

# Prevention & WUI Work Group Report

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## **Prevention & WUI Team Charge**

Provide alternatives and make a recommendation on how to deliver the prevention and WUI programs. Explain how this can be provided given changes in what we can invest and at different levels of stratification.

### **Objectives**

- Define the Division's role in fire prevention and wildland urban interface program.
- Determine which prevention education/outreach methods are most effective.
- Determine which wildland urban interface methods are most effective.
- Make recommendations on ways to best deliver the Prevention and WUI programs and how our efforts will change based on the amount we can invest (continuum).
- Provide recommendations as to the future role of Emergency Fire Wardens.
- Recommend any desirable legislative changes that could help prevent forest fires or enhance mitigation strategies for WUI.
- Recommend ways to further improve the burning permit system (e.g. further automation of BP's, establishing "no burning periods," and special permits)

# **Division of Forestry's Role in Prevention and Wildland Urban Interface**

## **Prevention**

**Purpose** – to work within the Division and with partners to take appropriate actions to effect education and awareness with individuals related to fire cause throughout the state so to reasonably prevent as many wildland fire ignitions as possible and reduce damage associated with those ignitions.

**Current Investments** - Currently, base budget support for Prevention consists of funding the FTE Prevention Specialist position based out of Madison, and expenditures in activity code FRGG, fire prevention. Over the last five years, those expenditures for LTE salary, permanent salary and supplies averaged \$5,700, \$176,900 and \$166,200, respectively. All other aspects of the program, including funding for all prevention activities, are supported by grant funding, which is diminishing.

### **Bureau Role in Prevention**

- Provide guidance, leadership, support, and evaluation for statewide prevention effort.
- Monitor and review trends in cause information and existing prevention research and provide support to prevention efforts in those areas. Develop appropriate initiatives associated with needs identified in cause analysis.
- Provide leadership in specific statewide prevention campaigns.
- Manage prevention budget allotments of prevention funds to enhance statewide prevention efforts.
- Provide leadership to statewide policy efforts related to prevention to assure relevancy, consistency, and appropriate application of prevention efforts.
- Monitor developments in prevention activity with partners and on the national scene to assure maximum continuing effectiveness of ongoing prevention efforts.
- Develop, continuously assess, and adjust educational materials related to fire prevention.
- Respond to specific efforts that arise that may impact fire needs, and develop appropriate prevention tools and direction to address those needs.

### **Field Role in Prevention**

- Take appropriate actions to assure that prevention messages provided to the field are effectively shared at the local level to assure that they reach the intended target audience.
- Provide feedback from the local level to the Bureau regarding the efficacy of various messages and efforts.
- Assure that prevention tools are properly used locally to reach audiences in the intended manner.
- Observe and share within the Division the relationships between various prevention messages and the behavioral response by the public.
- Assess local fire cause trends, at both the Area and FRU level, and take appropriate prevention oriented measures to address those causes.
- Share prevention messages with the public and other stakeholders, both formally and informally, as opportunities arise.

### **Joint Role in Prevention**

- Establish, support, oversee and facilitate the function of a specialist team to continuously assess the role and effectiveness of prevention in Wisconsin. The team will be comprised of Division staff from both Bureau and field, and key internal and external partners. Handbook management will be a critical component of their work.
- Utilize prevention teams to address specific prevention needs in specific locations. These are small teams with a communication orientation established for a short period to respond to a particular circumstance or in response to specific actions, such as a series of significant fires in a particular location.
- As needed, establish, support, oversee and facilitate ad hoc teams of defined duration to assess specific prevention related issues requiring input from various perspectives.
- As appropriate, participate on teams created in other Divisions, or external to DNR which may have an impact on prevention related issues.

### **Recommendations -**

- Provide base funding for the prevention program (advertising campaigns, local prevention materials, burning permit system, etc.) to be supplemented by grant funds.
- Maintain handbook currency, as this is the key source of information for field application of the prevention program.
- Maintain and develop key partnerships (e. g., fire departments) in the area of prevention, and assure that messages shared are consistent.
- Consider continuing community activities that may have a less direct relationship with prevention, but which maintain a positive relationship between the fire program and the local community.

## **Wildland Urban Interface (WUI)**

**Purpose** - to work within the Division and with partners to take appropriate community oriented actions to identify and mitigate potential problems and issues associated with the development and existence of the wildland urban interface associated with wildland fires.

**Current investments** - Currently, the only base budget support for WUI is for the FTE WUI position based out of Madison. All other aspects of the program, including LTE Field WUI Specialists and funding for field projects, are supported by grant funding, which is diminishing.

### **Bureau role in WUI (including WUI coordinator and field WUI specialists)**

- Provide leadership, guidance, support, and evaluation for statewide wildland urban interface (WUI) planning and mitigation effort.
- Monitor developments in WUI techniques and strategies and assess for applicability in the state program.
- Monitor and oversee applicability of WUI efforts in light of relative fire related dangers and exposures in various parts of the state.
- Manage budget allotments associated efforts to assure maximum benefit from expenditures and efforts.
- Provide local support in the field for hazard mitigation project oversight, including major planning efforts. This support will most frequently occur through the efforts of field based WUI specialists. (Surveys show strong field support for this concept.)
- Help with connections with internal and external partners to facilitate WUI activities requiring coordination between various parties.
- Track grant funding opportunities available, following up with grant application efforts, where appropriate.
- Develop informational materials to effectively communicate WUI concepts to stakeholders.

### **Field role in WUI**

- Actively identify specific situations related to WUI which may be mitigated through a combination of planning, influence, and funding.
- Assist with the efforts of Bureau staff through facilitation of connections through established local relationships (FDs, homeowner groups, county officials, etc.)
- Provide input, support and advocacy for local WUI related efforts.
- Provide feedback to Bureau about efficacy of various field WUI activities.

### **Joint Role in WUI**

- Establish, support, oversee and facilitate the function of a specialist team to continuously assess the role and effectiveness of WUI-related efforts in Wisconsin. The team will be comprised of Division staff from both Bureau and field, and key external partners. This team can provide input to the process that identifies prioritization for hazard mitigation project funding.
- Collaborate on major federal grant related initiatives, including Community Wildfire Protection Plans (CWPPs), home ignition zone assessments, Firewise communities and hazardous fuels reduction.
- As needed, establish, support, oversee and facilitate ad hoc teams of defined duration to assess specific WUI related issues requiring input from various perspectives.

**Recommendations –**

- Provide base funding for four FTE field WUI specialists in Landscapes #4, #15, #7, and #9 in order of priority, based on fire history, and capacity for large WUI related fires..
- Provide base funding for WUI related activities, specifically education/outreach, fuels reduction, and planning, to be supplemented by grant funds.
- Incorporate WUI related aspects into local field position descriptions.
- Make efforts to better inform and interrelate with the field the objectives and specifics of the WUI program.
- Develop communications tools, such as an information sheet, regular features in the ForesTreeporter, and presentations at pre- and post-fire season meetings, Fire Working Group, etc.
- Develop deliberate mechanisms to obtain feedback from the field as to the efficacy of the program and ways to improve it.
- Develop specific practices to better incorporate local input into WUI solutions.

# Emergency Fire Warden (EFW) Program

## Objective/Charge

Review the Emergency Fire Warden program and make recommendations on the future of the Emergency Fire Warden program in the Wisconsin Department of Natural Resources Forestry Division.

### **Alternatives/factors Considered**

- Maintain the EFW program Status Quo.
- Increase the EFW program
- Decrease the EFW program
- Eliminate the EFW program
- Review statutes pertaining to emergency fire wardens
- Analyze steps that could be taken to reduce the costs associated with administration of an EFW program

## Current Investment and Background

The Emergency Fire Warden program is a long standing partnership that has benefitted the State of Wisconsin forestry program since the 1920's. The role of Emergency Fire Wardens has changed significantly over time evolving from a detection and suppression role to the current role of mainly issuing outdoor burning permits. The exception is Fire Chiefs or others designated as special fire wardens who are often involved with both forest fire prevention and suppression activities. Currently, EFW's play a significant role in the WDNR burning permit program by issuing the majority of burning permits issued in WDNR intensive and extensive areas (over 68,000 permits were issued in 2008 by EFW's and WDNR Ranger Stations). The new burning permit system requiring only one permit for the calendar year has reduced the number of burning permits being issued by over 30% and decreased the amount of information that is collected for each burning permit issued, making burning permits easier to issue. With the closure of or reduction in DNR Service Center hours (DNR service centers issued approximately 6000 permits in 2008) it is expected that EFW's will continue to be primary source for obtaining burning permits. In addition to issuing burning permits, EFW's have also traditionally been a location to obtain WDNR backcans or handtools to assist private citizens in conducting safe outdoor burning.

Over 65% of individuals surveyed indicated that maintaining some type of EFW program is an important aspect of the burning permit program, although several surveys also mentioned evaluating ALIS as a potential burning permit issuance method.

Budgetary concerns and time commitments to the EFW program have forced us to evaluate how we do business from a burning permit issuance standpoint. Large geographic FRU's have in some cases over 70 EFW's, requiring a significant amount of time and cost.

It is important to note that EFW's have been an extremely important and valuable partnership, steeped in tradition. This partnership is an example of a successful fire prevention activity that has historically been cost effective while continuing to maintain valuable relationships between the community and the Wisconsin Department of Natural Resources Division of Forestry.

## Recommendations

Recommendation #1 is based adoption of an ALIS based burning permit system. It also presumes statute changes allowing for burning permit issuance through ALIS, including an associated charge. Currently, 807 ALIS vendors are located in counties with either WDNR Intensive or Extensive Forest Fire Protection designation. This recommendation also takes into account future budgetary shortfalls.

- 1. If an ALIS based burning permit system is adopted, phase out the EFW program gradually over time.**
  - Explain clearly to all EFW's that ALIS options for burning permit issuance are being explored and may become the method for burning permit issuance.
  - A written burning permit is still required by Wisconsin State Statute, Statutes may need to be changed to allow for issuance of burning permits through ALIS. If ALIS is adopted change or eliminate statutes currently pertaining to Emergency Fire Wardens (See Appendix A1-A2 for a list of statutes referencing EFW's)

- Statute changes will need to be made to allow WDNR to charge for burning permits.
- Evaluate on a statewide basis the availability of sufficient ALIS vendors in the right locations.
- During the ALIS phase in period, restrict active recruiting of EFW's to high traffic, high visibility locations that are business type settings and are already ALIS vendors.
- One year prior to any implementation of an ALIS based burning permit issuance system, distribute informational pamphlets for distribution with burning permits explaining implementation of the ALIS system to the general public.
- Obtain constructive feedback at team, dispatch group, ranger recertification and technician meetings and communicate the implementation of an ALIS based burning permit system to all WDNR fire management staff.
- Conduct a final EFW banquet recognizing EFW's for their service, and arrange for appropriate media coverage.

**2. If an ALIS based burning permit system is not adopted, reduce EFW numbers, maintaining high visibility, high traffic locations.**

- Utilize phone contacts and mailings to communicate with EFW's to minimize costs.
- Stop issuing backcans or handtools to EFW's, making them available only at Ranger Stations.
- Eliminate Wisconsin State Statute 26.15; **“Responsibility of wardens and citizens.** Any fire warden who refuses to carry out this chapter, or any able-bodied citizen who refuses to render assistance as provided by this chapter, shall forfeit not more than \$50.”

**Changes in Investment:**

**Increased Resources:**

- Continue to move toward ALIS burning permit issuance. If sufficient financial resources are available, explore the option of a free ALIS burning permit.
- If ALIS is not adopted, maintain a reduced EFW force sized appropriately for FRU logistics. Consider placement of forest fire prevention signage at EFW locations in high traffic, high visibility areas.

**Reduced Resources**

- Continue to move toward ALIS burning permit issuance with an associated fee. Funds generated will provide a stable funding source to maintain and improve both the toll free phone system and outdoor burning permit information found on the WDNR internet site as well as to publish pamphlets and posters related to burning permits.

Components that were considered but that were not recommended (along with additional justification for the recommendations) can be found on page Appendix A1-A2 of the appendix.

**Measures of Success**

**If ALIS burning permit issuance is adopted;**

- Positive comments from customer satisfaction survey.
- Positive comments from ALIS vendor survey.
- Operational budget and time savings
- Increased utilization of web based burning permit issuance.
- Funding provided for the toll free phone system, enhancement of the website and prevention materials.
- Database to follow-up enforcement related to outdoor burning violations.
- Effective use of ALIS database for tracking of burning permit issuance.

Note: The measures of success may not be immediately recognized because it may take several years before the public accepts and adapts to the ALIS issuance system.

**If ALIS is not adopted and the EFW program remains in place;**

- EFW numbers reduced.
- High traffic EFW locations issuing the majority of burning permits.
- Reduced overall operational costs associated with EFW program.
- On line issuance of burning permits implemented supplementing EFW burning permit issuance.
- Self service burning permit options explored in appropriate locations.



