

OFFICE OF RESOURCE CONSERVATION
State of Illinois
Grant

PROJECT NUMBER:

PROJECT TITLE: Conservation actions to address invasive species threats in the Cache River and Shawnee COAs (Cache River-Cypress Creek, Larue-Pine Hills-Western Shawnee Hills-Trail of Tears and the Eastern Shawnee COA)

PURPOSE: Utilize the successful framework established by the River to River Cooperative Weed Management Area to coordinate interagency efforts to manage invasive plant species through control practices, education, survey, research, strategic projects, and enhanced communication between agency personnel and private landowners. Work directly with private landowners to control priority invasive species, such as bush honeysuckle, *Lonicera maackii*; garlic mustard, *Alliaria petiolata*; and Japanese stiltgrass, *Microstegium vimineum*, to reduce regional impacts and lessen spread potential. This is a three-year approach (July 2011 to June 2014) to completing the goals of this project.



River to River Logo

The River to River CWMA (RtRCWMA) is one of the most successful Cooperative Weed Management Areas in the country. The RtRCWMA is a formalized partnership bringing together the most prominent conservation organizations in the state with a common goal of reducing the negative impacts of invasive plants in southern Illinois. The RtRCWMA has proven to be effective and successful in multi-agency and organization coordination. The area of the RtRCWMA includes the southern eleven counties of Illinois including **three Conservation Opportunity Areas**, a National Forest, two National Wildlife Refuges, 15 state Parks, 22 State Natural Areas, nine NGO conservation areas, and thousands of acres of conservation easements. Restoring ecological processes responsible for the character and diversity of natural communities within this project area will provide for the long-term sustainability of species in greatest need of Conservation.

NEED: Invasive species have long been recognized as a primary threat to natural resources, biodiversity, and wildlife in Illinois and worldwide. Native ecosystems and plant communities can be drastically altered through the introduction of an exotic invasive species, as can ecosystem functions and services. Often invasive plant species are unpalatable or lower in nutritional quality than native species, which directly impacts on the native wildlife.

Many agencies and landowners are currently managing invasive plants, but these management activities are often uncoordinated, haphazard, and

may not use the best available techniques. In addition, many managers may not know the status of these invasives on a regional scale, making long-term prioritization and planning a difficult task.



Bush honeysuckle invading a natural area

In southern Illinois, natural areas and native ecosystems are found on private, federal and state-owned lands. Because of this complex stakeholder ownership, conservation practices can only be effective when they span jurisdictional boundaries and address the issue at the appropriate ecological scale. With invasive species, we often see the “to-the-fence” problem, where a landowner or agency can only control an infestation up to their property boundary. Quick-spreading, aggressive invaders, such as garlic mustard, Oriental bittersweet, and bush honeysuckle, can quickly re-infest treated areas and spread into new territory if left unchecked. A need strongly exists in Southern Illinois to coordinate invasive plant management efforts across agencies and work with private landowners and the general public to increase awareness and action on invasive species issues. In addition, private lands can harbor many of these priority invasive species, but often control activities are expensive, require advanced knowledge of management techniques for success, or the landowner may simply not know the plants are invasive. Because of this, many infestations on private lands are not treated. A need exists in Southern Illinois to work closely with landowners to control infestations of priority species through technical and financial assistance.



CWMA conducting a landowner training session

The River to River Cooperative Weed Management Area (CWMA) was established in 2006 to start addressing those needs in Southern Illinois (RTRCWMA MOU 2006). Since then, the CWMA has worked with its agency partners, other conservation groups, and private landowners in the southernmost 11 counties in Illinois. This proposal seeks funding to fill the need for continuing support for the CWMA, to allow for increased educational events, increased interagency coordination, efficient technology transfer for new control methods and techniques, increased on-the-ground control efforts, increased landowner control assistance, and enhanced regional planning and

Implementation of the Wildlife Action Plan-Invasive Species Campaign’s action items.

