

## **Methods**

A mail survey of eight hundred twenty-five current and former members of the Society of Wood Science and Technology and selected Forest Products Society members was conducted in April of 1998. The sample frame was obtained from the Society of Wood Science and Technology (SWST).

A questionnaire, administered through the mail, was used to collect data and was directed to members and non-members involved in the field of wood science and technology (WS & T). All responses remained confidential. The first section of the questionnaire utilized categorical questions to identify the importance of attitudes towards selected SWST services.

The second section of the questionnaire used an open-ended question to elicit responses for potential additional services the SWST could offer members. Categorical questions were utilized to determine the importance of selected aspects regarding national certification in WS & T and important selected criterion for national certification of individuals in WS & T.

The third section of the questionnaire asked respondents if they would prefer new items and/or categories to be included in future Wood and Fiber Science (W & FS) issues. Open-ended questions were utilized to gather information towards national certification. Itemized-category scale questions were then used to elicit responses towards annual and initial fees for a national certification program. Categorical questions were utilized to determine what topics and aspects of W & FS respondents deemed important. The final section of the questionnaire utilized open-ended and categorical questions to ascertain demographic information for the SWST.

## **Respondents**

The SWST Membership and Services questionnaire was mailed to 825 current and former members or persons associated with or in the area of WS & T. Two hundred thirty-four responded to the survey. The response rate was 28.4 percent.

The mean age for all respondents was 48.8 years. The 41-50 year old age group had the highest frequency (54 and 24.0 percent), followed by the 31-40 group, 51-60 group, 61-70, 21-30, and finally the 70-plus age group (Table 1). Two hundred-eighteen of the (96.0 percent) respondents were males and 9 (4.0 percent) were females (Table 2).

One hundred ninety-one (85.6 percent) of the respondents were current members, 18 (8.1 percent) were former members, and 14 (6.3 percent) were not members of the SWST (Table 3).

One hundred twenty-four (67.0 percent) of the respondents were full members, 31 (16.8 percent) were retired members, and 30 (16.2 percent) were student members of the SWST (Table 4).

Nine (64.3 percent) of the respondents were formerly full members, 4 (28.6 percent) were formerly student members, and 1 (7.1 percent) was a former retired member of the SWST (Table 5).

One hundred-forty (61.1 percent) of the respondents attained Ph. D. degrees, 49 (21.4 percent) obtained Master's degrees, 37 (16.2 percent) obtained Bachelor of Science degrees, 2 (0.9 percent) were other types of degrees, and 1 (0.4 percent) had a high school degree (Table 6).

Eighty-one (35.7 percent) of the respondents were employed in the academic field, 67 (29.5 percent) were employed in industry, 37 (16.3 percent) were retired, 24 (10.6 percent) were employed by the government, 15 (6.6 percent) were students, 2 (0.9 percent) were in other job classifications (unemployed and computer science) and 1 (0.4 percent) was a consultant (Table 7).

Respondents were asked to list their place of residency. Virginia, Washington, and Wisconsin were the most frequent responses with 20 from each state, respectively (Table 8).

Respondents were asked to describe their educational training. The most frequent replies were training in WS & T, forestry, and wood engineering. Other degrees mentioned were nuclear, electrical, mechanical, and civil engineering. Also there were degrees in biology, zoology, and history.

Respondents were asked to describe their current areas of professional expertise. Expertise areas ranged from wood adhesion, anatomy, chemistry, coatings, composites, drying, engineering, marketing and management, moisture relations, paper and paper packaging, preservation, and secondary wood processing. Other areas were academic, government, industry researchers, technologists, research and development, and corporate officers. In addition, there were assistant, associate, and full professors, and Deans and Department heads.

## **Results and Discussion**

One hundred ninety-nine (87.7 percent) respondents indicated the publication of Wood and Fiber Service was an important service, 24 indicated it was moderately important, and 4 (1.7 percent) had no opinion (Table 9). The mode (measure of central tendency) for this question was important, 4 respondents had no knowledge of this service.