# Burning Permit Program

## Objective/Charge

Recommend ways to further improve the burning permit system

### **Alternatives/factors considered**

- Lack of stable funding for prevention activities
- ALIS based burning permit system, with associated charge
- Eliminate the “carbon copy” for residential burn permits
- Eliminate burning on days when fire danger levels are very high or extreme.
- Add the option of issuing permits online
- Special permit issues
- In Extensive, require a burning permit whenever the ground is not snow-covered
- Increase flexibility for daily messages for phone system
- Suspend permits for set periods of time when fire danger is generally highest
- Eliminate burning on Air Quality Advisory days
- Ability to track when people call the hotline and or issue them a verification code to be sure they have checked restrictions

## Current Investment and Background

The DNR issues only two types of burning permits; 1) residential burning and 2) special permits for situations that exceed the baseline restrictions for residential permits. Residential permits are written on an annual basis and restrictions can be updated daily to allow for rapid changes in conditions. Restrictions for the day are available via toll free phone number or by accessing the DNR internet site. Currently, burning permits are obtained from DNR locations or EFW's. The EFW program, steeped in tradition, has been in place since the 1920's.

Wisconsin Statute requires written permission to have any fire, except for cooking or warming 1) in intensive areas, anytime the ground is not snow covered, 2) for extensive areas, anytime the ground is not snow covered in January through May.

Outdoor debris burning continues to be the leading cause of forest fires in Wisconsin, in both intensive and extensive protection areas. Burning without a permit, holdover fires, or burning contrary to burning permit restrictions accounts for 74% of all debris burning related forest fires. Burning with a valid burning permit accounts for 16% of all outdoor burning related forest fires. The remaining 10% of debris burning fires were not associated with burning requiring a burning permit. (Data from fire reports for the period 1987-2008)

There is wide acceptance of the current burning permit system:

- From the broad internet based Fire Assessment Survey, 86.6% of respondents said the existing burning permit system is effective from a fire prevention standpoint.
- 85% of respondents to the technician survey agreed that the current burning permit system is effective when it comes to preventing wildfires.
- Even without actively prompting local/ regional TV and radio stations, many media outlets have utilized the fire danger information from the DNR website and include fire danger and permit suspension as a portion of their news and weather segments during the spring time.

Based on survey results and comments, recommended enhancements to the burning permit will allow the system to

- Continue to be a major component of the WI DNR Forest Fire Prevention Program
- Provide a better product for the customers
- Create some additional efficiencies (both time and money for the department)

## Recommendations

Immediate adoption of the following will enhance the burn permit system. Additional information regarding components considered can be found in the Appendix A3-A5:

**1. Move toward issuing of burning permits via ALIS vendors, with a fee, to establish a stable funding source to fund the phone portion of the burning permit system.**

The new burn permit system has been a success, yet the phone system is funded by hazard mitigation funds. If hazard mitigation funds cease, so may the phone system and the ability of the Area Forestry Leaders to change restrictions as fire conditions change. What follows are recommendations based on 1) creation of an ALIS based issuing system and 2) a path to pursue if the ALIS System is not implemented.

**Primary Recommendation based on issuance of permits by ALIS vendors**

Propose a fee \$3 for a burning permit through ALIS to fund the phone system and other prevention efforts. Statutory changes are required to charge for burn permits.

**Alternative Recommendation, based on not issuing burning permits through the ALIS system**

- Assess the legal need for the Department to maintain record of a burning permit being issued and the validity of a self service burning permit. FLEST or an ad hoc team could make this assessment.
- Eliminate the “carbon copy” of the burning permit (see appendix), contingent on the above assessment.
- Establish self-service burn permit issuance (at local government offices, local businesses, libraries, etc). Make burning permits available by mail via the toll-free DNR hotline, contingent on the above analysis.
- Actively promote local media’s broadcasting of fire danger and permit restrictions.
- Investigate adding a surcharge to burning related citations to help fund the phone system.

**2. Improve Outreach:**

- Most forest fire issues are not directly related to the individuals who have valid permits. More outreach about burning permits and checking restrictions would likely result in more permits being issued and increased compliance, reducing the number of forest fires. For the period 1987-2008, there were 11,684 debris related fires. 9827 fires, 84%, were either not permitted, burning contrary to conditions, fires not requiring permits, or were holdovers. Improved outreach to reach those individuals not burning according to restrictions, failing to completely extinguish fires, or not burning safely.
- Increase public awareness of the dangers of holdover fires by adding script to the toll free phone messages and increasing web site information in regard to holdover fires.
- Fire Prevention Specialist Team should identify causes and develop appropriate materials.
- Provide base funding to support outreach efforts promoting burn permits, complete extinguishment of fires, and targeting specific fire causes.

**3. Suspend all Residential Burning when the Fire Danger Reaches Very High or Extreme.**

- For the period 1987-2008, there were 3492 debris burning fires at very high or extreme fire danger. Of those, 14 % were legally permitted fires that escaped. Those could be prevented by a burning ban. Further, media attention to such suspensions will heighten public awareness and may prevent additional debris burning fires.
- From a public relations standpoint, it is important to maintain a consistent message, including Smokey Adjective Level signs. Burning restrictions need to be consistent with the danger level.
- The following table illustrates that fire size at adjective levels at low, moderate, and high are relatively consistent, but at very high or extreme, the average fire size is nearly doubled. Although data is for all forest fires, it shows that fires are significantly larger once the conditions reach very high and extreme.

<b>Fire Size by Adjective (for all fires for the period 1987-2008)</b>	
<b>Fire Adjective Level</b>	<b>Average Fire Size (acres)</b>
Low	1.8
Moderate	0.98
High	2.01
Very High	3.86
Extreme	4.08

**4. Issue Permits Online to supplement other methods**

- Permits are required annually with a date stamp, which needs to be signed and available when burning.
- The responsible party would still meet the statutory requires of written permission
- Online permits are independent of the ALIS option.

## 5. Special Permits

- Survey comments indicate special permits are working well, and that it is important to field check them as weather dictates, using a common sense approach.
- DoF needs to maintain an active role in the issuance of special permits, which may include allowing special credentialed EFWs to write out special permits, with DoF approval.
- If the ALIS system is implemented, an ALIS permit must be obtained prior to special permit issuance.

## 6. Require Extensive areas to obtain burning permits and check restrictions daily when the ground is not snow covered, including after May 31

- With the new burn permit system, it is a logical time to change requirements for extensive areas.
- Currently in extensive areas, to enact fire restrictions, permits need to be reinstated and then canceled.
- Options to allow daytime burning in extensive areas should also be implemented,

## 7. More fully utilize the flexibility of the phone system

- Maximize benefits of the phone and internet restrictions in both intensive and extensive areas. Consider expanding burning opportunities when fire danger is lower.
- Credibility of the department will increase as the public begins to recognize the programs responsiveness to changing conditions.
- Encourage burning at lower adjective levels to decrease fires via increased utilization of the phone and internet systems.
- Explore using the phone and internet system to allow burning at times that traditionally have only been allowed for special permits.

## Changes in Investments

### Increased Resources

- After there is sufficient funding for the phone and internet based permit system, consider a free ALIS burning permit.
- Further expand outreach.

### Decreased Resources

- Drop implementation of recommendation to “Change regulations so that extensive counties would need to call anytime there is not complete snow cover”.
- If an ALIS based burning permit system is not implemented, there are other potential cost savings:
  - Eliminating the carbon copy for burn permits,
  - Mail permit books to EFWs and use the phone to communicate with EFWs.
  - Actively promote local media’s broadcasting of fire danger and permit restrictions to reduce phone usage. Further encourage accessing burn restrictions via the website, which has no volume-associated costs to DNR.
  - Investigate adding a surcharge to burning related citations to fund the phone system.

Based on current funding, the phone system is not sustainable due to the fact that there is not a stable funding source.

## Measures of Success

- Fewer fires. (Best measured continually over time using a multi-year average obtained from fire reports). Specific goals
  - Reduce number of fires at adjective level Very High and Extreme by 20% for 5 year average.
  - Reduced number of holdover fires by 50% for 5 year average.
  - Decreased number of non-reportable BWOP.
- Stable funding for fire prevention program created
- Phase in of ALIS vendors to issue burn permits within 5 years
- High customer service satisfaction measured by surveys and number of comments received via DNR general hotline.
- Reduced mileage and time being spent on EFW activities (reduction in activity code FRGI).
- Reduction in EFW force during ALIS phase in, by 20% in 10 years if ALIS recommendation is not implemented.
- Extensive counties need to have a burning permit anytime the ground is not snow covered, within 5 years.

# Legislative Recommendations

## Objective/Charge

Recommend any desirable legislative changes that could help prevent forest fires or enhance mitigation strategies for WUI.

### **Alternatives/factors considered**

- Status Quo;
- Change the Burning Permit Regulations in the Extensive Forest Fire Protection Area;
- Under 26.97(1), include citation authority to credentialed Forest Rangers for burning illegal materials under Wis. Stats. 287.81(4);
- Create stronger enforcement protocol for debris burning;
- Update the definition of “forest fire” of Chapter 26 to include “wildfire;”
- Create a fire prevention surcharge for burning permit violations;
- Establish a funding source to fund the toll-free number of the burning permit system by moving the issuing of burning permits to the ALIS vendors;
- Increase the cost of forfeitures for debris burning violations;
- In Chapter 26, eliminate the need for written permission as part of the burning permit process;
- Increase the forfeiture amount for Chapter 26 burning permit violations

## Current Investment and Background

The enforcement authority related to forest fires and burning regulations are primary found in two locations: Chapter 26 of Wisconsin State Statutes (and a few others referenced in 26.97) and Natural Resources Chapter 30 of the Wisconsin Administrative Code.

## Recommendations

- 1. Change Burning Permit Regulations in the Extensive Forest Fire Protection Area**
  - For the purposes of Annual Burning Permits, eliminate Extensive Forest Fire Protection Area designation in state statute and Administrative Code (have only Intensive Forest Fire Protection and COOP) or re-word state statutes and Administrative Codes so that areas currently designated as Extensive would be required to have a burning permit anytime the ground is not snow covered.
- 2. Under 26.97(1) include citation authority to credentialed Forest Rangers for burning illegal materials under Wis. Stats. 287.81(4)**
  - Support SB 119 that includes giving Forest Rangers the citation authority when a violation of 287.81(4) occurs and is encountered incidental to other wildland fire management activities.
- 3. Create stronger enforcement protocol for debris burning**
  - Follow-up law enforcement is a valuable part of any forest fire prevention program and appropriate enforcement standards need to be identified and applied uniformly across the state.
- 4. Update the definition of “forest fire” of Chapter 26 to include “wildfire”**
  - If Chapter 26 is opened for other modifications, in 26.01(2) the term “wildfire,” should be included as a synonym for “forest fire.”
- 5. Create a fire prevention surcharge for burning permit violations**
  - To supplement funding that is dedicated to the maintenance of the fire prevention program, including the burning permit phone and web system and educational outreach efforts, a \$20 surcharge should be added to any Wis. Stats. Chapter 26 or Wisconsin Administrative Code NR 30 violation related to forest fire laws or burning regulations.
- 6. Establish a funding source to fund the toll-free phone system for burning permits by moving the issuing of burning permits to the ALIS vendors**

- Change statutory language to establish a stable funding source by issuing burning permits through ALIS vendors for a fee.

**It is unclear how much additional time these enforcement activities will take. But it is also unclear how much time savings will result from shifting permit issuance to ALIS, and from decreased burning activity on bad fire days, as a result of the new BP system. It is expected that they will nearly correspond, cancelling one another.**

### **Measures of Success**

- Fewer debris burning caused forest fires in the Extensive Forest Fire Protection Area. Using the fire reporting system, this will be best measured over time using a multi-year average.
- Fewer forest fires caused by people burning “trash,” (materials currently prohibited from burning, with or without a burning permit). Using the fire reporting system, this will be best measured over time using a multi-year average.
- More citations written for forest fire laws and burning permit violations. Using the fire accomplishment reporting system, capture the number of citations written by type of violation (e.g. burning without a permit, setting fire and failing to extinguish) found within state statutes and Administrative Codes. The pattern of citations issued would reflect the level of Fire Danger occurring consistently across the state (e.g. fewer warnings issued and more citations written on days of very high and extreme fire danger).
- A source of funding to support the burning permit system through ALIS, supporting the toll free phone system, the web-based system, and educational information related to the burning permit system. The fee associated with the ALIS generated burning permit will be in place. The surcharge associated with Chapter 26 violations (and rules promulgated under) will be in place.

# Prevention

## Objective/Charge

Determine which prevention methods are most effective

- Analyze our current investment in prevention (activities by time, dollars, and locations).
- Determine the value of various prevention activities (school programs, Smokey Bear items, parades, signs, etc.)
- Assess the value of Prevention Teams. There have been recurring suggestions to “seize the moment” when “smoke is in the air” by mobilizing a Prevention Team to talk to area homeowners, officials, etc.
- Gather studies which assess the effectiveness of different prevention strategies and determine applicability to Wisconsin.