“Eradicate, control, and prevent the introduction of invasive exotic species” is listed as one of the six primary challenges in the Wildlife Action Plan (IDNR 2005, pg. 2). The plan states that the response to invasive species within the state has been piecemeal and localized instead of coordinated and widespread. The plan has an invasive species campaign that prioritizes actions such as: 1. interagency coordination for effective and rapid detection, quarantine, eradication and control of invasive species; 2. Prioritizing high-quality natural areas, large habitat patches, and other key locations for invasive species control; and 3. Marketing, education, technical assistance, incentives and cost-sharing to prevent invasions, control invasive species, and restore natural disturbance regimes on private lands (IDNR 2005, pg. 81-83). In addition, invasive species control and prevention action items are located within the Streams, Forests, Farmlands & Prairies, Wetlands, and Land & Water Stewardship Campaigns (IDNR 2005, pgs. 61, 66-70, 72-76, 77-79, and 85-87 resp.).

The River to River CWMA, and this proposal, address all of these action items within the Southernmost 11 counties in Illinois through directed, collaborative, interagency efforts. These efforts are particularly successful because of their cooperative nature and strategic implementation. The River to River CWMA seeks to work closely with its conservation partners to implement on-the-ground conservation practices to control, eradicate or prevent the spread of invasive species. Our efforts are guided by a CWMA success plan, the State Wildlife Action Plan, the Shawnee Resource and Management Plan, Crab Orchard NWR’s and Cypress Creek NWR’s Comprehensive Conservation Plan, and The Nature Conservancy’s Illinois Ozarks Ecoregional Plan.

In addition, the River to River CWMA encompasses three Conservation Opportunity Areas (Cache River-Cypress Creek, Larue-Pine Hills-Western Shawnee-Trail of Tears, and the Eastern Shawnee COA).

OBJECTIVES:

The objectives of this proposal are to develop and implement interagency invasive species control projects and other management strategies in Southern Illinois and assist private landowners in controlling invasive species for the period of July 2011 to June 2014. The River to River CWMA is currently developing regional ranking criteria to assist in determining management priorities for both location and species of infestation. This proposal will provide funds to allow us to implement these ranking criteria and continue to enhance coordination and cooperation between agencies and assist private landowners. Specifically, the objectives for the grant are to:

1. Compile existing distribution data on invasive species within Southern Illinois and collect new data on invasive species through CWMA, partner agency staff, Southern Illinois University research, and volunteers and create an online mapping program to assist land managers in prioritization and decision making
2. Develop and implement strategic management plans for reducing the impact of invasive species in Conservation Priority Areas (specifically the Shawnee National Forest, Pine Hills; Cache River, Cypress Creek; and Eastern Shawnee)
3. Target available technical and financial assistance to landowners for priority invasive plant control
4. Continue to raise awareness about invasive species in Southern Illinois and the need for control and prevention techniques
5. Reduce the impacts of invasive species in natural areas and other lands with significant ecological resources
6. Reduce the spread of exotic species through widespread adoption of spread prevention techniques
7. Establish and implement an effective Early Detection program as well as develop an interagency network and protocol for rapidly responding to any early detection events
8. Engage other stakeholders (governmental, non-profit, private business, and landowners) to enhance cooperative efforts
9. Coordinate CWMA partner interest in COA's and target control and prevention activities.

This project complements work already in process by the CWMA. Together, the River to River CWMA projects work towards the overall CWMA goal of: “reducing the negative impacts of invasive plants in Southern Illinois”

EXPECTED RESULTS OR BENEFITS:



Autumn olive control site

This project will result in a reduction in the negative impacts of invasive species in Southern Illinois through target control of priority species and locations, reduced spread of invasive species, and increased knowledge by landowners and agencies on invasive species management techniques. Specifically, this project will:

- Work with 15-20 private landowners to provide technical and financial assistance and aid with developing management plans for invasive plants
- Provide information on funding sources for invasive plant

control to an additional 10-15 landowners

- Develop management plans for three priority watersheds and three priority invasive species and seek funding to implement plans
- Work with CWMA partners to coordinate and implement portions of priority management plans on public lands
- Give 30 presentations or field tours on invasive plant management with at least 500 people attending
- Have a working online mapping and reporting system in place and in use by the end of the grant
- Compile database of known distribution records for southern Illinois invasive species. The database is predicted to have at least 15,000 records
- Hold at least three Early Detection and mapping training sessions and train at least 20 new volunteers
- Install boat ramp signs on at least 35 boat ramps
- Install an additional 10 boot brush stations at trailheads
- Spread prevention BMPs specific to southern Illinois developed and disseminated to CWMA partners
- Hand out at least 1,500 publications on invasive plants in Southern Illinois
- Prepare and release at least seven articles on invasive plants to local newspapers
- Hold four town hall meetings to discuss invasive plants, CWMA projects, and collaboration opportunities
- Work with land management agencies to develop and implement management plans for six natural areas