Eighty-three (37.7 percent) indicated the annual Society of Wood and Science and Technology meeting was important, 76 (34.6 percent) indicated it was moderately important, and 61 (27.7 percent)

had no opinion (Table 9). The mode for this question was moderately important; 4 respondents had no knowledge of the meeting.

One hundred-nine (48.4 percent) indicated that the SWST Membership Directory was important, 80 (35.6 percent) indicated it was moderately important, and 36 (16.0 percent) had no opinion (Table 9). The mode for this question was important; 5 respondents had no knowledge of this service.

Ninety-four (42.3 percent) indicated that the Student Poster Competition was important, 81 (36.5 percent) indicated it was moderately important, and 47 (21.2 percent) had no opinion (Table 10). The mode for this question was important; 9 respondents had no knowledge of this award.

Eighty-seven (39.4 percent) indicated that the Distinguished Service Award was important, 79 (35.7 percent) indicated it was moderately important, and 55 (24.9 percent) had no opinion (Table 10). The mode for this question was important; 10 respondents had no knowledge of this award.

Eighty-seven (40.3 percent) indicated that the George Marra Award was important, 82 (37.9 percent) indicated it was moderately important, and 47 (21.8 percent) had no opinion (Table 10). The mode for this question was important; 13 respondents had no knowledge of this award.

Seventy-seven (34.1 percent) indicated the International Visiting Science Award was moderately important, 73 (36.0 percent) indicated it was important, and 64 (29.9 percent) had no opinion (Table 10). The mode for this question was moderately important; 16 respondents had no knowledge of this award.

Eighty-six (40.8 percent) indicated that the Visiting Scientist Program was important, 78 (37.0 percent) indicated it was moderately important, and 47 (22.2 percent) had no opinion (Table 11). The mode for this question was important; 18 respondents had no knowledge of this program.

One hundred twenty-three (54.4 percent) indicated that the SWST Newsletter was important, 81 (35.8 percent) indicated it was moderately important, and 22 (9.7 percent) had no opinion (Table 11). The mode for this question was important; 5 respondents had no knowledge of the newsletter.

Seventy-six (38.6 percent) indicated that the SWST Webpage was moderately important, 72 (36.5 percent) indicated it was important, and 49 (24.9 percent) had no opinion (Table 11). The mode for this question was moderately important; 33 respondents had no knowledge of the webpage.

One hundred forty-nine (67.1 percent) indicated that the SWST Accreditation of University Wood Science Programs was important, 46 (20.7 percent) indicated it was moderately important, and 27 (12.2 percent) had no opinion (Table 11). The mode for this question was important; 9 respondents had no knowledge of this service.

Seventy-eight (40.8 percent) indicated that the SWST Teaching Units for High Schools were

important, 78 (40.8 percent) indicated it was moderately important, and 35 (18.4 percent) had no opinion (Table 11). The mode for this question was important and moderately important; 39 respondents had no knowledge of this service.

One hundred-ten (50.9 percent) indicated that the SWST Critical Publications were important, 81 (40.8 percent) indicated it was moderately important, and 25 (18.4 percent) had no opinion (Table 11). The mode for this question was important; 14 respondents had no knowledge of this service.

Respondents were asked to comment on what new services the SWST could potentially provide to its members. Former and non-members stated that the SWST should provide wood identification services, a survey and review of WS & T programs, reviews of other wood science articles, practical survey of a wood production factory, a separate e-mail directory, and better networking. Respondents too stated that they would like to see annual fees lowered, an ethics committee with strength to rescind SWST membership of offenders, a video and internet article on what wood technology and forest products jobs are really all about, and a one-day SWST meeting that would coincide with different meetings (e.g., TAPPI or ACS). In addition, some replied the articles were predominately technical and that construction or industry professionals may be enticed to join if there were more practical articles.

Student members stated they would like the SWST to support graduate students with funds, annual student conference funded by the SWST, organize exchange programs for international students, online journal articles, enhanced website, internet resources, job listings for forest products careers, and free subscriptions to W &FS.

Full members replied they would like to see past articles and membership directories on the webpage, literature database, Internet chat line with a question and answer capabilities, on-line technical support, have prepared wood science course outlines and lectures available for purchase, professional packets (e.g. relating to wood drying, mechanics, etc.), more papers from outside North America (however, one respondent stated that this should occur only if it increased membership from outside North America), job listings, salary surveys, reduce or eliminate page charges for W&FS, reduce annual fees, more promotion of the forest products industry, and more articles and examples on the application of research.