## Current Investments and Background

The Department’s financial investment in fire prevention is limited to one full-time statewide coordinator and ten field representatives to support the Fire Prevention Specialist Team. Prevention initiatives are entirely funded with federal moneys, primarily through grants from the National Fire Plan.

National Fire Plan funds that support statewide prevention through the state’s Hazard Mitigation Program were sufficient from 2005-2009. However, funding of the fire prevention programs through federal grants is not likely to be a sustainable practice much longer. Early indicators, such as the State and Private Forestry Re-design effort and a declining “maximum amount” for proposals, foreshadow the unreliability of this funding source in the future.

An analysis of current investments in prevention education and outreach activities shows that \$20,000 (state operational funds) was historically allocated to field operations each year. The majority of those funds were used towards the purchase of promotional Smokey Bear promotional material. As of 2009, the statewide allotments were permanently eliminated due to budget reductions.

See table of prevention labor hours & supplies for 2005-2009 in Appendix A14-A15.

A four-year average shows that statewide fire prevention efforts (to include the Fire Prevention Specialist & WUI Coordinators’ time) equal approximately 9,700 labor hours per year. This is equivalent to 4.7 full-time employees. The Fire Prevention Specialist Team accounts for approximately 360 labor hours per year.

In the 2005-2007 biennium budget package, \$70,500 of limited-term employee salary and fringe benefit funding was to provide support for 5,200 hours of assistance, annually, for back-up dispatchers. Those hours would be to complete 1) prevention, 2) fire analysis work and, during peak fire season days, 3) dispatching assistant. Thus, roughly 2/3 of their time, 3,400+ hours, should be dedicated to prevention and analysis work. Instead, a four-year average shows that only 540 labor hours were completed towards these prevention efforts statewide. This indicates that hours of back up dispatcher time for which funding has been provided has been used for other purposes.

## Specific Prevention Activities; Investment, Value, Recommendation, Changes and Measures of Success

### **Promotional Material**

#### Current Investment:

- \* Up until 2009, funding for Smokey Bear promotional material in the amount of \$20,000 traditionally came from state bureau operational funds. At the present time, those funds have been eliminated. Therefore, funding for all Smokey Bear promotional material comes from local operational budgets.
- \* Funding for larger event giveaways (e.g. State Fair) come from funding sources dedicated for those events.
- \* Other one-time events (e.g. Logging Congress or minor league baseball games) typically are funded via local operational budgets or Hazard Mitigation.



- \* From 2006-09, \$58,000 of hazard mitigation funds was used to support educational items and trinkets. Items included things such as Smokey Bear suits and outreach materials (e.g. pencils, lunch bags) and Firewise outreach materials (e.g. work gloves, magnets, t-shirts, hats, coffee mugs, carpenter pencils).
- \* Between 2005-09, \$84,000 in hazard mitigation funds was used to create and distribute re-usable wildfire prevention tote bags. From 2006-08, \$68,000 in hazard mitigation funds were used to support the creation of a wildfire prevention message on tree seedling boxes, for statewide distribution.

Value:

- \* Promotional material has a limited effect on preventing wildfires
- \* Promotional materials create awareness for Wisconsin's fire program and allow the DNR to engage the public at events/school programs
- \* Promotional material must be of good quality & contain an accurate and/or proactive message and be target audience appropriate
- \* Materials can be an opportunity for a take home message and leave a lasting impression
- \* Promotional material/ trinkets may not be thought of as an effective method to prevent wildfires or reduce risks. They do, however, raise awareness of the issue. These types of efforts can be implemented by DNR field, CO, WUI specs, teachers, FDs, and parks/forests.

Recommendations:

- \* Keep promotional material giveaways unique to appropriate fire management and fire prevention events and programs.
- \* Minimize giveaways provided to other programs within the DNR (e.g. Wildlife staff represented at a Ducks Unlimited event) where fire staff and a fire message is not represented.
- \* Consider creating good quality, low-cost products with a message specific to Wisconsin. The products could coincide with the theme for Wildfire Prevention Week.
- \* Funding for smaller local events should come from local operational budgets.
- \* Funding to purchase materials for larger events that have statewide or regional impact should not come out of local operational budgets and could be supplemented by Hazard Mitigation as funding allows.
- \* When the Central Office has limited supply of materials, priority should fall on Dispatch Groups, State Forests, and then areas outside of intensive and extensive protection, in order of priority.

Changes in Investment:

**Increased Resources:** Re-establish the dedicated operational funding statewide for these materials. Funds can also be used to create Wisconsin-specific materials for statewide use.

**Decreased Resources:** Purchase only low-cost materials (e.g. pencils).

Measures of Success:

One-on-one prevention contacts can be measured by the number of materials distributed. A mechanism for this accounting could be via the accomplishment reporting system on an annual basis.

**Fire Prevention School Programs**

Current Investment:

- \* In 2007, LEAF Wildland Fire K-12 curriculum was developed for teachers along with in-classroom resources for forestry field staff
- \* In 2009, a 7 minute K-2<sup>nd</sup> grade interactive DVD for forestry field, teachers, & partners was developed
- \* The Wildland Fire Curriculum is currently posted on the internet for teachers to download at no cost; several classroom materials specifically for foresters are posted on the DNR's intranet
- \* In 2008, LEAF incorporated wildland fire activities directly into a graduate level course for teachers (75 teachers took the course).
- \* 1,100 educators have participated in the LEAF professional development course since 2007 and have received an introduction to the Wildland Fire Curriculum.
- \* Workshops for strictly fire-based LEAF curriculum are not currently offered; scholarships for teachers for general LEAF curriculum workshops run roughly \$325/teacher.



Value:

- \* Survey results indicate 73% of field forestry staff (techs, rangers, dispatchers & foresters) feel that school programs (K-6) are somewhat effective to very effective in preventing wildfires
- \* Children cause a minimal number of all wildfires annually. However, they are impressionable at a young age and the long-term effects of the programs are valuable
- \* School programs help maintain good community relations (survey questions)
- \* Smokey Bear is best utilized in grades K-3 (survey questions)
- \* Firefighters in uniform have high credibility in carrying a fire prevention message (PIFE research)
- \* Better, more interactive and current tools are available to conduct school programs (LEAF resources, Schoolhouse DVD, Smokey's Big-Book, etc.)
- \* School programs are a great way to get to the parents and educate them on adult causes

Recommendations:

- o Statewide
  - \* Promote use of materials via web for teachers to be mailed to them free of cost to use in their classroom
  - \* Some field staff mentioned that we need more current materials. However, they do not exist. Thus, the methods of promoting those materials need to improve
  - \* When doing school programs, combine close grade levels and similar levels for bigger audiences
  - \* Promote use of LEAF; use field forestry staff to assist in conducting local teacher workshops to ensure teachers are equipped to conduct fire curriculum on their own
  - \* Beyond the existing workshop schedule, consider organizing specific LEAF wildland fire curriculum workshops for teachers (a local project utilizing Hazard Mitigation Funds)
  - \* All programs must contain take home information for the parents.
  - \* Partner with local fire departments to assist in programs
  - \* Create a "Smokey's Helper" so that teachers/organizations can do programs without the presence of DNR.
  - \* Forest management & fire prevention messages should be combined
  - \* School forests should incorporate fire prevention messages at all grade levels
- o Fire Landscape (FL) in DNR Protection
  - \* School programs in K-3 shall be conducted in FL 4, 5, 7, 9, 15 once every three years by DNR forestry field staff
  - \* School programs in K-3 should be conducted in FL 3, 6, 8, 10, 11, 13, 14, 16 once every three years by DNR forestry field staff
  - \* School programs in 4-12 should be conducted when special opportunities exist (in conjunction with other projects such as the creation of fire prevention signs) in FL 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16 by DNR forestry field staff
  - \* School programs conducted by DNR forestry field staff in K-12 are not recommended in FL 1, 2, 12.

Changes in Investment:

**Increased Resources:** School programs in K-3 should be conducted in FL 3, 6, 8, 10, 11, 13, 14, 16 once every three years by DNR forestry field staff. School programs in 4-12 should be conducted when special opportunities exist in all landscapes by DNR forestry field staff.

**Decreased Resources:** School programs in K-3 should be conducted in FL 4, 5, 7, 9, 15 once every three years by DNR forestry field staff. Conduct school programs when special opportunities exist in FL 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 by DNR forestry field staff. Again, school programs in K-12 are not recommended in FL 1, 2, 12 by DNR forestry field staff

Measures of Success:

Monitor the number of LEAF workshops and count the number of school programs conducted on an annual basis, using the accomplishment reporting system.

**Smokey Bear**

Current Investment:

- \* As of 2009, the DNR owns a total of 44 Smokey Bear suits [see Appendix A13 for Smokey Suit distribution] which can be found mostly at Ranger Stations.
- \* Most of the requests for Smokey visits come from the higher populated areas.



- \* Our DNR policy is, if a visit cannot be accommodated, the second option is to loan the suit to local fire department personnel; all suit appearances must be accompanied by uniformed fire personnel. Smokey suits cost roughly \$3500 per suit and repairs have proven rather costly

Value:

- \* The ‘Only You’ message is as true today as it was when Smokey first appeared in 1944. It is important for everyone in the fire community to understand that Smokey’s message *does not conflict with land managers’ parallel need for prescribed fire and other fire management tactics*. His message is simply preventing unwanted, human caused wildfires- an extremely important one at that (NWCG Communicator’s Guide for Wildland Fire Management).
- \* Smokey’s image in parades is effective in creating awareness for the fire program (numerous survey comments)
- \* Repetition of the image is important
- \* At any age, Smokey is relatable



Recommendations:

- \* Accompanying all Smokey appearances, should be a local fire prevention message. Smokey school program visits should be limited to grades K-3.
- \* Utilizing fire departments for Smokey appearances is a partnership that should be considered. Keep Smokey’s image and message traditional.
- \* Smokey Bear appearance requests should be evaluated and prioritized as work and time allows. Smokey appearances during times of higher fire danger should be strongly considered, especially in FL 4, 15, 9, & 7.
- \* Create a “Smokey’s Helper Vest” generic uniform, and Smokey Guideline booklet so that teachers and other credible organizations (i.e. Boy Scout groups) can do programs without the presence of DNR; proper education and hand-off will be critical for appropriate use and success; promote the use of the DVD, teacher curriculum and forester resources when handing off the suit.
- \* Establish some baseline funding for Smokey suit repairs & annual cleaning.

Changes in Investment:

**Increased Resources:** Purchase additional suits for our more populated areas and encourage more partnerships with fire departments to increase more appearances.

**Decreased Resources**

If we have a decrease in resources, we should consider utilizing partnerships for most of the Smokey appearances.

Measures of Success:

Maintain a journal or log with each suit to indicate the audience and number of people reached. On an annual basis, this information could be transferred to the accomplishment reporting system.

**Parades and Events**

Current Investment:

It is difficult to quantify the number of prevention related events due to the inaccuracies of the fire accomplishment reporting system. Many communities have events such as parades, fishing clinics, career days, county fairs, fire department fund raisers, etc. which DNR forestry staff are routinely asked to attend (and occasionally bring Smokey). Several of the event requests fall on weekends which require overtime/comp time pay. Along with smaller community events, the DNR also participates in other larger events such as State Fair, Logging Congress, Balloon Rallies, Log-A-Load, Air Shows, etc.



Value:

- \* Participation in high traffic events to raise awareness of your fire message among the broader community is effective outreach
- \* Smokey & fire equipment in parades are not necessarily effective in preventing fires, but effective in creating awareness for fire program & fire prone areas (several survey comments)
- \* Parades hit target audience in a short amount of time for little cost
- \* It’s difficult to justify going to State Fair for prevention while reducing local prevention efforts; only 26% of dispatch/techs felt State Fair prevented fires

- \* People come to State Fair to visit the mechanical Smokey in his Schoolhouse every year and have done so for many years

Recommendations:

- \* Prioritize local events based on appropriateness, target & size of audience, & distance from stations.
- \* On a statewide basis, events including parades should focus on times of high fire danger with larger audiences especially in landscapes FL, 4, 7, 9, 15.
- \* Use partners such as fire departments if possible in FL 3, 5, 6, 8, 10, 11, 13, 14, and 16.
- \* Support staff attendance in landscapes FL 1, 2, 12 when event has a large attendance and is appropriate for a fire prevention message.
- \* Continue to support mechanical Smokey at Smokey's Schoolhouse within State Fair.

Changes in Investment:

**Increased Resources:** Hire contractors at State Fair to staff Smokey's Schoolhouse daily from 9-5 for the entire event. Expand attendance at events in FL 3, 5, 6, 8, 10, 11, 13, 14, and 16.

**Decreased Resources:** Minimize event attendance to only one or two select pre-determined events. Use fire departments for parades when possible. Increase unstaffed static displays.