APPROACH:

This approach to meeting project objectives details the activities proposed over the duration of the grant (July 2011 to June 2014). The timeline for each activity is detailed in the ESTIMATED PROJECT SCHEDULE section.

The River to River Cooperative Weed Management Area, working through the CWMA coordinator – Chris Evans, will be responsible for meeting all Project Objectives. The CWMA is a partnership of multiple agencies and organizations, and the APPROACH section details the grant partners and cooperators involved in each activity. The CWMA has used this collaborative approach to conduct coordinated management efforts since 2007 and has a proven track-record of success. The CWMA Coordinator brings years of experience working on invasive species efforts and large-scale projects and the Shawnee RC&D (fiscal manager for the CWMA) has over four decades of experience managing large projects and grant efforts. Our CWMA brings together all of the major land management agencies and conservation organizations in Southern Illinois. This type of large-scale partnership, along with the expertise of the CWMA Coordinator and Steering Committee, will allow the CWMA to conduct activities necessary to meet the Project Objectives.



CWMA Volunteer training event for invasive plant surveys. Over the last two years, the CWMA has trained over 40 volunteers and recorded hundreds of new infestations

CWMA Staffing/Cooperator List

Position	Person and Affiliation
CWMA Coordinator	Chris Evans, River to River CWMA
Grants Administrator	Melissa Wilson, Shawnee RC&D
Steering Committee	Jody Shimp, Illinois Department of Natural Resources Julie Klamm, Illinois Department of Transportation Warren Goetsch, Illinois Department of Agriculture Tom Vorce, USDA-APHIS Matt Lechner, Shawnee National Forest Karen Mangan, Cypress Creek National Wildlife Refuge Judson Spicer, Crab Orchard National Wildlife Refuge Ron Ziehm, USDA-NRCS David Gibson, Southern Illinois University at Carbondale Michelle Wiesbrook, University of Illinois – Extension Karen Tharp, The Nature Conservancy Stephanie Brown, Shawnee RC&D
Cooperators	Kent Adams, National Wild Turkey Federation Terri Treacy, Sierra Club – Illinois Chapter John Wallace, Illinois Audubon Society Stephanie Eichholz, Green Earth, Inc. Chris Benda, Illinois Native Plant Society J.B. Gates, Illinois Forestry Association Chuck Barger, Center for Invasive Species and Ecosystem Health Various Soil and Water Conservation Districts throughout CWMA region Carolyn Ferdinand, Friends of Giant City Richard Johnson, Southeast Illinois Prescribed Fire Council

Objective 1: Create online mapping program

- Work with Southern Illinois University to enhance their database and transition to a stable software platform and incorporate data from partner agencies and other survey projects
- Work with the UGA Center for Invasive Species and Ecosystem Health to make data available on CWMA website (www.rtrcwma.org) and create online mapping feature using EDDMapS system (www.eddmaps.org)
- Make maps and database available to land managers to use for local prioritization and management decisions

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective by the presence of an online distribution mapping program being made available, annual usage of this website, and number of infestations tracked/reported on the website.

Objective 2: Strategic planning and priority control

- Use ranking systems developed as part of existing projects to identify priority watersheds, focal areas and invasive species
- Determine best management practices and control techniques for priority species
- Develop strategic planning, complete with target timelines and control methods to address priority COAs

- Work with land management agencies to coordinate, plan, and implement priority control activities using natural areas as the focus areas for the SNF-Pine Hills COA, Cache COA and ESNF COA
- Identify & map the distribution of bush honeysuckle in the SNF-Pine Hills COA through aerial detection techniques and develop response plan to survey results

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the presence of BMPs and control techniques, the number of plans/activities conducted within natural areas within the project focus areas, and the creation of a bush honeysuckle distribution map for the SNF-Pine Hills COA.

