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## **Natural Resource Literacy and Public Policy: *An Expanded Role for the California State Board of Forestry and Fire Protection?***

Prepared by the California Licensed Foresters Association  
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“The Board shall implement a public information program on matters involving forest management and shall maintain an information file on forest management research and other pertinent matters.”

– Section 745, California Public Resources Code

*“Kids don’t know where ‘stuff’ comes from. They think milk comes from Safeway.”*

This kind of sentiment is common among professional foresters. The feeling is that if people were better informed about the ties that bind farm fields to dinner tables, or remote forests to the built environment, the public and its elected representatives would be more supportive of agriculture and forest management. It’s believed that the problem is systemic, beginning with our education system and spilling over into print and broadcast media.

Foresters aren’t alone in feeling misunderstood. In fact, the broader issue of agricultural literacy has been discussed since at least the 1980s.<sup>1</sup> A recent internet search of the topic elicited numerous responses.<sup>2</sup> Commentators on agricultural illiteracy each stressed the role that modern urban population demographics play in shaping the public’s

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<sup>1</sup> Board of Agriculture and Natural Resources, National Research Council, 1988. *Understanding Agriculture: New Directions for Education*. <http://books.nap.edu/books/0309039363/html/1.html>.

<sup>2</sup> Examples include:

Kelsey, Weeks, Terry, authors. Oklahoma State University. *Important Issues Facing Oklahoma: An Analysis of Agricultural Leaders’ Perspectives*. The “Need for agricultural literacy” topped a list of 15 critical issues identified by agricultural leaders in the state.

Torrico, Lonna, 2004. Agricultural Research Initiative, California State University Fresno, *Policy and Ag Literacy (PAL): From Crisis to Opportunity*. <http://aglit.csufresno.edu/ARI/>.

Eastburn, D’Arcy and Bruce, authors. *Plants, Pathogens and People: A Web Site to Improve Student Awareness of Agricultural Science*. University of Illinois at Urbana-Champaign, Instructional Technology Symposium, 2001. [http://www.ispp-itsymposium.org.nz/papers/submiss\\_7/](http://www.ispp-itsymposium.org.nz/papers/submiss_7/).

understanding of traditional rural lifeways such as agriculture and forestry, and their intertwined ecological, social and economic issues.

In California, the challenge of breaking down barriers between urban and rural sensibilities is especially daunting. Only 6% – one in fourteen – of Californians now live in rural areas. The Golden State ranks first among all fifty states in the proportion of its inhabitants residing in urbanized settings.<sup>3</sup> No other state has as many people whose daily lives are as physically isolated from the production of food and fiber as does California.

This disconnect – which we term “*urban isolation*” – is a fundamental challenge to sustainable forest management in the Golden State. It also helps to explain California’s “Environmental Paradox<sup>4</sup>” – why some interest groups and government agencies often seek to improve environmental quality by supporting policies that inhibit forest management in California. The direct result is an increase in the state’s heavy reliance on wood products imported from outside our borders. The net global environmental effects of California’s NIMBY<sup>5</sup>-driven forest policy choices are rarely discussed.<sup>6</sup>

We view urban isolation and its corollary, agricultural illiteracy, as unique challenges for California forestry, and therefore an appropriate topic for policy consideration by the Board of Forestry.

Understanding the issue is a first step. Reviewing current conservation education efforts is another. We will conclude by making recommendations for possible future Education/Outreach actions by the Board.

First, an important caveat: Implicit in this discussion is an assumption that if the 94% majority of Californians residing in urban areas become more deeply informed about natural resource issues, “better” (“wiser” “more favorable”) policy decisions will be made. While we believe this to be correct, we offer no documentation that definitively supports such a view.

## CURRENT CONSERVATION EDUCATION EFFORTS

For public schools in California, the curriculum framework for science<sup>7</sup> now mandates that environmental education be included in the science framework. “Wildlife conservation and forestry” is one of seven topics enumerated in the legislation (SB 373, 2001<sup>8</sup>) that created this requirement.

Currently, the California EPA and Integrated Waste Management Board are developing environmental education principles. A model curriculum is expected to be

<sup>3</sup> U. S. Census Bureau, October 1995. *Urban and Rural Population: 1900 to 1990*.

<sup>4</sup> See Dekker-Robertson, Donna: *A Global View of Our Forests*, The Washington Times, August 11, 2004.

