

COMMUNICATION TOOLS FOR THE WILDLAND-URBAN INTERFACE

Martha C. Monroe, *University of Florida, School of Forest Resources and Conservation, Gainesville, FL*

ABSTRACT: Effective communication tools can help resource managers address wildland-urban interface issues by reducing conflict, raising awareness, and motivating behavior change among the visitors and residents.

The wildland-urban interface is an area that falls between a metropolitan community, replete with public services – such as police and fire protection, water and wastewater control, municipal garbage disposal, recycling, hospitals, schools, public transportation, and mosquito control – and the rural hinterlands, where such services are few and far between. In some states it is characterized by sprawling suburbia with new subdivisions leapfrogging into the countryside. In other parts of the country, second homes and tourist destinations attract residents to nearby public lands. In either case, the interface is a region of increased development and changing land uses with the potential to significantly alter the ability of the ecosystem to provide ecological services (Egan and Luloff 2000; Macie and Hermansen 2002).

For resource managers who work to maintain those ecological services, this interface represents a new and growing challenge. Forestry professionals have a new audience to educate about the use of forest management tools such as herbicides and prescribed fire. Wildlife managers must contend with housecats left to wander during the day, fragmented forest habitat, and invasive exotics sold by the nursery industry. Issues of water quality, water quantity, and water movement plague managers where development makes the landscape less permeable and at the same time, increases the demand for drinking water. Planners and decision makers, fire fighters and transportation engineers, farmers and forest landowners all find a host of new problems springing up in the interface, all exacerbated by the exponentially increasing population (Duryea and Hermansen 2002).

Residents of the interface can be engaged in the process of seeking and implementing solutions to some of these problems. Protecting their own property from wildland fire is a scenario in which homeowners have an undeniable stake, but there are other opportunities to engage them as well. Residents of interface subdivisions can create butterfly gardens, put up nest boxes, and protect pockets of habitat. New migrants to agricultural areas have concerns about pesticides, water quality, and aromas that waft from nearby pig and chicken farms. Tolerating some of the traditional practices of their rural neighbors may be easier to do with an educated understanding of why these are appropriate practices and what the future might hold if farmers, ranchers, and forest landowners are not able to make a living from the land. There are many reasons to communicate with residents of the wildland-urban interface, and a variety of tools that can be used.

The literature reports a range of results from educational programs. Some recent efforts clearly show that educational brochures, posters, field trips, interpretive signs, and workshops help increase knowledge and raise awareness (Taylor and Daniel 1984; Marynowski and Jacobson 1999; Beringer 2000; Broussard, Jones et al. 2001). Although attitudes are harder to change, some of these tools even show a slight shift in how people feel about the issue. What makes these communication tools effective? They are designed with the audience in mind. They provide meaningful and relevant information in an understandable manner. They include procedural (how-to) details as well as the explanatory (how-come) information with examples and models.

Educational programs that contribute to behavior change must do more than provide attractive information. They have to inspire, engage, and motivate. Most of the programs that have achieved a change in behavior (Rohrmann 1999b; Fisher 2002; Monroe and Jacobson 2003) are examples of multi-faceted strategies that use a variety of tools to convey information, support attitudes, build skills, provide opportunities, reduce barriers, and offer assistance. After discovering what barriers and perspectives stand in the way, the organizers of these programs worked to remove them. These programs include publications that demonstrate the social acceptability of a solution and the consequences of the behavior, as well as suggestions for obtaining resources, working with neighbors, or learning more. A community cleanup day, a neighborhood picnic and tournament, an awards program, and a demonstration garden with a reminder sign are examples of activities that generate enthusiasm and community support while providing information that residents need. Empowering groups of residents to work together, much like using block captains to promote curbside recycling, appears to be a helpful strategy (Boura 1998; TFS 2003). For more information on strategies that support conservation behavior, see "Fostering Sustainable Behavior" (McKenzie-Mohr and Smith 1999).

The development of effective communication and education programs for interface residents and visitors should follow the same basic approach used in other successful programs (Bennett and Rockwell 1995; Jacobson 1999; Day and Monroe 2000).