Retired members stated the Society and industry should sponsor television specials on the good and bad uses of wood, salary and remuneration surveys, sponsor more seminars on selected research topics and emerging products in the emerging field of engineered wood, full text graphics on the webpage (i.e., PDF format), more publications on critical issues, SWST and members must oppose such organizations as the Sierra Club, a directory of members in their areas of expertise, and a listing of e-

mail addresses located in the SWST directory.

One hundred twenty-one (54.0 percent) of all respondents indicated that national certification in WS & T would be important towards enhancing visibility to potential clients or employers, 55 (24.6 percent) indicated it was moderately important, and 48 (21.4 percent) had no opinion (Table 12). The mode for this question was important.

One hundred-seventeen (51.8 percent) of all respondents indicated that national certification in WS & T would be important towards recognition of professional accomplishments and expertise, 61 (27.0 percent) indicated it was moderately important, and 48 (21.2 percent) had no opinion (Table 13). The mode for this question was important.

One hundred-three (46.0 percent) of all respondents indicated that national certification in WS & T would be important towards improved networking with accomplished professionals in the area of WS & T, 71 (31.7 percent) indicated it was moderately important, and 50 (22.3 percent) had no opinion (Table 14). The mode for this question was important.

One hundred-fourteen (50.9 percent) of all respondents indicated that national certification in WS & T would be important towards recognition of the WS & T discipline through the coordination of a national certification program, 71 (31.7 percent) indicated it was moderately important, and 39 (17.4 percent) had no opinion (Table 15). The mode for this question was important.

One hundred-seven (47.6 percent) of all respondents indicated that national certification in WS & T would be important as an incentive towards remaining current and retaining knowledge in the WS & T discipline, 78 (34.7 percent) indicated it was moderately important, and 40 (17.7 percent) had no opinion (Table 16). The mode for this question was important.

One hundred forty-eight (67.0 percent) of all respondents indicated that a minimum number of college credits in WS & T coursework would be an important criterion for an individual to attain national certification in the WS & T discipline, 52 (23.5 percent) indicated they had no opinion, and 21 (9.5 percent) indicated it was not important (Table 17). The mode for this question was important.

Ninety-eight (44.7 percent) of all respondents indicated they had no opinion as to whether passing a comprehensive examination in WS & T would be an important criterion for an individual to attain national certification in the WS & T discipline, 67 (30.6 percent) indicated it was important, and 54 (24.7 percent) that it was not important (Table 18). The mode for this question was no opinion.

One hundred fifty-one (68.6 percent) of all respondents indicated that demonstrated work experience in WS & T would be an important criterion for an individual to attain national certification in the WS & T discipline, 52 (23.6 percent) indicated they had no opinion, and 17 (7.8 percent) indicated

it was not important (Table 19). The mode for this question was important.

One hundred-eight (49.3 percent) of all respondents indicated they had no opinion as to whether participation in a minimum number of contact hours in approved WS & T symposia or short courses would be an important criterion for an individual to attain national certification in the WS & T discipline, 58 (26.5 percent) indicated it was important, and 53 (24.2 percent) indicated it was not important (Table 20). The mode for this question was no opinion.

Seventy-four (71.8 percent) of positive respondents (respondents voted yes for a national certification program in WS & T) indicated that national certification in WS & T would be important towards enhancing visibility to potential clients or employers, 24 (23.3 percent) indicated it was moderately important, and 5 (4.9 percent) had no opinion (Table 12). The mode for this question was important.

Seventy-five (72.8 percent) of positive respondents indicated that national certification in WS & T would be important towards recognition of professional accomplishments and expertise, 22 (21.4 percent) indicated it was moderately important, and 6 (5.8 percent) had no opinion (Table 13). The mode for this question was important.

Sixty-one (59.3 percent) of positive respondents indicated that national certification in WS & T would be important towards improved networking with accomplished professionals in the area of WS & T, 33 (32.0 percent) indicated it was moderately important, and 9 (8.7 percent) had no opinion (Table 14). The mode for this question was important.