<sup>5</sup> “NIMBY”: popular acronym for “Not In My Back Yard.”

<sup>6</sup> See Berlik, Kittredge and Foster, 2002. *The Illusion of Preservation: A Global Environmental Argument for the Local Production of Natural Resources*. Harvard Forest, Harvard University. Link to adobe acrobat file of reprint in Journal of Biogeography (29, 1557-1568):

[http://harvardforest.fas.harvard.edu/publications/pdfs/Berlik\\_Jbiogeography\\_2002.pdf](http://harvardforest.fas.harvard.edu/publications/pdfs/Berlik_Jbiogeography_2002.pdf).

<sup>7</sup> California Department of Education, 2003. *Science Framework for California Public Schools, Kindergarten through Grade Twelve*, page 8. Also: <http://www.cde.ca.gov/re/pn/fd/sci-frame-dwnld.asp>.

<sup>8</sup> Chapter 926, Statutes of 2001 (California).

completed in 2005<sup>9</sup>. In addition, science textbooks utilized in California public schools are undergoing a periodic revision, with new versions expected to be completed in 2006.

There are a number of unique educational programs addressing agricultural and/or forest resources targeting our public education system. These include:

**Project Learning Tree (PLT)**: This is a national program sponsored by the American Forest Foundation and Council for Environmental Education. Its mission statement says that “PLT uses the forest as a "window" on the world to increase students' understanding of our environment; stimulate students' critical and creative thinking; develop students' ability to make informed decisions on environmental issues; and instill in students the commitment to take responsible action on behalf of the environment.”<sup>10</sup> To reach young people, PLT concentrates on “teaching the teachers”. Last year, 2,400 educators and youth leaders received a minimum of six hours PLT training in California workshops.<sup>11</sup> The California Department of Forestry and Fire Protection (CDF) is the state sponsor of PLT.

**Ag in the Classroom**: This program, sponsored by the California Foundation for Agriculture in the Classroom (CFAITC), provides diverse educational resources for teachers and students, including the topic of forest resources. CFAITC’s Vision Statement (excerpted) touches upon the challenge of urban isolation: “Agriculture is the very basis of civilization—the food we eat, the clothing we wear, the material of our homes and many of our traditions and values... As generations of Americans become more distant from their agrarian origins, fewer and fewer people understand agriculture's importance to society. Yet, increasingly, people with limited agricultural knowledge and background are determining agricultural policy.”<sup>12</sup>

CFAITC’s website also contains a link to state agricultural literacy guidelines, developed in conjunction with California State Polytechnic University, San Luis Obispo.

**Forestry Institute for Teachers (FIT)**<sup>13</sup>: Sponsored by the Northern California Society of American Foresters, FIT takes PLT’s teacher training principles into the forest during a 6-day summer internship held in one of three Northern California locations. Since its inception in 1993, over 1,200 teachers from all over the state have attended FIT. Pre- and post-FIT teacher surveys provide anecdotal as well as objective confirmation that FIT graduates return to their home classrooms with a higher level of understanding of complex, often highly controversial, natural resource management issues.<sup>14</sup>

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<sup>9</sup> [www.calepa.ca.gov/Education/AB1548/](http://www.calepa.ca.gov/Education/AB1548/).

<sup>10</sup> <http://www.plt.org/>.

<sup>11</sup> Personal communication (10/12/04) with Kay Antunez, California PLT Coordinator, CDF Sacramento Headquarters, (916) 653-7958.

<sup>12</sup> [www.cfaitc.org](http://www.cfaitc.org).

<sup>13</sup> <http://www.forestryinstitute.org/>.

<sup>14</sup> Forestry Institute for Teachers, Camp Latiez FIT Assessment (Pre- and Post-FIT) Results, 2003. With a numerical range from 1 (strongly agree) through 5 (strongly disagree), participants responding to the statement, “Most land managers (both public and private) consider public trust resources, such as clean air, clean water, and wildlife habitat, when making management decisions” scored an average of 2.8 (n=35) before FIT, and 1.5 (n=34) when encountering the identical statement in the follow-up survey.