1. Articulate the goal of the program. Know what condition you wish to change and be specific. If possible, engage residents and community leaders in the process that defines the specific targets and objectives of the program. In several cases, experts have offered a list of suggestions, but community members have made choices about the things they are willing to change and the risks they are willing to accept (Worley 2002).
2. Analyze the audience. Understand their fears and concerns, their values, and their abilities. Find out if they have misconceptions that might interfere with their understanding of your message. Where possible, plan to modify your program to enhance and support the values they hold (Hodgson 1995). Learn which communication channels are best for reaching this audience (e.g., radio, internet, poster) and whether your agency has a good enough reputation to be a trusted source of information. With these answers, develop specific objectives for your program.
3. Analyze your resources. Think about building partnerships with other agencies and organizations. Consider using other information-dispensers for your message—extension agents, nursery owners, building supply stores, landscape architects, real estate agents, etc. Also reconsider your objectives in light of your audience. Is a behavior change realistic? Is a violent confrontation likely? How can you adapt your message to make it more likely to succeed?
4. Develop program tools and strategies that will enable the target audience to meet the objectives. Enlist community leaders to demonstrate the new behavior and carry the message to others (Rogers 1995). Use existing homeowners associations, civic groups, environmental organizations, or youth clubs in your strategy to get the word out. Choose the tools that best fit your message and your audience, e.g., demonstration areas, festivals, bookmarks, interpretive signs, Internet sites, and posters in addition to brochures, fact sheets, caps, TV ads, radio Public Service Announcements, and newspaper coverage.
5. Field test the program ideas. Run everything by a representative group of local advisors. Find out which picture is most appealing for the brochure and whether your buzzwords communicate the right message. Collect feedback from a small group and revise the communication tools before they go out to the entire community.
6. Build in a strategy to monitor success. Consider the following indicators as measures of success: participation at community events, drive-by assessments of the neighborhood, number of complaints received, and physical changes of the landscape. Feedback cards, mail-in request cards, and coupons can be tagged to enable you to track where people are finding useful information.

A synthesis by the USDA Forest Service, North Central Research Station will provide more information about using education and communication tools to change behavior in the wildland-urban interface. Please check:
<http://ncrs.fs.fed.us/pubs/>

Conclusion

While some of the work of designing effective communication tools is intuitive, there are successful models and helpful guidelines that can remove some of the guesswork from the process. It is helpful to identify these models and explore the degree to which a modification of that program will sufficiently meet your needs. A good program will include how-to information as well as how-come information. It will convey that information through relevant, understandable messages. Where possible, it will use networks and social groups to elicit support and demonstrate appropriate change.

References

- Bennett, C. and K. Rockwell (1995). Targeting Outcomes of Programs (TOP): An integrated approach to planning and evaluation. Lincoln NE: University of Nebraska: 30.
- Beringer, J. (2000). "Community fire safety at the urban/rural interface: The bushfire risk." *Fire Safety Journal* 35: 1-23.

- Boura, J. (1998). Community Fireguard: Creating partnerships with the community. Mt Waverley VIC Australia: Country Fire Authority: 16.
- Broussard, S. R., S. B. Jones, et al. (2001). "Forest Stewardship Education: Fostering positive attitudes in urban youth." *Journal of Forestry* 99(1): 37-42.
- Day, B. A. and M. C. Monroe, Eds. (2000). *Environmental Education and Communication for a Sustainable World: Handbook for international practitioners*. Washington D.C.: Academy for Educational Development.
- Duryea, M. and L. A. Hermansen (2002). Challenges to forest resource management and conservation. In Macie, E. and L. A. Hermansen (eds.) *Human influences on forest ecosystems: The southern wildland-urban interface assessment*. Asheville, N.C.: US Department of Agriculture, Forest Service, Southern Research Station.
- Egan, A. F. and A. E. Luloff (2000). "The Exurbanization of America's Forests: Research in rural social science." *Journal of Forestry* 98(3): 26-30.
- Fisher, J. (2002). Crossroads: Quarter century of urban wildland fire prevention. *Wildland Firefighter*: 16+.
- Hodgson, R. W. (1995). Strategies for and Barriers to Public Adoption of Fire Safe Behavior, USDA Forest Service: 93-98.
- Jacobson, S. K. (1999). *Communication skills for conservation professionals*. Washington D.C.: Island Press.
- Macie, E. A. and L. A. Hermansen (2002). *Human influences on forest ecosystems: The southern wildland-urban interface assessment*. Asheville, N.C.: US Department of Agriculture, Forest Service, Southern Research Station.
- Marynowski, S. B. and S. K. Jacobson (1999). "Ecosystem management education for public lands." *Wildlife Society Bulletin* 27(1): 134-145.
- McKenzie-Mohr, D. and W. Smith (1999). *Fostering Sustainable Behavior: An introduction to community-based social marketing*. Gabriola Island, B.C. Canada: New Society Publishers.
- Monroe, M. C. and S. K. Jacobson (2003). "Partnerships for Natural Resource Education: Differing program needs and perspectives of extension agents and state agency staff." *Journal of Extension* 41(3): 1-9.
- Rogers, E. M. (1995). *Diffusion of Innovations*. New York: The Free Press.
- Rohrmann, B. (1999b). "Community-Based Fire Preparedness Programmes: An Empirical Evaluation." *Australasian Journal of Disaster and Trauma Studies* 1999(1): 26.
- Taylor, J. G. and T. C. Daniel (1984). "Prescribed Fire: Public Education and Perception." *Journal of Forestry* 82(6): 361-365.
- TFS (2003). *Citizen Wildfire Ecology Specialist Certification Program*. Bastrop TX: Texas Forest Service.
- Worley, K. (2002). Developing a "Value" based Community Mitigation Program. *Wildfire News and Notes*. 16: 1-6.