**Signage, Including Fire Danger Signs**

Current Investment:

- \* According to Fire Action Plans & Handbook, there are no standards for the number of Smokey Bear Fire Danger Adjective Level Signs.
- \* For years, the Division used hand painted signs that needed yearly maintenance. Currently, the signs are being made of aluminum, reflective and UV protected material and pressure treated lumber with a lock box to house the adjective levels. The new signs are geared to last 7-10 years before repairs. The total cost of one complete sign is \$784 (without lumber).
- \* From 2006-09, \$55,000 in hazard mitigation funds supported wildfire danger signage.



Value:

- \* 95% of techs & dispatchers felt that fire danger signs are effective in preventing wildfires
- \* Location of signs is important; focus on high impact & high risk areas
- \* Quality of sign & accuracy of message is important
- \* Smokey Bear fire danger signs are minimal cost and get image out there
- \* Fire departments support the effort of using them for changing messages and routine maintenance (Fire Department Advisory Committee)
- \* Billboards are considered to be somewhat effective at preventing wildfires. They should be created by CO, WUI specs, and DNR field forestry staff.
- \* Signs & posters are considered to be somewhat effective at preventing wildfires and reducing risks. They can be created by DNR field forestry staff, CO, WUI specialists, FDs, UW Extension, and possibly, State Parks and Forests.
- \* Fire danger adjective level signs are highly effective messages for the publics understanding of fire risk (e.g. to burn or not to burn)

Recommendations:

- o Fire danger signs should be utilized & kept accurate, especially in spring. Use fire departments for maintenance. Replace old signs. Keep them the same/do not deviate from their original message.
- o Statewide
  - \* Purchase new or relocate existing fire danger rating signs to high traffic areas.
  - \* Use businesses/partners to change fire danger rating signs to reduce mileage/time by DNR forestry field staff to change fire danger rating signs.
  - \* Support the effort of utilizing DOT electronic signs during emergency forest fire regulations.
  - \* Adjective levels need to correlate with appropriate burning permit issuance; based on predicted indices, residential burning will not be allowed (burning permits suspended) when an adjective level is on Extreme or Very High.

- \* Better promote base funding for sign purchase and maintenance to purchase fire danger signs.
- \* Move towards higher quality aluminum signs. High traffic areas, and move away from lower traffic areas and poster boards.

Changes in Investment:

**Increased Resources:** Explore the possibility of using electronic fire danger signs.

**Decreased Resources:** Remove signs that cannot be maintained or are longer distances from stations and look for cost-shared opportunities to purchase signs.

**Alternatives to burning**

Current Investment:

- \* Hazard Mitigation allows for projects related to promoting alternatives to burning (e.g. chipping days, debris disposal sites, etc).
- \* Model Burning Ordinance was created by the Air & Waste program

Value:

- \* Debris burning continues to be the number one cause of wildfires statewide (33%); ten year average ('99-'08)
- \* Creating more viable (easily accessible, low-cost) alternatives to burning could decrease the number of debris fires



Recommendations:

- o Statewide
  - \* Encourage the use of the DNR Model Burning Ordinance by Township or County levels.
  - \* Assist in organizing community chipping days.
  - \* Continue support for citation authority (for illegal burning materials).
  - \* Identify and promote more low-cost means for debris or garbage disposal within local communities.
  - \* Encourage seasonal residents to take refuse home instead of burning it before they leave.
  - \* Field staff should work more closely with Air & Waste to promote the DNR Model Burning Ordinance in appropriate communities and identify alternatives to burning in outreach material.
  - \* Consider revisiting the “Burn Barrel Buy Back Program” initiated from Minnesota DNR.
  - \* Continue to utilize and suspend burning via WIS-BURN hotline & website during Very High & Extreme fire danger days as well as Air Quality Alert & Air Watch Days.
  - \* CO and the Prevention Specialist Team should create a campaign to address seasonal residents who burn garbage before they leave their second home. All media relations should promote alternatives to burning; number one recommendation.
- o By Fire Landscape:
  - \* Staff applying for Hazard Mitigation funds, should consider alternatives to burning projects (e.g. organizing chipping days & establishing debris disposal sites or pick-ups). *See WUI section for recommendations by landscape.*
  - \* All media relations should promote alternatives to burning; number one recommendation.
  - \* Central Office and the Prevention Specialist Team should create a campaign to address seasonal residents who burn garbage before they leave their second home.

Changes in Investment:

**Increased Resources:** Increase the number of alternatives to burning and/or the awareness of these alternative methods. Use public awareness efforts such as media (TV, radio, print) to promote the alternatives.

**Decreased Resources:** Scale back on the public awareness efforts and only focus on times of high fire danger or communities at risk.

Measures of Success:

A success as an alternative to burning could be the number of Model Burning Ordinances adopted

## Web-based Fire Reporting System

### Current Investment:

- \* The web-based fire reporting system has been an on-going project since 2003. It lacks the ability to be queried for many important elements (e.g. weather, indices, etc.).
- \* The current investment to maintain and develop new projects associated with the system is a tenuous part-time contracted position.



Date	County	Fire Name	Acres Burned	Restriction Level	Fire Cause	Structure Type	Structure Area	Structure Value	Structure Occupancy	Structure Damage	Structure Status	Structure Notes
01/01/2010	Adair	...	...	...	...	...	...	...	...	...	...	...
01/02/2010	...	...	...	...	...	...	...	...	...	...	...	...

### Value:

- \* The basis for the web-based portion of WIS-BURN is for the public to obtain daily fire restriction information
- \* Houses historical fire information and the ability to query that information as soon as it's entered
- \* Displays fire danger information within DNR protection by county boundary
- \* Displays fires and acres burned for the external website
- \* The ability to query information (e.g. fire causes, acres burned, etc.) in a user friendly format is critical for media & outreach purposes.
- \* Many media outlets have accessed this fire information for television, news and radio stories

### Recommendations:

- \* Make the fire report program more user friendly and add some useful information in order to more easily identify and then target local fire causes
- \* Currently, the phone portion of WIS-BURN is a separate entity from the web portion; therefore, web-base the phone and web for seamless and consistent changing of daily fire restriction information
- \* Support fire danger adjective level information currently in the "cooperative" area; secure staff time and dedication to support this effort for fire danger information on a statewide basis
- \* Create a downloadable "fact sheet" of year to date totals, restrictions, and fire danger statewide; sort of a "daily ops plan" for the media
- \* Several of the secondary causes (ex. Ash disposal, powerline and fireworks) cause significant numbers of fires, yet the ability to *easily* query the report system needs to be addressed.
- \* Create sub- categories for structures (ex. Primary residences, small outbuilding (less than 200 ft<sup>2</sup>), medium outbuilding (201-500 ft<sup>2</sup>), large outbuilding (greater than 501 ft<sup>2</sup>), etc.) to be able to better determine Urban Interface issues
- \* Add the days Fire Danger Adjective in order to be able to look at patterns at different adjective levels
- \* In addition to maintaining custom queries, create popular pre-established queries that would allow staff to quickly evaluate some of the more common prevention related information.

### Changes in Investment:

**Increased Resources:** Hire a dedicated 2-year project person to complete enhancements of the overall web-based fire reporting system.

**Decreased Resources:** Maintain the status quo; the program has become so dependent on the system that reducing in this area is not a viable option.

### Measures of Success:

Success could be measured by the number of web hits to the fire reporting page. The mechanism to accomplish this would be software to allow this to happen. We could also keep a list of the other web sites that include a link to our web site (e.g. radio/TV stations, homeowner associations).

## Displays

### Current investment

- \* From 2006-09, hazard mitigation funds supported the creation of displays in the amount of \$39,000. Displays included IMT decals, banners, Smokey Bear statues, Skyline displays, historic fire markers (i.e. Cottonville Fire, Eisberner Memorial).
- \* The Division also has several fire prevention related roll-up banner displays for staff use (2 stands with 6 banners per dispatch group).



### Value

- \* Fire prevention/WUI displays can be manned by field forestry staff, WUI specialists, central office, fire department personnel, and UW Extension staff.
- \* Firewise demonstration sites are considered a somewhat effective method to prevent wildfires/reduce risks. Appropriate project managers include WUI specialists, DNR field forestry staff, CO, FDs, local government, and UW Extension.
- \* People who have opportunities to observe a practice and its benefits are more likely to adopt the practice. Demonstration sites and neighborhood events provide opportunities for sharing the aesthetics of fuels reduction (Sturtevant and McCaffrey 2006).

Recommendations:

- \* Consider utilizing unstaffed static displays when possible, using local staff to maintain the supply of publications accompanying the displays.
- \* Lend displays to partnering organizations.

Changes in Investment:

**Increased Resources:** Create more banners specific to fire landscape needs.

**Decreased Resources:** Loan displays to partners and/or events only where a DOF staff is not necessary.

Measures of Success:

Monitor the number of times a display is used and capture this within the fire accomplishment reporting system. Keep a sign-in sheet with the displays so users can document information about the event (event name, date, approximate number of attendees, etc.). Enter this information on the accomplishment report.

**Newspaper/magazine outreach**

Current investment

- \* From 2005-09, newspaper outreach was supported by the hazard mitigation program in the amount of \$38,000. Outreach included newspaper ads, chipping day announcements, brush collection site announcements, and inserts (Living with Fire and Burning News).
- \* Advertising space has been purchased in the Wisconsin Woodland Owners Assn magazine (spring and fall editions), and the Great Lakes Timber Producers Assn. Half-page ads cost about \$250.
- \* Staff have been given the opportunity to write articles, including interviews, for newspapers and magazines at no cost to the Department.



Value

- \* Press releases are thought to be a somewhat effective prevention outreach tool. A variety of sources can assist with press releases: DNR field forestry staff, CO, WUI specs, and possibly fire departments.
- \* Print ads are considered to be somewhat effective at preventing wildfires and reducing risks. They should be implemented by CO, WUI specs, and field forestry staff.
- \* Newspaper inserts featuring local wildfire issues or events can be used to educate people about fire prevention and safety. These inserts are considered to be somewhat effective at preventing wildfires and reducing risks.
- \* Staff considers articles and newsletters to be a somewhat effective tool to prevent wildfires/reduce risks. This kind of effort can be implemented by CO, field staff, and WUI specialists, potentially with assistance from UW Extension and fire departments.
- \* Newspaper outreach provides for community-wide distribution of information.
- \* Information is more likely to be read and taken seriously when presented in the local paper.
- \* Feature stories can heighten the perceived importance of the topic. They are likely to be read and taken seriously by the public.

Recommendations:

- \* Continue informing partners through newsletters.
- \* Focus advertisements on pertinent fire causes and target audiences.
- \* Newspaper ads and inserts should be first supported in Fire Landscapes 4, 7, 9, and 15 (priority) and in FL 3, 5, 6, 8, 10, 13 and 14 (secondary) as appropriate with elevated fire danger and creating awareness of fire occurrence and anniversaries of historic project fires.

- \* Press releases should continue to be generated by the Central Office and Regional Public Affairs Managers.
- \* Press releases should not be issued unless a fire risk is associated; avoid the “cry wolf” syndrome.

Changes in Investment:

**Increased Resources:** Increase the audience size and frequency of contacts.

**Decreased Resources:** Focus only on high risk landscapes and limit the audience and frequency.

**Public Service Announcements**

Current investment

- \* Since 2003, the Bureau has coordinated statewide radio advertisements purchases in the spring.
- \* Several professionally produced radio spots were created by the Bureau.
- \* In addition to statewide campaigns, field staff have also coordinated broadcasts of the PSA’s with local radio stations at no cost.
- \* From 2005-09, hazard mitigation funds supported PSA’s to the tune of \$209,000. Spots were created to increase awareness of wildfire dangers of fireworks, debris burning, campfires, and ash disposal. A television PSA called “Plan, prune, and protect” was also created. In addition, funds supported PSA’s in connection with the new WIS-BURN system.



Value

- \* Radio and TV interviews were rated as being the most effective outreach method for preventing wildfires/reducing wildfire risks.
- \* A variety of sources can assist with interviews: DNR field forestry, CO, WUI specs, and fire department personnel.
- \* 85% of Techs/Dispatchers feel that radio & television ads are very effective in preventing wildfires
- \* Several of the surveys & cafes, indicated support for more use of radio/TV ads for prevention messages
- \* Radio is an often-forgotten medium, but sometimes it can provide the most effective means to reach your target audiences (NWCG Wildfire Prevention & The Media, PMS 454)
- \* Radio is more cost effective than television, can be more immediate, and has a better chance of running messages as a public service (no cost)
- \* Television is a powerful medium for wildfire prevention messages; the most effective means for television are strong visuals and concise sound bites, preferably in uniform (NWCG Wildfire Prevention & The Media, PMS 454)

Recommendations:

- \* Staff involved in PSA’s shall foster a relationship with the media outlets they use – this kind of positive relationship may result in more favorable timing of messages and running of additional messages as a public service.
- \* CO staff should check out the option of posting videos on internet sites.
- \* Base funding needs to be established to purchase radio and television ads. In the absence of such support, the use of Hazard Mitigation funds to purchase radio and television ads should be a high priority.
- \* Statewide purchases should be coordinated by the Central Office. The timing of the purchases should be during the spring and/or in times of traditional high fire danger.
- \* Forestry staff should develop strong relationships with local media outlets to encourage playing PSA’s during non-traditional spikes in fire occurrence.
- \* Focus messages on the use of WIS-BURN (phone & web).