Objective 3: Private landowner assistance

- Work with Soil and Water Conservation Districts and Extension to start developing relationship with landowners in priority areas in the three COA’s.
- Provide direct financial assistance to landowners for controlling priority species and locations. Priority will be determined by severity of threat to high-quality natural areas and rare species extent of targeted infestation; probability of successful control and potential for restoration. Financial assistance will be reimbursement to the landowner for actual expended funds up to 75% of the total cost of the project. When possible, these funds will be used as leverage for other assistance programs (EQIP for example). Landowners will either conduct the work themselves (and get reimbursed for materials) or hire and pay a qualified contractor (the CWMA must review and approve costs and activities before the work is conducted). After project is completed, then the landowner will request reimbursement from the CWMA. The CWMA Coordinator and Steering Committee will be responsible for deciding if landowners qualify for the assistance (determined by which invasive species and location of land, depending upon project priorities). An annual expenditure of \$20,000 is being dedicated to financial assistance (for a total of \$60,000 over the duration of the grant).
- Determine other existing funding sources (Illinois FDA, EQIP, etc.) for invasive plant control and help advertise these sources

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the number of acres of priority invasive species treated, the number of landowners involved in the project, and the number of landowner contacts/technical assistance provided by the CWMA.



CWMA, partnering with DNR, to control bush honeysuckle

Objective 4: Awareness and education

- Continue giving presentations, field tours, and training sessions to enhance landowners, agency staff, volunteers, and private citizens’ knowledge of invasive plants
- Disseminate publications during educational events and at state parks, visitor’s centers, rest areas, etc.
- Prepare press releases about invasive plant issues
- Work with CWMA partners to better equip their staff with the ability to incorporate invasive plants into their educational scheme

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the number of

educational programs conducted, number of educational publications disseminated, and the number of staff training days conducted.

Objective 5: Reduce impacts of invasive species in natural areas

Continue working with land management agencies to map invasive species, develop response plans, find funding for control, survey and monitor success of management programs, and adapt management scheme based upon monitoring results

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through evaluations with the land management agencies conducting management activities. Asking questions such as ‘Do you feel your involvement in this project and subsequent management activities lead to a reduction on negative impacts of invasive species in your natural areas?’. Also, when possible, use survey data to compare population and distribution trends for invasive species within natural areas.

Objective 6: Reduce the spread of invasive plants

- Work with land management agencies to install boot brush stations at trailheads to educate the public and provide opportunity to clean boots before and after hiking
- Work with land management agencies to install boat ramp signs that educate and encourage boaters to clean boat and trailer
- Work with land management agencies to adopt spread prevention techniques for equipment cleaning and material sanitation

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the number of boot brush stations installed or maintained, the number of boat ramp signs installed, and adoption rate for spread prevention activities.

Objective 7: Early Detection and Rapid Response system

- Work with New invaders Program to adapt and implement EDRR strategy for Southern Illinois
- Work with area conservation organizations to develop Early Detection volunteer network
- Work with CWMA partners to develop response protocols and responsibilities

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the presence of an EDRR program, the number of volunteers trained as part of the program, and the number of infestations reported



Japanese Chaff Flower – an Early Detection species in Illinois

Objective 8: Engage other stakeholders

- Hold series of town-hall style meetings with different stakeholder groups to inform them about the CWMA and discuss invasive species needs and projects

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the number of stakeholder groups attending meetings.

Objective 9: Target control in COAs.

Hold regular meetings between CWMA partners to plan and implement conservation strategies for COAs

Accomplishment/Outcome tracking – Success will be measured/tracked for this objective through the number of meetings held throughout the duration of the grant

Emergency contingency plans: In the event of a new species being introduced that: 1. Has the potential to drastically alter ecosystems and impact natural resources, and 2. Methods exist to control this plant, then priorities may shift within the CWMA to address this new threat.