Seventy-five (72.8 percent) of positive respondents indicated that national certification in WS & T would be important towards recognition of the WS & T discipline through the coordination of a national certification program, 24 (23.3 percent) indicated it was moderately important, and 4 (3.9 percent) had no opinion (Table 15). The mode for this question was important.

Sixty-six (64.1 percent) of positive respondents indicated that national certification in WS & T would be important towards remaining current and retaining knowledge in the WS & T discipline, 35 (34.0 percent) indicated it was moderately important, and 2 (1.9 percent) had no opinion (Table 16). The mode for this question was important.

Eighty (78.4 percent) of positive respondents indicated that a minimum number of college credits in WS & T coursework would be an important criterion for an individual to attain national certification in the WS & T discipline, 17 (16.7 percent) indicated they had no opinion, and 5 (4.9 percent) indicated it was not important (Table 17). The mode for this question was important.

Forty-seven (46.1 percent) of positive respondents indicated that passing a comprehensive

examination in WS & T coursework would be an important criterion for an individual to attain national certification in the WS &T discipline, 37 (36.3 percent) indicated they had no opinion, and 18 (17.6 percent) indicated it was not important (Table 18). The mode for this question was important.

Eighty (77.7 percent) of positive respondents indicated that demonstrated work experience in WS &T would be an important criterion for an individual to attain national certification in the WS &T discipline, 17 (16.5 percent) indicated they had no opinion, and 6 (5.8 percent) indicated it was not important (Table 19). The mode for this question was important.

Forty-seven (46.6 percent) of positive respondents indicated they had no opinion as to whether participation in a minimum number of contact hours in approved WS &T symposia or short courses would be an important criterion for an individual to attain national certification in the WS &T discipline, 37 (36.6 percent) indicated it was important, and 16 (15.8 percent) indicated it was not important (Table 20). The mode for this question was no opinion.

Respondents were asked to recommend other criterion they felt would be beneficial towards certification. Non-members and students replied that certification should include all fields of WS & T, there should be a code of ethics, publications and committee work, expertise and a proven track record, passing a comprehensive exam, referrals and recommendations, and one mentioned the SWST should examine the Society of American Foresters criterion (also implied that the S.A.F. accreditation program was a disaster).

Full members stated that publications, personal recommendations, demonstrated expertise and experience, committee work for the SWST, and the program should be patterned after the International Society of Arboriculture's program.

Sixty-four (29.6 percent) of all respondents indicated that \$25.00 and zero dollars, respectively; would be the amount they would pay for annual national certification fees. Fifty-six (25.9 percent) indicated that \$50.00 would be the amount they would pay for annual national certification fees, 15 (6.9 percent) indicated \$100.00, 9 (4.3 percent) indicated other amounts, and 8 (3.7 percent) indicated \$75.00 (Table 21). The mode for this question was both \$25.00 and zero dollars.

Eighty-one (37.9 percent) of all respondents indicated that zero dollars would be the amount they would pay for initial certification fees, 76 (35.5 percent) indicated \$50.00, 24 (11.2 percent) indicated other amounts, 13 (6.1 percent) indicated \$150.00, 12 (5.6 percent) indicated \$250.00, and 8 (3.7 percent) indicated \$200.00 (Table 22). The mode for this question was \$0.00.

Thirty-seven (36.6 percent) of positive respondents indicated that \$25.00 would be the amount they would pay for annual national certification fees, 36 (35.6 percent) indicated \$50.00, 12 (11.9

percent) indicated other amounts, 8 (7.9 percent) indicated zero dollars, 4 (4.0 percent) indicated \$100.00, and 4 (4.0 percent) indicated \$75.00 (Table 21). The mode for this question was \$25.00.

Forty-nine (49.0 percent) of positive respondents indicated that \$100.00 would be the amount they would pay for initial national certification fees, 15 (15.0 percent) indicated zero dollars, 13 (13.0 percent) indicated other amounts, 9 (9.0 percent) indicated \$250.00, 8 (8.0 percent) indicated \$150.00, and 6 (6.0 percent) indicated \$200.00 (Table 22, Figure 40). The mode for this question was \$100.00.