Changes in Investment:

**Increased Resources:** Increase the audience, frequency, and quality of contacts.

**Decreased Resources:** Focus only on high risk landscapes and limit the audience and frequency; do not compromise the quality.

Measures of Success

Purchases made with Hazard Mitigation need to be quantified, therefore knowing the market, frequency, number of stations, and times played is required for the federal reporting system.

## Publications

### Current investment

- \* Between 2005-09, \$117,000 in hazard mitigation funds supported the creation of publications, including the Point of Origin newsletter, Living with Fire newspaper insert, placemats, door hangers, Natural Resources magazine insert, tax bill flyers, and numerous brochures.

### Value

- \* Staff consider articles and newsletters to be a somewhat effective tool to prevent wildfires/reduce risks.
- \* Placing info in property tax mailings is another way of getting to the audience in every household we need to reach.
- \* Eight of the 20 “top performing” Forestry publications from 2006-09 were ones created for fire management: Burning Permits – it’s your responsibility (FR 400), Burn Barrel/Pile Information (FR 357), Wisconsin Forest Fire Laws and Regulations (FR 224), Wildfire Prevention Calendar (FR 192), Firewise Around Your Home (FR 297), Living with Fire Placemat (FR 284), Smokey Bear Prevention Placemat (FR 389), and Smokey Bear Wildcard (FR 236m).
- \* A 3-year average of “Burning Permits- It’s Your Responsibility” shows that 83,000 brochures were ordered by the field. 30,000 were ordered for “Burn Barrel/Pile Information.” Lastly, 23,000 were ordered for “Forest Fire Laws & Regulations”
- \* People prefer to try new practices in stages. Checklists can provide homeowners with a way to incrementally assess and test each stage of an innovation (Sturtevant and McCaffrey 2006).
- \* Direct mailings are considered to be somewhat effective at preventing wildfires and reducing risks.



### Recommendations

- \* Create fire prevention packets for new home buyers in high hazard areas. This effort can be implemented by WUI specs, CO and field staff with assistance from local govt.
- \* Articles and newsletters can be implemented by CO, field staff, and WUI specialists, potentially with assistance from UW Extension and fire departments.
- \* Creating inserts for tax bills can be implemented by CO, WUI specs, and field staff, with possible assistance from UW Ext and local government.
- \* Direct mailings can be implemented by WUI specialists, DNR field forestry staff, CO, local government, FDs, and UW Extension.
- \* Continue to print “Burning Permits- It’s Your Responsibility” brochure and hand out with written permits. Consider more targeted direct mailings in fire landscape 4, 7, 9, & 15.

### Changes in Investment:

**Increased Resources:** Consider more frequent updates of publications, and a higher quality of paper and graphic design.

**Decreased Resources:** Limit the frequency of updates, and focus only on distribution in high risk landscapes. Consider a lower quality of paper.

### Measures of Success:

Utilize the Order Tracking Information (OTIC) system from Darwin Rd. warehouse to monitor the number of publications or posters distributed to the field annually

## Patrols & Pre-Positioning

### Current investment

- \* The only organized and contracted patrol came from the Waupaca Fire Department in April of 2009 and consisted of two wildland fire trained firefighters patrolling the Waupaca fire district in a type 7x engine.
- \* On four separate occasions, the patrol notified DNR dispatch that they observed someone conducting illegal debris burning.
- \* DNR forestry personnel made contact with the individuals, explained the burning laws, and filled out forestry contact slips.



- \* The total cost of the project was \$800.

### Value

- \* Patrols can be conducted by DNR field forestry staff or by our partners, such as fire department personnel.
- \* The idea of patrolling high hazard areas during periods of high forest fire danger had mixed reviews in the surveys and cafes. Some people felt patrols were an effective way to prevent wildfire and others said they were a waste of gas and mileage.
- \* Patrols & pre-positioning heavy units on high fire days are somewhat effective to effective in preventing wildfires

### Recommendation

- \* As fire danger increases, 4x4 patrolling is strongly encouraged throughout communities at risk.
- \* Utilize the Fire Danger Adjective Level magnets for all forestry vehicles and partners (i.e. fire departments), especially during times of high fire danger.
- \* Pre-position fire equipment in high visible locations (e.g. gas stations, grocery stores, etc.).

### Changes in Investment:

**Increased Resources:** Patrol more in communities at risk, especially on days of Very High and Extreme. Purchase additional danger level vehicle magnets for partners, especially fire departments.

**Decreased Resources:** Patrol only on Extreme days and/or consider contracting, as funding allows.

### **General Fire Prevention Outreach Values:**

- \* It is important for fire staff to develop working relationships with local media (fire assessment survey)
- \* The internet is mechanism most often used by other news media outlets for fire information
- \* Communicating wildfire prevention messages to the public, through the news media, requires an aggressive, proactive approach
- \* Fire-fighters have high credibility in the media; most believable/effective fire prevention message deliverer
- \* Presentation are a somewhat effective prevention tool and can be given by DNR field forestry staff, WUI specialists, CO, FDs, UW Extension, teachers, parks/forests.
- \* Workshops are considered to be somewhat effective at preventing wildfires and reducing risks. They can be put on by WUI specialists, DNR field forestry staff, CO, UW Extension, and FDs.
- \* Web sites are a somewhat effective outreach method to prevent wildfires and teach people how to reduce risks. With the advent of the internet, more and more people look for very quick instant and current information that the internet can provide.
- \* One-on-one contacts with public are thought to be an effective means of preventing wildfires.
- \* Awards recognition are not an effective means of fire prevention



### General Fire Prevention Outreach Recommendations:

- \* All media efforts should focus on the spring (strike when the iron is hot) or when fire danger or fire activity has increased.
- \* While working with media outlets, it is recommended to encourage fire danger updates in weather portions of television, radio, & newspapers.
- \* Consider focusing media efforts on state borders (Minnesota, Illinois, & Michigan) utilizing the partnerships of Great Lakes Forest Fire Compact.
- \* Media training for field fire staff on media relations is strongly encouraged. Continue to print forest fire publications on permits, laws, & debris burning brochures; hand out with all permits issued.
- \* Central office staff and WUI specialists should be responsible for keeping the DNR fire prevention and WUI web pages current. Educate people on fire suppression tactics, such as fighting fire in the black, so they will understand the importance of reducing hazards in their "home ignition zone."
- \* Focus WUI activities in areas where a large fire has occurred. During times of high fire danger, utilize radio as a means for relaying spring fire conditions (e.g. morning talk show to relay special fire conditions).
- \* Maintain accurate and current information on the internet to promote more frequent use by media outlets.
- \* Fire personnel should wear nomex/uniform, especially in the spring whenever possible.



- \* Use various methods of outreach; diversify.
- \* Work more closely with Ad Council for timely & appropriate messages.

### **Assess the Value of Prevention Teams**

Wildland Fire Prevention Education Teams go to areas experiencing severe wildland fire threats to assist local fire managers with tasks including, but not limited to:

- Preparing fire protection assessments
- Reducing the number of person-caused fires
- Educating people about actions to reduce the danger to themselves, their families, and their neighbors in the event of a wildland fire
- Educating people about pre-fire management priorities appropriate to the wildland urban interface
- Develop area-wide prevention strategies
- Develop a wildland fire prevention communication plan
- Promote interagency cooperation
- Promote responsibility for fire safety and encouraging self-help actions

Wildland Fire Prevention Education Teams are available to support and coordinate fire prevention education programs over large geographical areas before and during periods of high fire danger or fire activity. These teams are effective in assisting local and regional fire managers wherever conditions have evolved to the point that prevention and education efforts must be intensified to a degree that would stretch available resources too thin.

The mission of Fire Prevention and Education Teams (FPET) is to provide unit and agency managers with skilled and mobile personnel which have the ability to supplement or enhance ongoing local wildfire prevention and education activities, where hazard or risk is, or is expected to be, elevated above normal.

Teams are highly effective in their ability to reduce unwanted human-caused wildland ignitions and are equipped to rapidly complete on-site prevention assessments and plans, initiate implementation of such plans, and to begin immediate prevention and education activities.

Teams are supervised by a Prevention and Education Team Leader (PETL). Team leaders are assisted by two other members and by additional specialists, as needed to complete a team's assigned tasking as effectively and efficiently as possible.

Several challenges are faced with mobilizing a Fire Prevention Education Team within Wisconsin. Firstly, there is a shortage nationally for Fire Prevention Education Team Leaders. Secondly, securing funding for the Team poses a challenge. Lastly, resources to fill a Team typically will need to come from outside the state and possibly the great lakes area due to similar fire risk imposed throughout.

#### Recommendations:

- \* Fire Prevention Education Teams should be considered in one of three situations: 1) during periods of high fire danger or fire activity 2) during periods of low fire danger to prepare fire protection/prevention assessment plan by Area (or Region) and 3) to facilitate fire assessments after a large fire with significant structure loss.
- \* Similar to suppression resources, Fire Prevention Team Members could be mobilized from lower risk areas of the state to the area of need.
- \* It is recommended that the WUI Specialists at a minimum become certified as a Fire Prevention Education Team Members or go out nationally on assignment as a trainee and pursue a Fire Prevention Team Leader qualification as well.
- \* Areas where a Team may be needed should request a Team through their Area Forestry Leader. The AFL must identify a local liaison to the Team to support the efforts and manage any long-term efforts after the Team demobilizes.
- \* The Fire Prevention Specialist could assist in ordering and mobilizing a Team and in initializing the Delegation of Authority and Communication Plan.
- \* Teams would run from 1-2 weeks, depending on the need and funding source. Labor hours for local resources will come out of a local budget and must be supported by the AFL. Supplemental funding for the Teams could come from Federal Hazard Mitigation Grants.
- \* Areas adjacent to USDA National Forests should consider an interagency Team and attempt to utilize severity or preparedness funds.

- \* The criteria and ordering process for Teams should be incorporated into the Fire Prevention chapter of the Fire Management Handbook.

**Consolidated Measures of Success** (included in previous sections)

- \* One-on-one prevention contacts can be measured by the number of materials distributed. A mechanism for this accounting could be via the accomplishment reporting system on an annual basis.
- \* Success for school programs could be measured by monitoring the number of LEAF workshops and counting the number of school programs conducted on an annual basis. This could be achieved by the accomplishment reporting system on an annual basis.
- \* Maintain a journal or log for each Smokey suit to indicate the audience and number of people reached. On an annual basis, this information could be transferred to the accomplishment reporting system.
- \* Success could be measured by the number of web hits to the fire reporting page. The mechanism to accomplish this would be software to allow this to happen. We could also keep a list of the other web sites that include a link to our web site (e.g. radio/TV stations,
- \* Monitor the number of times a prevention display is used and capture this within the fire accomplishment reporting system. Keep a sign-in sheet with the displays so users can document information about the event (event name, date, approximate number of attendees, etc.). Enter this information on the accomplishment report.
- \* Purchases made with Hazard Mitigation need to be quantified, therefore knowing the market, frequency, number of radio/TV stations, and times played is required for the federal reporting system.
- \* Utilize the Order Tracking Information (OTIC) system from Darwin Rd. warehouse to monitor the number of publications or posters distributed to the field annually.
- \* A success as an alternative to burning could be the number of Model Burning Ordinances adopted.

# Wildland-Urban Interface

## Objective/Charge:

Determine which Wildland-Urban Interface (WUI) methods are most effective. Make recommendations on ways to best deliver the WUI program.

- Analyze our current investment in WUI (activities by time, dollars, and locations).
- Analyze the hazard mitigation program and make recommendations as how to best utilize National Fire Plan funds.
- Determine the value of various WUI activities (Firewise Communities, Community Wildfire Protection Plans, HIZ assessments, etc.).
- Gather studies which assess the effectiveness of different WUI strategies and determine applicability to Wisconsin.

## Current Investment and Background



### **Hazard Mitigation Program**

National Fire Plan (NFP) funds that support statewide WUI, fire prevention, and fire planning through the state's Hazard Mitigation Program were sufficient from 2005-2009. However, funding of the WUI and fire prevention programs through federal grants is not likely to be a sustainable practice much longer.

Early indicators, such as the State and Private Forestry Re-design effort and a declining "maximum amount" for proposals, foreshadow the unreliability of this funding source in the future. Table 1 shows the level of NFP funding awarded to DNR for federal fiscal years 2005-2009.