LOCATION: The River to River CWMA project area includes all of the following Illinois counties: Alexander, Gallatin, Hardin, Jackson, Johnson, Massac, Pope, Pulaski, Saline, Union, and Williamson. Particular emphasis and planning will be conducted within the three COAs (Cache River-Cypress Creek, Larue-Pine Hills-Western Shawnee-Trail of Tears, and the Eastern Shawnee COA). The River to River CWMA area is located within Congressional Districts IL-12, IL-15, and IL-19. This area contains roughly 4 million acres of land, including 286,000 acres of National Forest, 86,000 acres of National Fish and Wildlife Refuge, and 65,000 acres of State (DNR) lands. Also included in this area are 229 INAI sites.

ESTIMATED PROJECT SCHEDULE:

2011

July-Sep	4 days to begin mapping invasive species and enhancing online mapping program 4 days to begin planning and prioritization of species and sites 1 day on education and awareness efforts 2 days on spread prevention planning 5 days working with New Invaders to set up and design Early Detection/Rapid Response system 5 days working with DNR to develop invasive plant management plans for COAs
Oct-Dec	2 days to continue mapping/survey efforts 4 days to continue planning and prioritization of species and sites 10 days working with private landowners on control and planning efforts 2 days on education and awareness efforts 5 days working on control of invasive species within Natural Areas 1 day on spread prevention planning

2012

Jan-Mar	2 days to continue mapping and data collection efforts 2 days to continue planning and prioritization of species and sites 5 days working with private landowners on control and planning efforts 2 days on education and awareness efforts 5 days working on control of invasive species with Natural Areas 1 day on spread prevention planning 2 days conducting town hall meetings to engage stakeholders
Apr-June	2 days to work with volunteers on survey and data collection 5 days working with private landowners on control and planning efforts

15 days on education and awareness efforts (Illinois Invasive Species Awareness Month)

1 day on spread prevention planning

5 days on establishing an Early Detection Network

July-Sep

2 days to work with volunteers on survey and data collection for mapping

4 days to continue planning and prioritization of species and sites

5 days working with private landowners on control and planning efforts

1 day on education and awareness efforts

5 days working on control of invasive species within Natural Areas

2 days on implementing spread prevention planning

5 days on establishing an Early Detection Network

5 days working with DNR to develop and implement invasive plant management plans for COAs

Oct-Dec

2 days to work with volunteers on survey and data collection for mapping

4 days to continue planning and prioritization of species and sites

10 days working with private landowners on control and planning efforts

2 days on education and awareness efforts

5 days working on control of invasive species within Natural Areas

1 day on implementing spread prevention planning

2 days conducting town hall meetings to engage stakeholders

2013

Jan-Mar

1 day to work with volunteers on survey and data collection for mapping

2 days to begin implementing species and site prioritization plans

10 days working with private landowners on control and planning efforts

2 days on education and awareness efforts

5 days working on control of invasive species within Natural Areas

1 day on implementing spread prevention planning

2 days conducting town hall meetings to engage stakeholders

5 days working with DNR to implement invasive plant management plans for COAs

Apr-Jun

5 days working with private landowners on control and planning efforts

15 days on education and awareness efforts (Illinois Invasive Species Awareness Month)

1 day on implementing spread prevention planning

5 days on training and implementing Early Detection Network

July-Sep

2 days to implement species and site prioritization plans

5 days working with private landowners on control and planning efforts

1 day on education and awareness efforts

5 days working on control of invasive species within Natural Areas

2 days on implementing spread prevention planning

5 days on developing a Rapid Response protocol for early detection events

5 days working with DNR to implement invasive plant management plans for COAs

Oct-Dec

2 days to implement species and site prioritization plans
10 days working with private landowners on control and planning efforts
2 days on education and awareness efforts
5 days working on control of invasive species within Natural Areas
1 day on implementing spread prevention planning
5 days working with DNR to implement invasive plant management plans for COAs

2014

Jan-Mar

1 day to implement species and site prioritization plans
10 days working with private landowners on control and planning efforts
2 days on education and awareness efforts
5 days working on control of invasive species within Natural Areas
1 day on implementing spread prevention planning
4 days conducting town hall meetings to engage stakeholders

Apr-June

5 days working with private landowners on control and planning efforts
15 days on education and awareness efforts (Illinois Invasive Species Awareness Month)
1 day on implementing spread prevention planning
5 days to continue EDRR system enhancement and operations

CONTACT INFORMATION:

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ESTIMATED COSTS:

BY OBJECT CATEGORIES	FEDERAL SHARE	STATE SHARE	CWMA MATCH	TOTAL MATCH	TOTALS
		State Match	CWMA Match		
SALARIES AND WAGES	\$88,376	\$43,051	\$5,795	\$48,846	\$137,222
FRINGE BENEFITS					
TRAVEL	\$3,000				\$3,000
EQUIPMENT					
SUPPLIES/COMMODITIES					
CONTRACTUAL	\$60,000	\$30,000	\$10,000	\$40,000	\$100,000
CONSTRUCTION					
TOTAL DIRECT CHARGES	151,376	\$73,051	\$15,795	\$88,846	\$240,222
INDIRECT CHARGES					
F&A 9% TDC	\$13,624				\$13,624
TOTALS	\$165,000	\$73,051	\$15,795	\$88,846	\$253,846
	65%	29%	6%	35%	100%

RELATED GRANTS: none

BUDGET JUSTIFICATION:

Salary and Wages

PROJECT PERSONNEL, FEDERAL SHARE

River to River CWMA Coordinator, Evans, estimate 300 days over the 3 year project period = \$88,376

PROJECT PERSONNEL, MATCH (State and CWMA)

IDNR biologist Shimp, Lindsay, Ballard, Guetersloh, and IDNR Foresters Spivey and Allen 5 days/year/person = \$43,051

CWMA volunteers (estimate \$20/hr federal volunteer rate) 12.5 volunteer days/yr = \$5,795

(Volunteer time will be tracked using sign-in sheets for all volunteer events and time-logs for individuals that volunteer at times other than organized volunteer events. All volunteers will be asked to sign-in on the volunteer sheets and/or time logs to verify that they actually were present and conduct volunteer activities for the CWMA)

TRAVEL

Estimate \$800/year for Project coordinator travel to natural areas conference to present project findings and collaborate with other invasive species professionals.

Estimate \$200/year for project related travel within the CWMA project area

CONTRACTUAL (60,000 Federal, 30,000 state*, and 10,000 CWMA)

Funds to contract invasive plant control work on high priority natural areas on private (Federal and CWMA funds) and state (IDNR funds) sites. When possible, these funds will be used to supplement other cost-share programs (EQIP, FDA, WHIP, etc.)

*\$30,000 state match is In Kind contributions from the INDR for contractual control of invasive species within project area

INDIRECT CHARGES

F&A 9% TDC – Standard administration fee for Shawnee RC&D to administer grant and program.

COMPLIANCE:

The IDNR will use its CERP (Comprehensive Environmental Review Process) as a tool to aid the Department in meeting NEPA compliance for the project outlined under this grant proposal. It is the Department's policy to require CERP applications for all major activities, including land acquisition, unless those activities are covered by CERP exemptions (see the enclosed Comprehensive Environmental Review Process documents).

All planned activities will also be in compliance with the Endangered Species act. All determinations and documentation will be in accordance with the current established U.S. Fish and Wildlife Service protocols for Section 7.

All planned activities will be in compliance with the National Historic Preservation Act and the Council on Historic Preservation Act. All determinations and documentation will be in accordance with the terms of the Programmatic Agreement, as amended, effective September 23, 2002.

When applicable, those planned activities that involve a floodplain and/or jurisdictional wetlands will be done in accordance with Presidential Executive Orders 11988 and 11990.

When applicable, those planned activities that involve the use of pesticides, herbicides or other comparable chemicals will be done in accordance with current state and federal regulations to assure safe and legal application of those chemicals. All chemicals will be applied in accordance with the manufacturer's label instructions. All persons applying chemicals will be licensed by the Illinois Department of Agriculture as a chemical operator/applicator in accordance with Illinois state law.

LITERATURE CITED:

Illinois Department of Natural Resources. 2005. Illinois Comprehensive Wildlife Conservation Plan-Strategy (Illinois Wildlife Action Plan). Illinois Department of Natural Resources. 353 p.

River to River CWMA. 2006. RTRCWMA Memorandum of Understanding (MOU). 6 p.
<http://www.rtrcwma.org/mou.pdf>

SITE MAP ATTACHED

River to River Cooperative Weed Management Area – Project Area