Respondents were asked to make additional comments on national certification in wood science and technology. One non-member stated that if criterion for membership in the SWST were well defined there might not be a need for national certification. Another responded that certification was a mechanism to allow non-degreed people in the profession and therefore make a degree in WS & T unnecessary. Other comments included certification should be sponsored by certified practitioners, should be coordinated with universities, it should be paid for by employers, should be based on knowledge and not degrees, it would provide professional recognition, and there should be different levels of certification. Several respondents stated that certification would just provide another certificate to hang on the wall and the most frequent response was that certification was just a bad idea.

Student members responded that there should be different levels of certification to be meaningful, it would bring honor and prestige to the profession, look at state guidelines for a model, certification should not lead to an increase of fees for all members, and will the states approve certification.

The most frequently stated comment by full members was that they disapproved of national certification because of a lack of demonstrated need. The WS & T field is too diverse, a waste of money and the SWST was not large enough to sustain national certification, and it was an ego trip for someone. Other reasons stated for opposing certification were unless the client benefited there was no purpose, experience and expertise should be enough, and SWST as an accreditation policy. Full members in favor of certification replied that certain individuals may excel in WS & T and not have a degree in wood science, it was just a good idea whose time had come, there should be differing levels of certification and international certification, it would aid in the public recognition of WS & T, and it should be based on expertise. Other comments included: this is all we need--more control in our lives, will the public and employer notice certification, and our clients must benefit or there is no purpose or justification for certification.

Retired members commented that other professions certification procedures should be explored and the SWST program should be modeled after these, certification would be good if it increased

cooperation among all professions within WS & T, in order for the SWST to survive--national certification will have to be adopted, it should be carefully implemented, and the criterion should have a minimum amount of experience and coursework.

The results, by age group classification, are inconclusive regarding a national certification program. One hundred (45.0 percent) indicated they were in favor of a national certification program, 63 (28.4 percent) had no opinion, and 59 (26.6 percent) were not in favor (Table 23).

The results, by education level classification, are too inconclusive regarding national certification. One hundred-one (44.7 percent) indicated they were in favor of a national certification program, 63 (27.9 percent) were indifferent, and 62 (27.4 percent) were not in favor (Table 24).

The results, by job classification, are inconclusive regarding national certification. One hundred (44.6 percent) indicated they were in favor of a national certification program, 63 (28.2 percent) were indifferent, and 61 (27.2 percent) were not in favor (Table 25).

The results are inconclusive regarding national certification amongst all respondents. One hundred-four (45.2 percent) indicated they were in favor of a national certification program, 63 (27.4 percent) were indifferent, and 63 (27.4 percent) were not in favor of a national certification program (Table 26).

One hundred ninety-eight (88.8 percent) of the respondents indicated positive perceptions toward topics in W & FS being interesting, 13 (5.8 percent) indicated it was not interesting, and 12 (5.4 percent) indicated it was sometimes interesting (Table 27).

Two hundred-two (91.0 percent) of the respondents indicated positive perceptions towards W & FS being informative and helpful, 13 (5.9 percent) indicated it was not informative, and 7 (3.1 percent) indicated it was sometimes informative (Table 28).

Respondents were asked to comment on what could be included or changed to make W & FS more interesting and helpful. The most frequent response by non-members was that the articles were too specific, too academic, and not useful to those working in the "trenches". W & FS needs to include more continuing education articles, better transfer of technology to industry articles, current industry trends, computer science articles (e.g., artificial intelligence, data basing, and forest products software), and annual index of W & FS articles. And lastly, the topics were interesting--but the actual reports were not.

Student member respondents replied they wanted job listings, it was okay as is, focus more on materials science, marketing and management, focus less on marketing and management, more articles

on furniture and hardwoods, and more practical application of articles.

Full member's most frequent replies were that there needed to be more practical application and the journal was good as is. Several stated specific topic issues would be desirable (e.g., composite modeling, wood preservation, structures, etc.), a question and answer forum, technical and problem solving section, job openings, titles of upcoming issues, redesign the cover, conference and seminar information, summaries of symposiums and conferences, more reviews of technical articles, keep marketing out, more marketing articles, scratch and sniff data, and a better balance between theory and application.