**Talk About Trees (TAT):** This program, created by California Women in Timber and supported by the California Forest Products Commission, utilizes trained facilitators who present one-hour forestry short courses to students in the classroom. In 2003, 42,000 California students (and 1,400 classroom teachers) were reached by TAT, which began in 1980 as Trees Are For People.<sup>15</sup>

Other environmental education providers/coordinators include the venerable **Association of Environmental and Outdoor Education**, whose members annually provide thousands of California 5<sup>th</sup> and 6<sup>th</sup> graders with overnight outdoor “science camp” experiences<sup>16</sup>, the California Department of Fish and Game’s **Project Wild**<sup>17</sup> and the **California Regional Environmental Education Community (CREEC)** network.<sup>18</sup>

These programs complement each other in their different approaches to natural resource education. However, they share one common difficulty: achieving program delivery in California’s most heavily urbanized areas. It’s one thing for Fresno schoolchildren to come into contact with a program like Ag In The Classroom; quite another for kids in Los Angeles or Orange Counties to receive similar educational opportunities.

Urban isolation is penetrated most effectively on the edges of metropolitan California, areas both physically closer to resource-based program providers and also where agricultural/forestry land uses are more readily familiar to the people. Forestry educators agree that only a fraction of California teachers and students are currently receiving their information.<sup>19</sup>

The fact that high quality natural resource information is not reaching most of California’s schoolchildren is of great concern to the forestry profession. Foresters are also keenly aware of the content and tone of media coverage. Exaggerated and untruthful statements about forest management often resonate in the popular press.

## FORESTRY AND THE “FOURTH ESTATE”

Information about forestry is presented in the classroom and also in the media. To increase interest in its product, the media tends to dramatize conflict and minimize consensus. In order to be heard, stakeholders reach out to the media and often package their “pitches” to amplify a particular story angle. Organizations like the Board of Forestry, with broad representation from various perspectives, can play a positive role in helping to clarify policy tradeoffs on issues of interest to the public.

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<sup>15</sup> Personal communication (10/13/04) with Pam Gannon, Administrative Support, Talk About Trees, [www.talkabouttrees.org](http://www.talkabouttrees.org), (530) 889-5100.

<sup>16</sup> [www.aeoe.org](http://www.aeoe.org).

<sup>17</sup> <http://www.dfg.ca.gov/coned/projectwild/resources.html>.

<sup>18</sup> [www.creec.org](http://www.creec.org), whose mission is: “To develop a communication network which provides educators with access to **High Quality** environmental education resources to enhance the environmental literacy of California Students.”

<sup>19</sup> Personal communications (10/04) with Lisa Perry (CFPC/TAT), Kay Antunez (CDF/PLT) and Gary Nakamura (UC Cooperative Extension/FIT).

## RECOMMENDED BOARD OF FORESTRY ACTIONS

The purpose of this paper has been to document the demographics behind agricultural illiteracy in California and to highlight some of the efforts being made to meet the growing challenge. CLFA believes that the Board of Forestry, in keeping with PRC 745, should assert its authority and weigh in on this issue. We also ask you to consider reaching out to the news media so that the general public might have a better opportunity to become informed on issues that are often presented in a very contentious, “us versus them,” manner.

CLFA requests the Board to:

1. Ask CDF for a review of current (and recommended) conservation education and public information activities.
2. Request the Executive Officer to report on the current status of Board compliance with PRC 745.
3. Consider hosting a symposium on environmental education, with an emphasis on promoting methods to improve agricultural literacy.
4. Become more proactive in media relations. One method of doing this would be to schedule editorial board meetings with leading California newspapers. Another would be to select and publicize a mechanism for Board media contact.
5. Consider monitoring the SB 373/AB 1548<sup>20</sup> environmental education curriculum development and review process.
6. Consider reviewing draft California science textbooks as they become available in the coming months, to ensure that forestry-related information is factual and unbiased.

Thank you for your consideration of these recommendations. This paper is the first of three that CLFA is preparing in response to “*The Changing California – Forest and Range 2003 Assessment*” by CDF’s Fire and Resource Assessment Program (FRAP). The topic of the next paper will be natural resource governance and the series will conclude with a discussion of national forest policy.

*The California Licensed Foresters Association, with approximately 750 members, represents the common interests of California Registered Professional Foresters. The Association provides opportunities for continuing education and public outreach to its membership, which includes diverse professionals affiliated with government agencies, private timber companies, consultants and the academic community. Governed by an elected Board of Directors, CLFA was established in 1980 after the passage of the landmark California Professional Foresters Law.*

<sup>20</sup> Chapter 665, Statutes of 2003 (California).