**Table 1. NFP funds awarded to DNR Forestry federal fiscal years 2005-2009.<sup>1</sup>**

	2005	2006	2007	2008	2009
<b>NFP \$ awarded</b>	\$1,000,000	\$300,000	\$600,000	\$300,000	\$600,000

Each year, statewide Forestry staff and non-federal partners have the opportunity to apply for the use of the NFP grant money through Forestry's Hazard Mitigation Program. Hundreds of Hazard Mitigation projects have been conducted across the state since the program's inception in 2001. Most projects fall within three categories: education, planning, and fuels reduction. The tables below show project funding in each of these categories for state fiscal years 2005-2009:<sup>1</sup>

**Table 2. NFP-funded projects related to education and outreach, state fiscal year 2005-2009.<sup>1</sup>**

Project Type	2005	2006	2007	2008	2009	Grand Total
Displays	\$ 0	\$ 6,065	\$ 12,509	\$ 9,028	\$ 11,461	<b>\$ 39,063</b>
Educational items/trinkets	\$ 0	\$ 4,983	\$ 13,756	\$ 13,381	\$ 26,084	<b>\$ 58,204</b>
Newspaper outreach	\$ 6,710	\$ 8,852	\$ 13,845	\$ 5,494	\$ 3,189	<b>\$ 38,091</b>
Outreach work	\$ 17,020	\$ 14,882	\$ 0	\$ 0	\$ 1,719	<b>\$ 33,621</b>
Public service announcements	\$ 70,740	\$ 45,764	\$ 9,724	\$ 52,287	\$ 30,703	<b>\$ 209,218</b>
Publications	\$ 50,096	\$ 28,026	\$ 16,681	\$ 4,430	\$ 17,663	<b>\$ 116,896</b>
Signs	\$ 0	\$ 20,373	\$ 4,255	\$ 26,508	\$ 3,927	<b>\$ 55,063</b>
Tote bags	\$ 17,593	\$ 18,328	\$ 14,980	\$ 14,738	\$ 17,997	<b>\$ 83,636</b>
Tree seedling boxes	\$ 0	\$ 37,086	\$ 11,521	\$ 0	\$ 20,000	<b>\$ 68,607</b>
<b>Grand Total</b>	<b>\$ 162,159</b>	<b>\$ 184,059</b>	<b>\$ 97,271</b>	<b>\$ 125,866</b>	<b>\$ 132,743</b>	<b>\$ 702,399</b>

<sup>1</sup> Please note that project funding by year does not correlate to the NFP funds the Department was awarded that year. NFP grants come with a 5-year timeline in which the funds must be spent. Therefore, the state fiscal year will not necessarily match up with the grants acquired that year. For example, in SFY 2005, the Hazard Mitigation program was funding projects from grants acquired in 2002.

**Table 3. NFP-funded projects related to planning efforts, state fiscal year 2005-2009.**

Project Type	2005	2006	2007	2008	2009	Grand Total
Burning Permit Trial			\$ 4,406	\$ 74,446	\$ 24,958	\$ 103,810
Community Wildfire Protection Plan		\$ 35,677	\$ 50,425	\$ 22,675	\$ 64,790	\$ 173,567
HIZ Assessments	\$ 9,300	\$ 22,072	\$ 31,095	\$ 19,211	\$ 19,450	\$ 101,128
Incident Management		\$ 6,200	\$ 69,938	\$ 18,954	\$ 12,758	\$ 107,850
Miscellaneous	\$ 5,817	\$ 8,200	\$ 42,959			\$ 56,976
Structure Zone Mapping	\$ 35,123	\$ 89,549	\$ 101,613	\$ 93,900	\$ 108,286	\$ 428,471
<b>Grand Total</b>	<b>\$ 50,240</b>	<b>\$ 161,698</b>	<b>\$ 300,436</b>	<b>\$ 229,186</b>	<b>\$ 230,242</b>	<b>\$ 971,803</b>

**Table 4. NFP-funded projects related to fuels reduction, state fiscal year 2005-2009.**

Project Type	2005	2006	2007	2008	2009	Grand Total
Brush collection sites	\$ 7,320	\$ 9,480		\$ 11,253	\$ 8,204	\$ 36,257
Chipping Days			\$ 4,353	\$ 10,171	\$ 28,950	\$ 43,474
Fuel breaks	\$ 13,337	\$ 31,042	\$ 17,565	\$ 21,150	\$ 46,550	\$ 129,644
Fuel reduction	\$ 42,967	\$ 34,764	\$ 47,768	\$ 16,093	\$ 13,301	\$ 154,893
Hand Crew	\$ 19,353	\$ 29,743	\$ 25,172	\$ 25,756	\$ 24,528	\$ 124,552
Pine thinning		\$ 28,506	\$ 53,910	\$ 16,968	\$ 5,226	\$ 104,610
Road brushing			\$ 50,211	\$ 30,000		\$ 80,211
<b>Grand Total</b>	<b>\$ 82,977</b>	<b>\$ 133,535</b>	<b>\$ 198,979</b>	<b>\$ 131,391</b>	<b>\$ 126,759</b>	<b>\$ 673,641</b>

**National Fire Plan**

The focus of the NFP, including the types of projects eligible for funding, has narrowed over the past several years. The primary focus of the program now seems to be related to 3 over-arching categories and activities for each to ensure that funds are used to mitigate or reduce hazard and risk in the wildland urban interface. They are:

- 1) **Hazardous Fuel Reduction** in or adjacent to identified fire prone communities to reduce the threat of wildfire within the community.
- 2) **Information and education targeting prevention and mitigation in the wildland urban interface:** Programs should lead to use or establishment of one or more fire program elements such as fire safety codes, development / implementation of Community Wildfire Protection Plans, implementation of Firewise safety practices, fuel treatments within fire prone communities, or community planning to define fire safe structures suited to the local ecosystem.
- 3) **Risk reduction and hazard mitigation for homeowners and their communities:** States can facilitate projects that focus on reducing risk of ignitions and loss, development of Community Wildfire Protection Plans, implementing Firewise concepts, and risk reduction demonstration projects.

The Bureau of Forest Protection created a map of the state, delineating Communities at Risk (CAR) and Communities of Concern (CoCo) at the municipal civil division. The prioritization of NFP funds in Wisconsin is based on whether or not the project is located in a CAR or CoCo. Additional prioritization is based on whether or not the project location falls within a Community Wildfire Protection Plan (CWPP) or Firewise Community (FWC) or areas targeted for a CWPP or FWC.

**Recommendations as how to best utilize NFP funds**

NFP funding will be prioritized for projects in Fire Landscapes (FL) 4, 15, 9, and 7, in that order, as these FLs coincide with areas of the state with the highest acreage of high and very high risk communities, particularly if they coincide with a CWPP or FWC.

Projects in FL 3, 8, 14, 11, 16, 5, 13, and 6, in that order, should be considered for NFP funding on a secondary basis, as these FLs have a lesser number of high and very high risk communities.

Projects in Fire Landscapes 2, 10, 12, and 1, in that order, are of a lower priority and should be limited to projects that support partners (e.g. Smokey Bear suits) or are part of a mass media awareness campaign that happens to overlap these landscapes (e.g. radio, newspaper, or TV ads), as these FLs have the least amount of acreage considered to be at high or very high risk (in that order).

## Specific WUI Activities; Investment, Value, Recommendation, and Changes

### FUELS REDUCTION

#### Hazard tree removal along powerlines

##### Current investment

- \* Educational items exist: *Wisconsin's Power Line Forest Fire Prevention Manual* (DNR pub FR-067 1990) and the Power Line section of the Prevention Handbook – both are being updated in 2009-10.
- \* In 2007, the Hazard Mitigation program supported a project in Minong (FL 15) to identify hazard trees along a section of distribution line. A forester was hired to mark hazard trees along a ¾ mile section of power line. The DNR contributed \$5,000 in HM funds to this effort. Dahlberg Light and Power sent notices and removed the hazard trees. This partnership helped in gaining support from the affected property owners.

##### Value

- \* Considered to be a somewhat to very effective fuels reduction strategy if done more often and thoroughly.
- \* 98% of staff surveyed felt that the power line companies are responsible for removing hazard trees along the right-of-ways.

##### Recommendation

- \* Engage in a partnership to educate power line companies to identify hazard trees and to recognize the most dangerous wildland fire fuels. The removal of hazard trees along power lines is the responsibility of power line companies.
- \* Target efforts around Firewise Communities and communities with a CWPP where power line fire starts are known to be a problem. In these cases, the DNR could provide some nominal HM funding to initiate the project, particularly to prioritize the removal of trees and gain support of the affected property owners through education and outreach efforts. A few outreach efforts already exist and should be shared with power line companies in every fire landscape where this kind of fire start is a concern.



##### Change in investment

**Increased Resources:** None

**Decreased Resources:** None

#### Storm/insect damage salvage

##### Current investment

- \* The Hazard Mitigation program supported clean-up of hail damage in 2002 on the Brule River State Forest (FL 15), tornado damage in 2004-08 on Quincy Bluff (FL 4), and tornado damage in 2008-09 in Oconto County (FL 7).
- \* WFLGP funds are available for clean up of storm damage on private lands.

##### Value

- \* Considered to be a somewhat effective fuels reduction strategy.
- \* 80% of staff surveyed felt that DNR field forestry staff should implement the salvage. 39% of staff felt that contractors should be used for salvage. 19% felt it is the responsibility of local government.

##### Recommendation



Storm and insect damage to trees tends to occur in rapid fashion. The clean up of this kind of damage needs to be facilitated by multiple parties, especially the affected property owners, working in conjunction with one another.

- \* Individual private landowners should seek storm damage mitigation funds through WFLGP.
- \* HM funds should be prioritized for public lands and communities-at-risk, which do not have the WFLGP option. Prioritization for hazard mitigation funding and/or staff support should follow the “**Recommendations as how to best utilize NFP funds.**”

Change in investment

**Increased Resources:** Uncertain

**Decreased Resources:** Uncertain

This is a highly variable and unpredictable fuels reduction component. Investment needs to be determined on an event-by-event basis. An increase in investment can be sought through emergency funds provided by FEMA in the case of a natural disaster.

**Brush collection sites**

Current investment

- \* In 2005-06, hazard mitigation funds were used to establish brush collection sites in the Towns of Athelstane, Stephenson, and Wausaukee (FL 7). This was a partnership between DNR field forestry and the Northwoods Recycling Coalition.
- \* Hazard mitigation funds were used in 2008-09 to establish and maintain brush collection sites in Oconto and Marinette Counties (FL 7), in conjunction with the Town of Riverview and Town of Stephenson CWPPs. Forestry field staff, WUI specialists, and local government have worked together on these projects.
- \* 2005-09 HM investment totaled \$36,000

Value

- \* Considered to be a somewhat effective fuels reduction strategy.
- \* 92% of staff surveyed felt that local government should be responsible for implementing brush collection sites.
- \* DNR field forestry and WUI Specialists should assist with this effort.
- \* Having convenient and no-cost brush disposal can reduce the number of debris burning fires.

Recommendation

- \* Support the creation of brush collection sites in high/very high risk communities, especially when the project is a mitigation strategy identified in a CWPP. These sites may need to be located on property donated for this purpose. Realistically, this will work best if the land is donated by a local (town) government that will be able to maintain the site and provide a staff member to be present at the site during specific times. The sites should also include information boxes for fire prevention brochures.
- \* Use hazard mitigation funds to support establishment of these sites in the future.
- \* Work with the air/waste program on this effort, especially if they can contribute to the effort.
- \* Brush collection sites also provide a location for biomass. Seek opportunities for contractors to chip/haul away the brush for use as boiler fuel, animal bedding, etc.

Change in investment

**Increased Resources:** Support the creation of more brush collection sites in high hazard areas, even if the area is not covered by a CWPP.

**Decreased Resources:** Reduce support for brush collection sites or rely more on partners.

**Creation and maintenance of fuel breaks**

Current investment

- \* Hazard mitigation funds have been used to support the creation of fuel breaks on the Bayfield County Forest, Burnett County Forest, and Washburn County Forest (FL 15), Jackson County Forest (FL 4), Marinette County Forest and Peshtigo River State Forest (FL 7), and in a Firewise Community (FL 4).
- \* 2005-09 HM investment totaled \$130,000.



Fuel break along a red pine plantation in the Bayfield County Forest.

### Value

- \* Considered to be a somewhat effective fuels reduction strategy.
- \* A variety of entities should be used to create fuel breaks (e.g. DNR field forestry, local government, contractors, WUI specialists, landowners, land managers) depending on who owns the land.
- \* DNR Field Forestry should provide guidance/coordination, but not necessarily do the work.
- \* Fire breaks should be concentrated around pine fuel types.
- \* Mineral soil fuel breaks rob a fire of the fuel needed for combustion, and is most effective at stopping or slowing the spread of a surface fire.
- \* Encourage private property owners in high hazard areas to maintain some type of fire breaks.

