirable number and size of trees for best growth and management. 100% stocking is considered to be the maximum number of trees of the given size classes present in which all trees are receiving the minimum nutrient requirements to live. Thinning activities will generally reduce stocking to predetermined levels, such as B-Level or C-Level. See overstocked and understocked.

Stumpage: The value of timber as it stands uncut in the woods on the stump.

Succession: The natural process of change on a site from one plant community to another.

Sustainable Forest Management: The practice of meeting forest resource needs and values of the present without compromising the similar capability of future generations.

Suppressed Trees (crown class): Trees with small crowns that are entirely below the level of the canopy and receive no direct sunlight. Also called overtopped trees.

Sweep: The extent to which a tree trunk or log diverges from straight.

Shearing: To trim back and shape tree branches, making foliage dense and giving the tree a conical form. Used to produce Christmas trees.

Taper: The decrease in diameter from the large end of a log to the small.

Thinning: Generally, a cutting or killing of trees in an immature forest stand to reduce the tree density and concentrate the growth potential on fewer, higher quality trees.

Timber Stand Improvement (TSI): See Forest Stand Improvement.

TPA: Trees per Acre.

Tree Farm: A privately owned forest or woodland where the production of wood fiber is a primary goal. It is certified as a Tree Farm by the American Tree Farm System, an organization sponsored by the American Forest foundation in Washington D.C.

UGS: Unacceptable Growing Stock.

Unacceptable Growing Stock: Trees of undesirable species and/or form for the management goals of a given stand, which should be removed in a thinning.

Understocked: Insufficiently stocked with trees. Each tree in the stand could be utilizing its maximum amount of space and resources, and there will still be excess room in the stand.

Understory: All forest vegetation growing under an overstory.

Uneven-Aged Management or Stand: A stand of trees containing at least three age classes intermingled on the same area.

Variable Point Sampling: See Point Sample Cruise.

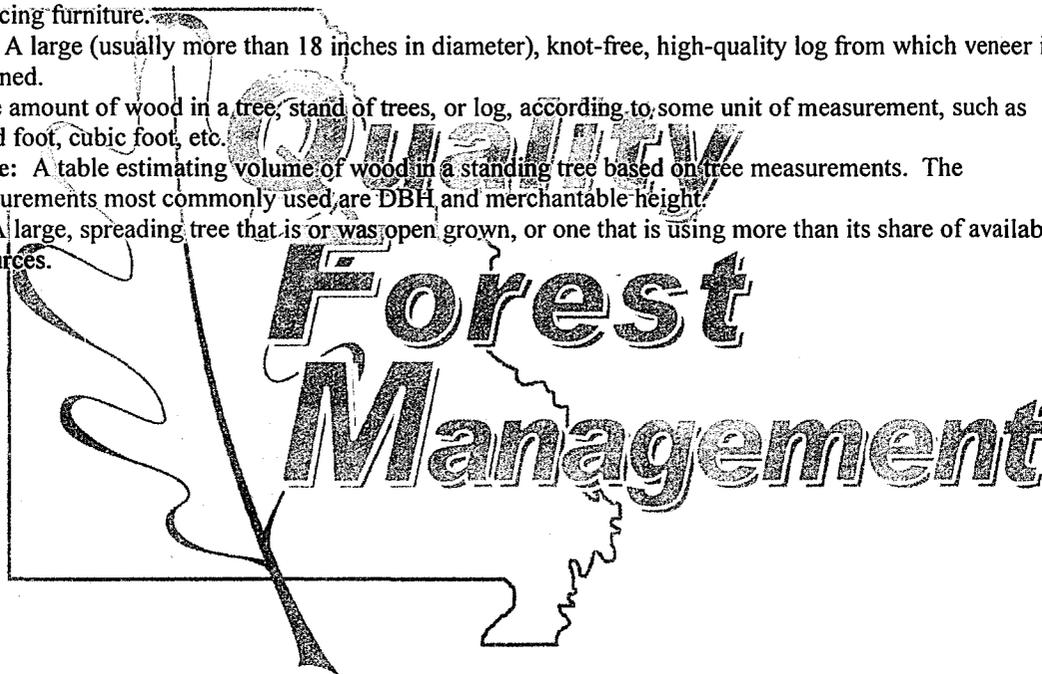
Veneer: A thin sheet of wood sliced or peeled on a veneer machine and often used for decorative plywood or for surfacing furniture.

Veneer Log: A large (usually more than 18 inches in diameter), knot-free, high-quality log from which veneer is obtained.

Volume: The amount of wood in a tree, stand of trees, or log, according to some unit of measurement, such as board foot, cubic foot, etc.

Volume Table: A table estimating volume of wood in a standing tree based on tree measurements. The measurements most commonly used are DBH and merchantable height.

Wolf Tree: A large, spreading tree that is or was open grown, or one that is using more than its share of available resources.