### Recommendation

- \* Support the creation and maintenance of fuel breaks in FL 4, 15, 9, and 7, in that order, particularly when the breaks are listed as a mitigation strategy in a CWPP.
- \* The use of hazard mitigation funds for this purpose should follow the “**Recommendations as how to best utilize NFP funds.**”
- \* Create fuel breaks in partnership with county forests, state forests, and private property owners. DNR field forestry staff is best suited in a supporting role (e.g. project manager, technical advice).
- \* Secure NFP funding (CO function). Partners should create and maintain the fuel breaks with their own equipment or by hiring a contractor.

### Change in investment

**Increased Resources:** Support the creation and maintenance of fuel breaks in high hazard, pine areas in FL 3, 8, 14, 11, 16, 5, 13, and 6.

**Decreased Resources:** Focus on the creation of fuels breaks, rather than their maintenance, and/or reduce the number/size of fuel breaks we support, and/or rely more on support from our partners.

## **Prescribed fire**

### Current investment

- \* From 2005-09, hazard mitigation funds have supported a south central region hand crew (FL 2 and 3). This 20-person crew assists with prescribed burning and fire suppression when needed during spring fire season. This 5-year investment totaled \$125,000.
- \* In 2006, \$3,900 in HM funds were used to design and print 40,000 prescribed burn information door hangers. Alliant Energy donated \$1,000 towards the project. The door hangers are used by members of the Prescribed Fire Council to contact the public adjacent to burn sites.
- \* In 2009, National Fish and Wildlife Foundation funds in the amount of \$125,000 were received for oak-pine barrens restoration work on the Burnett County Forest and Buckhorn State Park, of which prescribed burning is a component. These projects support forestry activities as well as activities of our County Forest, DNR Wildlife, and DNR State Park partners.
- \* Private landowners are able to apply for WFLGP funds for prescribed burning.

### Value

- \* Considered to be a somewhat effective fuels reduction strategy.
- \* The Dodgeville dispatch group consistently shows the highest numbers of Rx fires and acres burned (see Appendix A17).
- \* Prescribed fire for fuel reduction is limited for widespread use because:
  - o Prescribed fire for fuels reduction is not generally a primary objective – more often it’s for habitat, control of invasive species, or site prep.
  - o The Rx burning program in the state does not have adequate resources.
  - o Rx fire can be a wildfire threat itself.
- \* Prescribed fire for fuel reduction should be supported because:
  - o 76% of staff surveyed felt that DNR field forestry should be responsible for prescribed burning for hazard reduction.
  - o Staff is interested in doing more prescribed burning as a forestry tool.
  - o We can focus on fire-dependent natural communities and the use of fire as a management tool in those communities.

### Recommendation

- \* Support the use of prescribed burning for fuels reduction as a primary objective in FL 4, 15, 9, and 7, particularly when Rx burns are listed as a mitigation strategy in a CWPP.
- \* The use of hazard mitigation funds for this purpose should follow the “**Recommendations as how to best utilize NFP funds.**”
- \* Support prescribed burning for habitat improvement in fire-dependent communities, but not necessarily with HM funds. Rx burns should be conducted in partnership with DNR wildlife and endangered resources and other public land managers, including Non-Government Organizations. DNR field forestry staff can assist with planning, burning, and mop-up, as appropriate.
- \* DNR CO should secure NFP funding and other grants specific to the use of Rx burns. Partners can assist with planning, burning, mop-up, and financial support.

Change in investment

**Increased Resources:** Support the use of Rx burns for fuels reduction on a more frequent basis, especially in fire-dependent oak-pine barrens areas in the state.

**Decreased Resources:** Reduce or eliminate support for the south central region hand crew or any Rx burning for reasons other than hazard reduction. Rely more on support from our partners.

**Fuels reduction on private property**

Current investment

- \* Hazard Mitigation funds have been used to support fuels reduction on private property in communities at risk. Projects have included chipping days, ladder fuel removal, vertical clearance along roads, and tree removal.
- \* From 2007-09, over 150 chipping days were funded in Firewise Communities in FL 4 for a total of \$43,474. The 2009 funding level for a chipping day was \$280. Residents have contributed, on average, a 6:1 match using their time and labor to reduce fuels in their communities.



Community fuels mitigation in Lone Rock.

Value

- \* Fuels reduction on private property, including community chipping days and tree thinning projects are considered to be somewhat effective fuels reduction strategies.
- \* A variety of sources can be involved in the coordination and implementation of these efforts: property owners, homeowner associations, WUI specialists, field forestry, local government, fire departments, and contractors.
- \* Studies and investigation of WUI fires have repeatedly shown that embers and creeping surface fire is what burns structures, not raging crown fires. Firewise practices, including the removal of fuels around homes, are the most important preventative measures for protecting homes. See Appendix A23-A24 for research information.
- \* New markets for biomass utilization could generate more interest in the private sector for such efforts.

Recommendations

- \* Assist private property owners with fuels reduction activities through the Firewise Communities USA program and the Hazard Mitigation program. DNR WUI specialists, working with local forestry field staff and fire department personnel, can provide technical assistance to homeowner groups by conducting a Firewise assessment and offering suggestions as how to go about mitigating fire hazards around their property. Hazard Mitigation funds may be used to help offset some out-of-pocket costs, such as equipment rental.
- \* Using WUI specialists and forestry field staff, work with communities to reduce fuel on private property by organizing chipping days, tree thinning, and harvests. Field foresters can organize small private landowners in fire-prone areas who alone don't have adequate timber volume to set up a sale, but when combined with other small landowners, can attract a logging operation. Implementation of these activities can be done by contractors or partners with the necessary equipment, such as local government. Hazard mitigation funds can be used to support these projects.
- \* Prioritize these types of activities FLs 4, 15, 9, and 7.
- \* Projects that mitigate hazards in communities at risk and communities of concern in FLs 3, 5, 6, 8, 10, 11, 13, 14, and 16 may also be considered.



### Change in investment

**Increased Resources:** Increase the number of fuels reduction projects, with the same prioritization of Fire Landscapes mentioned above.

**Decreased Resources:** Reduce the number of fuels reduction projects to be implemented and/or utilize partners more, particularly private property owners and homeowner associations.

## **Roadside vegetation removal (brushing)**

### Current investment

- \* In 2007-08, \$80,211 in hazard mitigation funds were spent on road brushing projects in the Town of Barnes (FL 15) as part of the implementation of mitigation strategies identified in a CWPP. The projects were a partnership between the DNR and the Town of Barnes to improve the structure of “sugar sand” roads (the Town provided funds to improve the road base) and the use of the roads as widened fuel breaks through the removal of vegetation (brushing).

### Value

- \* Considered to be a somewhat effective fuels reduction strategy.
- \* The majority of survey respondents (88%) felt that the local government was responsible for implementing this type of fuels mitigation strategy. 14% of respondents thought that contractors could be used for this effort.

### Recommendations

- \* Support roadside brushing in FL 4, 15, 9, and 7, particularly when the project is listed as a mitigation strategy in a CWPP.
- \* The use of hazard mitigation funds for this purpose should follow the “**Recommendations as how to best utilize NFP funds.**” Conduct roadside brushing in partnership with local government. DNR field forestry staff is best suited in a supporting role (e.g. project manager, technical advice).
- \* DNR CO should secure NFP funding.
- \* Partners should do the brushing with their own equipment or by hiring a contractor.

### Change in investment

**Increased Resources:** Support more roadside brushing in high hazard pine areas, with or without their mention in a CWPP.

**Decreased Resources:** Reduce roadside brushing projects, and/or rely more on support from our partners.

## **PLANNING**

### **Partnerships**

#### Current investment

- \* Partnerships in the WUI program have included projects and communications with fire departments, local government, emergency management, realtors, landscapers, homeowners, homeowner associations, county forests, USFS, FWS, BIA, UW Extension, regional planning commissions, non-profits, and forest industry.

#### Value

- \* Strengthen and utilize partnerships with local fire depts. The WUI program is much more effective when it is a joint effort between forestry field staff, fire departments, and WUI specialists.
- \* Continue strong relations with existing partners.
- \* Work on partnerships with non-traditional associates, such as insurance companies and realtors, to reduce wildfire risks.

#### Recommendations

- \* Priority one: WUI specialists must partner with local DNR staff, particularly forester-rangers, forestry technicians, team leaders, and area forestry leaders.
- \* Partner with other DNR programs, such as air and waste, wildlife, and customer assistance and employee services, especially in areas where objectives of the fire program overlap.
- \* Partner with homeowners and homeowner associations through the Firewise program.

- \* Establish partnerships with fire departments, local government, public land management agencies, academia, industry, and non-profits.

#### Change in investment

**Increased Resources:** Increase partnering projects, starting with forestry staff and fire departments. Additional resource contributions to other partners are secondary to these groups.

**Decreased Resources:** Decrease partnering efforts, other than fire departments and internal forestry staff.

### Incentives

#### Current investment

- \* Incentives are provided to homeowners and communities through the Firewise Communities USA recognition program and Community Wildfire Protection Plans. Incentives are supplied in the form of technical expertise and financial contribution through the Hazard Mitigation program.

#### Value

- \* Financial incentives may be effective for initial vegetation management, but social incentives are more likely to be successful for long-term maintenance (Sturtevant and McCaffrey).
- \* Incentives for private property owners to reduce wildfire hazards on their properties can be economic (e.g. tax credits, cost-share opportunities, reduced insurance premiums), ecological (e.g. healthier forests, improved aesthetics), and social (e.g. better neighbor relations).
- \* Communities with CWPP's in place will be given priority for funding of hazardous fuels reduction projects carried out under the auspices of the Healthy Forest Restoration Act (NIFC 2008).

#### Recommendations

- \* Maximize effectiveness of the Hazard Mitigation program, the best incentive available. Homeowners, communities, and other stakeholders in wildfire preparedness are able to receive funding for projects that protect Communities at Risk to wildfire. Funds are prioritized for Firewise Communities and communities with a CWPP in place or in the works.

#### Change in investment

Relying on federal grants to support the WUI program, including our partners preparedness efforts, is not a sustainable practice.

**Increased Resources:** Utilize base funding establishment from State resources to plan efforts in advance and enhance security about the long term viability of wildfire education, planning, and fuels reduction efforts.

**Decreased Resources:** Focus our funding on Firewise Communities and communities with a CWPP. Other communities at risk and communities of concern may not receive the attention they need.

### Create “Best Management Practices” for high risk areas

#### Current investment

- \* We do not currently have BMP's for wildfire risk.
- \* In 2009, the Bureau of Forest Protection provided a paragraph regarding fire prevention to be included in Managed Forest Law plans (See Appendix A18).
- \* The Silviculture and Forest Aesthetics Handbook mentions the need for fuel reduction, fire breaks, and access roads in plantations.

#### Value

- \* BMPs should incorporate fire management and prevention strategies into management plans, including species selection, hazardous fuels mitigation, fuel breaks, powerline clearing, emergency vehicle access, etc.
- \* See Appendix A19 for more forestry staff suggestions regarding BMP's for high risk areas.

#### Recommendation

- \* Develop guidelines and support initiatives of BMP's to reduce fire risk.
- \* Create an Ad-Hoc team with a variety of field representation & agency partners (industry, USF&W, etc.) to create the guidelines and outline implementation.
- \* Incorporate biomass utilization into BMP guidelines.

Change in investment

**Increased Resources:** None

**Decreased Resources:** None

**Zoning/ordinances**

Current investment

- \* The WUI program currently utilizes the Great Lakes Forest Fire Compact publication *Protecting Life and Property from Wildfire*. We have been given permission to update the publication – that is in progress.
- \* A *Model Ordinance for Outdoor Burning, Open Burning, and Burning of Refuse* was created by the Air Management program in 2004 (Pub AM-356).
- \* The *International Wildland-Urban Interface Code, 2006* and *NFPA 1144 – Standard for Reducing Structure Ignition Hazards from Wildland Fire, 2008 Edition* are nationally accepted standards for developments in areas that might be threatened by wildfires.

Value

- \* Zoning ordinances and being involved with housing development projects are considered to be somewhat effective planning strategies that reduce wildfire risks.
- \* Local government should be responsible for implementing zoning ordinances and becoming involved with housing development projects, with support from DNR WUI specialists, fire departments, and DNR field forestry staff.
- \* Fire risk in the WUI can be reduced by regulating construction, without being too heavy-handed (Syratos et al. 2007).
- \* Preventing fire prone situations via zoning is far more cost effective than mitigation situations afterward.

Recommendations

- \* Encourage zoning regarding fire-resistant vegetation, access/egress, signage, water supplies, debris removal, building materials, defensible space, and maintenance in new developments in fire-prone areas. Publications and examples on the topic should be shared with local government.

Change in investment

**Increased Resources:** None

**Decreased Resources:** None

**Community Wildfire Protection Plans (CWPP)**

Current investment

- \* At the end of 2009, there were six completed CWPP’s in the state and four in progress:

<b>CWPP</b>	<b>FL</b>	<b>Completed</b>	<b>Investment</b>
Barnes-Drummond	15	2006	\$ 36,000
Town of Rome	4	2007	\$ 40,000
Town of Riverview	7	2008	\$ 36,000
Town of Stephenson	7	2009	\$ 40,000
Stateline (includes Phelps)	9	2009	USFS funded
Land O’Lakes-Conover	9	2009	\$ 25,000
NE Juneau County	4	Estimated 2010	\$ 34,000
Dewhurst/Komensky/Levis	4	Estimated 2010	\$ 34,000
Grand Rapids-Saratoga	4	Estimated 2010	\$ 25,000
Big Flats-Monroe	4	Estimated 2010	\$ 25,000

- \* In addition to the funding of the plans, significant investment in staff time (WUI specialists, Forest Rangers, Forestry Technicians, and Area Forestry Leaders) have gone in to support the creation of these plans and implementation of mitigation strategies.
- \* CWPPs in Wisconsin follow the steps outlined in *Preparing a Community Wildfire Protection Plan*.

Value

- \* CWPP’s are considered to be somewhat effective at reducing wildfire risks.

- \* The 2003 Healthy Forests Restoration Act (HFRA) calls for local communities in the wildland-urban interface to collaborate on developing CWPP's to reduce their wildfire hazard.
- \* The HFRA requires that the final contents of the CWPP be mutually agreed upon by the local government, local fire department(s), and state agency responsible for forest management. Together, these three entities form the core decision-making team responsible for the development of a CWPP.
- \* CWPP's should be created by WUI specialists, local government, DNR field forestry, fire departments, and other appropriate partners.

#### Recommendations

- \* Promote CWPP's in areas of high crown fire risk, primarily Fire Landscapes 4, 15, 9, and 7, in that order. CWPP's should be created in partnership with local government, local fire departments, and community stakeholders (e.g. large land owners, homeowner groups, public land management agencies, emergency management, etc.) WUI Specialists and local fire control staff, especially Forest Rangers, should be on the steering committee. A regional planning commission can be contracted to facilitate meetings, create maps, and write the plan. UW Extension Basin Educators may be available to assist in the facilitation process.
- \* The use of hazard mitigation funds for this purpose should follow the "**Recommendations as how to best utilize NFP funds.**"
- \* DNR CO should secure NFP funding for the creation of CWPP's and implementation of the mitigation strategies. After a plan is complete, a working group, with representation from each stakeholder groups, will be formed to prioritize and implement the strategies. Since this type of WUI effort is fairly new, it needs to be better explained to DNR field staff to incur the appropriate understanding and support, including the inclusion of this topic in the Fire Management Handbook.

#### Change in investment

**Increased Resources:** Increase the number of CWPP's if support by DNR, local government, and fire departments is in place.

**Decreased Resources:** Reduce the number of CWPP's initiated, regardless of stakeholder support.

### **Firewise Communities (FWC) Recognition Program**

#### Current investment

- \* As of December, 2009, there are 20 recognized Firewise Communities in the state, all of them in Fire Landscape 4. Two homeowner associations in FL 15 are also engaged in the process and are expected to achieve recognition in 2010.
- \* Hazard Mitigation funds are regularly used to support education and fuels reduction efforts in FWC. Past projects have included chipping days, mailings, access improvement, fuel break creation, tree thinning, and ladder fuel removal.
- \* Educational efforts have been conducted by DNR CO, WUI specialists, and field forestry staff. Presentations have been given, articles written, publications distributed, and home ignition zone assessments offered.



#### Value

- \* The FWC recognition program is considered by staff to be somewhat effective at reducing wildfire risks.
- \* A variety of people can work together to promote and support the FWC recognition program: WUI specialists, field forestry staff, local government, fire departments, and property owners.
- \* The Firewise Communities approach emphasizes local responsibility for planning safe communities and effective emergency response. Homeowners and communities, working in partnership with firefighters, can effectively reduce losses caused by wildland fires. The Firewise Communities/USA recognition program is an interagency approach enabling communities to achieve a high level of protection against WUI fires as well as sustain or improve ecosystem balance (NIFC 2008).
- \* Programs that tailor their efforts to address local values and interests are more likely to be adopted. Programs that increase contact between neighbors can help develop a sense of community as people work together to reduce hazardous fuels across ownership boundaries. Examples include Firewise Days, neighborhood clean-up days, celebrations, and other annual events (Sturtevant and McCaffrey 2006).

#### Recommendations

- \* Promote Firewise Communities in communities at risk, particularly in Fire Landscapes 4, 15, 9, and 7, in that order.
- \* The use of hazard mitigation funds for this purpose should follow the “**Recommendations as how to best utilize NFP funds.**”
- \* Use FWC’s to support partnerships with local fire departments. WUI Specialists and local fire control staff, especially Forest Rangers, and fire department personnel should work together on a community assessment that identifies wildfire and structural hazards and mitigation measures that can improve safety and increase the likelihood of property withstanding a wildfire even without firefighter assistance.
- \* DNR CO should secure NFP funding to support FWC mitigation efforts. Since this type of WUI effort is fairly new, it needs to be better explained to DNR field staff to incur the appropriate understanding and support.

Change in investment

**Increased Resources:** Provide more resources for mitigation efforts in FWC’s. Investment in FWC’s should be contingent on the support for such efforts by local DNR staff and fire departments in a community at risk.

**Decreased Resources:** Reduce the number of FWC projects we can support financially.

**Home ignition zone (HIZ)/fire-prone property assessments**

Current investment

- \* From 2005-2009, \$101,128 in HM funds were used to support home ignition zone assessments. This includes two long-term HIZ assessment projects conducted by the Spooner Fire Department Chief and Wascott Fire Department Chief, both in Fire Landscape 15. In 2006-07, an LTE was assessed properties in Oconto County (FL 9). A WUI specialist in FL 4 conducted HIZ assessments in Firewise Communities in 2008-09.
- \* HM funds supported two HIZ workshops in Wisconsin; one in Wis. Rapids (FL 4) and one in Shell Lake (FL 15).

Value

- \* HIZ (FPP) assessments are considered to be somewhat effective at reducing wildfire risks.
- \* A variety of people can be used to conduct assessments: fire departments, WUI specialists, field forestry staff, and possibly local government and insurance companies.
- \* Follow-up is needed to evaluate the effectiveness of the assessments.
- \* A full range of opinions were offered through the various surveys and cafes on whether or not HIZ assessments should be conducted, by which people, and in what manner. Overall, most people who felt they should be conducted, said DNR staff and fire departments should be the ones conducting them. There was less support for the outsourcing of this effort. More than a third of forestry staff surveyed felt that people who complete HIZ training prior to being allowed to conduct the assessments. 15% of forestry staff felt that “knowledge of wildfires” was sufficient for the assessor, although “knowledge of wildfires” needed to be clearly defined.

Recommendations

- \* Conduct HIZ assessments in Fire Landscapes 4, 15, 9, and 7, in that order, using DNR field staff, WUI specialists, and/or local fire departments. They can be conducted when people are not home, but the homeowner should at least know about and approve of the assessment so that the proper permission has been obtained. The assessments must include some follow-up with the property owners, such as a community chipping day. Priority areas include places targeted for Firewise Community recognition or a Community Wildfire Protection Plan or in a location where a mock fire will be performed. Communities-at-risk in other fire landscapes will be considered if the assessments are a coordinated effort with a hazard mitigation project (e.g. chipping day or tree thinning effort).
- \* For the sake of consistency, people conducting the assessments need to first complete the “Assessing Wildfire Hazards in the Home Ignition Zone” course. Educational materials should also be developed for people who prefer to assess their own properties. These materials can be posted on our web site and given to people when they apply for a building permit, get a burning permit, etc.

Change in investment

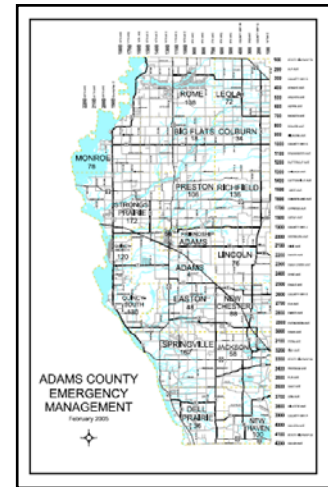
**Increased Resources** Increase the number of HIZ assessments in communities at risk in FL 3, 8, 14, 11, 16, 5, 13, and 6.

**Decreased Resources:** Conduct fewer HIZ assessments and/or expect more from our partners.

## Structure zone mapping (SZM)

### Current investment

- \* From 2005-09, \$428,471 in HM funds supported the creation and printing of structure zone map books in Adams, Barron, Clark, Columbia, Eau Claire, Jackson, Juneau, Marinette, Marquette, Monroe, Oconto, Oneida, Sawyer, Vilas, Washburn, Waushara, and Wood Counties. In some cases, the entire county was mapped, in other cases, only the high hazard portions of the county were mapped. See Appendix A19 for the status of statewide SZM efforts as of 2007.
- \* The Black River Falls, Cumberland, and Wis. Rapids dispatch groups are each allotted \$7,500 annually in Forestry funds to support SZM efforts. The Brule and Peshtigo dispatch groups alternate years in which they are allotted the \$7,500 for SZM efforts.
- \* Guidance documents were created by the GIS/IT Team to assist staff in creating proposals, working with contractors, and following standards for state-funded mapping projects.



### Value

- \* Structure zone maps are considered to be somewhat effective at reducing wildfire risks.
- \* Structure mapping is primarily a suppression tool. Structure mapping aids in structural protection after the fire starts. They reduce the loss and increase the efficiency of firefighting forces.
- \* Structure zone maps should be created/facilitated by field forestry staff, fire departments, local government, WUI Specialists, Law Enforcement, and central office.
- \* Structure zone maps have great value for all hazards – our books have been used in the past for reconnaissance after tornadoes, for example.
- \* For SZM books to maintain their value, they need to be updated to reflect changes in development and protection capability.

### Recommendations

- \* Promote budget initiatives that will increase the amount of forestry funds that can be allocated for these projects. With the narrowing focus of the NFP, hazard mitigation funds may not be able to support structure zone mapping efforts to near the extent that they have in the past. Alternative funding sources, especially base state funding, should be sought.
- \* Seek other grant funding, including FEMA/DHS grants and Title 3 grants.
- \* The use of hazard mitigation funds for this purpose should follow the “**Recommendations as how to best utilize NFP funds.**”

### Change in investment

**Increased Resources:** Creation SZM books in high hazard areas where they currently do not exist. Support updates to maps, as needed. Prioritize FLs 4, 15, 9, and 7. Mapping of high hazard areas in Fire Landscapes 3, 8, 14, 11, 16, 5, 13, and 6 are a second tier of priority. SZM efforts in 1, 2, 10, and 12 are not recommended.

**Decreased Resources:** Reduce mapping of high hazard areas.

## Consolidated Measures of Success

- o The implementation of education/outreach, fuels reduction, and planning projects should be entered in accomplishment reports.
- o The success of hazard mitigation projects can be analyzed using the fire report system. For example, the number of debris burning fires in an area with a brush collection site could be tracked to determine if this kind of effort is successful at lowering the number of DB fires.
- o National Fire Plan “success stories” should be documented when a fuels reduction effort is believed to have resulted in the stop or slowing of wildfire spread. For example, colloquial examples of hazard mitigation success have been shared by field forestry staff. One story refers to a wildfire that started along the Marinette County Forest, but was unable to move into a pine plantation when it burned up to a mineral soil fuel break – the absence of fuel resulted in the fire self-extinguishing. Another story has been told about a wildfire that started at Quincy Bluff, an area of extensive tornado damage. Hazard Mitigation funds were used to reduce the accumulation of downed trees and debris and to improve access to the site. Fire control staff believe that without these efforts, access to the location of the wildfire may not have been possible and the resulting area burned could have been much more significant.

- Records of prescribed burns should be maintained to include the objectives of the burn and acres treated.
- The creation of a Best Management Practices guide for wildfire risk would be a success for the fire program. Implementation of the practices should be tracked as on-going success of the initiative.
- The success of zoning recommendations can be tracked by documenting the ordinances that are created in new developments and existing communities. As of this writing, the Town of Rome created an ordinance restricting dead trees and brush in the town – a direct result of the Town’s involvement in a CWPP.
- The success of CWPP’s can be tracked by looking at the number of mitigation strategies identified in the CWPP Action Plan that have been implemented by the various community stakeholders.
- The success of Firewise Communities can be determined by the annual renewal rate of the communities (at least one Firewise Day must be conducted annually to retain FWC status).

**Reference documents**

Adams County Wildfire Perceptions Survey (2006)

Burning Permit Management (2006)

Communities at Risk assessment (2007)

LEAF Fire Curriculum

Statewide Fire Prevention Messaging

Systematic Post-fire WUI Analysis