D-9

RECEIVED

DEC 05 2012

Missouri Association of Soil and Water Conservation Districts

BY: _____

December 3, 2012

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Commissioners:

Enclosed is the resolution passed at the 2012 Annual Meeting of the Missouri Association of Soil and Water Conservation Districts held November 27, 2012.

Also enclosed is a motion that was passed at the 2012 Annual Meeting which we would appreciate discussion and action on from the Missouri State Soil & Water Commission.

We appreciate your consideration of this resolution and motion.

Sincerely,

Kenny Lovelace
Kenny Lovelace *pc*
MASWCD President

cc: Soil & Water Commissioners

RESOLUTIONS
November 2012 Training Conference

Resolution # 2012-1
Perry County SWCD

Whereas, tilling the soil and leaving it without a ground cover is one of the worst things that can be done on fields that are highly erodible. Planting with no-till planters and drills is the most effective method to use to prevent erosion on these fields, and

Whereas, the equipment is so expensive that many farmers do not have enough acres to justify buying newer planting equipment but they would rent no-till equipment if they were available, and

Whereas, many districts cannot afford to buy or replace existing no-till equipment without a matching grant program;

Therefore, be it resolved: that the Missouri Association of Soil and Water Conservation Districts urge the Missouri Soil and Water Commission to reinstate the matching grant program to districts for no-till equipment.

Passed – Yes – 51 / No – 0

Motion Presented and Approved at the 2012 MASWCD Annual Business Meeting

David Morris, supervisor from Livingston County stated his district did not feel the funds for outsourcing the payroll should be provided to a district in addition to their other funding. He read from the job description of the Program Specialist which states that payroll is part of that position's duties. He stated Livingston County would like to make a motion that the cost of the outsourcing of the payroll come from a district's \$5500 administrative fund with no additional reimbursement from the Program Office. DeKalb County seconded the motion. One comment in support of outsourcing, no other comments.

Passed – Yes – 39



SUPERVISORS

Martin Strauser, Chairman
Shirley Turnbough, Vice-Chairman
Frank Meyers, Treasurer
Lynn Heins, Secretary
James Phares, Board Member

**WASHINGTON COUNTY SOIL AND
WATER CONSERVATION DISTRICT**
103 N. MISSOURI STREET
POTOSI, MO 63664
PHONE (573) 438-9214

STAFF

Rhonda Davault, NRCS Conservationist
Jeff Dierking, MDC PLC
Tiffany Woods, Technician

October 3, 2013

Dear Commissioners:

This letter is to inform you that Frank Meyers, Board Treasurer, has resigned his position as a supervisor for the Washington County Soil and Water Conservation District affective September 30, 2013. We would like to appoint George Richards to fill the remainder of his term as a board supervisor.

Regards,

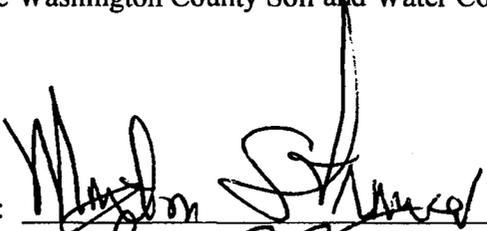
Washington County SWCD Board of Supervisors

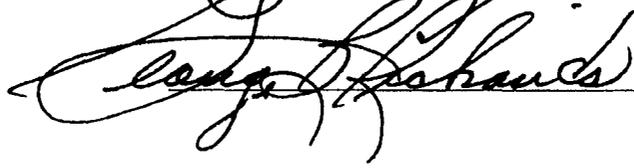
VERIFICATION OF SUPERVISOR ELIGIBILITY

**To qualify for office, according to Missouri's Code of State Regulations,
10 CSR 70-2.020, Conduct of Supervisor Elections, a candidate shall:**

- 1) Be a land representative as defined by "The owner, or representative authorized by power of attorney, of any farm lying within the soil and water conservation district (SWCD); provided, however, that any land representative must be a taxpayer of the county within which the SWCD is located," and
- 2) Be a resident taxpaying citizen within that SWCD for two (2) years preceding the appointment to the District Board of Supervisors by the Commission, and
- 3) Be a cooperator of the SWCD defined as "A person who is actively involved in farming and practices conservation activities related to agriculture," and
- 4) Reside in or own a farm lying in the same territory where the board position is vacant.

The undersigned certify that the candidate meets all of the above stated eligibility requirements to serve as a supervisor for the Washington County Soil and Water Conservation District.

Chairperson (or acting) Signature:  Date: 10-1-13

Candidate Signature:  Date: Sept. 30, 2013

To: Washington County SWCD Board of Supervisors
From: Frank J. Meyers
Date: September 23, 2013
Subj: Resignation, submission of

To the Board of Supervisors:

It has been my pleasure to have been a member of this board for the last several years. However, an increasing workload has necessitated that I devote more time to the consulting practice that has been my occupation. Therefore, I hereby tender my resignation from the Washington County SWCD Board, effective September 30, 2013.

I am grateful for the opportunity to have had a place on the board and have enjoyed working with all of you on it.

Sincerely,


Frank J. Meyers