One hundred sixty-six (75.8 percent) of the respondents indicated positive perceptions towards the W & FS table of contents being published on the SWST Webpage, 50 (22.8 percent) indicated it was not useful, and 3 (1.4 percent) indicated they had no opinion (Table 29).

One hundred sixty-nine (77.2 percent) of the respondents indicated positive perceptions towards W & FS abstracts being published on the SWST Webpage, 47 (21.4 percent) indicated it was not useful, and 3 (1.4 percent) indicated they had no opinion (Table 30).

One hundred thirty-nine (64.7 percent) of the respondents indicated negative perceptions towards entire papers being published on SWST Webpage, 73 (34.0 percent) indicated it would be useful, and 3 (1.4 percent) had no opinion (Table 31).

One hundred eighty-four (85.2 percent) of the respondents indicated positive perceptions towards papers from outside North America being included in W & FS, 31 (14.4 percent) indicated they should not be included, and 1 (0.4 percent) had no opinion (Table 32).

One hundred thirty-four (65.0 percent) of the respondents indicated negative perceptions towards obtaining a compact disk version of W & FS, 71 (34.5 percent) indicated they would prefer the option of obtaining a compact disk version, and 1 (0.5 percent) had no opinion (Table 33).

## Conclusions

Respondents deemed the publication of Wood and Fiber Science was the most important service offered by the SWST, followed by accreditation of university wood science programs, SWST newsletter, and SWST critical publications. Deemed moderately important were the SWST directory, the Student Poster Award Competition, teaching units for high school students, the Visiting Scientist Program, and the George Marra Award. Deemed less to moderately important were the Distinguished Service Award, SWST Webpage, the annual SWST meeting, and the International Visiting Scientist Award.

There were no conclusive findings regarding the proposed SWST national certification program. The most frequent response to comments on national certification asked is there was a demonstrated need for such a program. Positive respondents to national certification, as compared to all respondents, indicated more strongly that the program would enhance visibility to clients, was important towards recognition of professional accomplishments and expertise, would improve networking, would be important towards increasing the recognition of the WS & T discipline, and would be an incentive to remain current in the WS & T discipline.

Positive respondents indicated more strongly than all respondents that minimum requirements and work experience were necessary criterion. Positive respondents indicated that passing an exam would be a moderately important criterion. Both groups of respondents indicated that they had no opinion on whether participation in a minimum number of hours in short courses or symposia were necessary.

All respondents indicated more strongly that they would pay either \$25.00 or zero dollars for annual and zero dollars for initial fees. Positive respondents indicated more strongly that they would pay either \$25.00 or \$50.00 annual fees and \$100.00 for initial fees.

Respondents strongly indicated that W & FS topics were interesting, informative and helpful, a web-based table of contents and abstracts of journal articles would be useful, and that papers from outside North America should be encouraged. Respondents also strongly indicated that it would not be useful to include entire papers on the SWST Webpage and they were not interested in obtaining a compact disk version of W & FS. The most frequent responses to what could be included in W & FS to better serve your needs were job listings, make articles less technical, and more practical for field application.

**Table 1. Respondents by Age Group.**

Age Group	Frequency	Percent
41-50	54	24.0
31-40	52	23.1
51-60	41	18.2
61-70	37	16.4
21-30	23	10.2
70+	18	8.0
Total	225	100.0

**Table 2. Respondents by Gender.**

	Frequency	Percent
Male	218	96.0
Female	9	4.0
Total	227	100.0

**Table 3. Respondents by Membership Status.**

Membership Status	Frequency	Percent
Current member	191	85.6
Former Member	18	8.1
Never a Member	14	6.3
Total	223	100.0

**Table 4. Respondents by Current Membership Category.**

Membership Type	Frequency	Percent
Full	124	67.0
Retired	31	16.8
Student	30	16.2
Total	185	100.0

**Table 5. Respondents by Former Membership Status.**

<b>Previous Membership Status</b>	<b>Frequency</b>	<b>Percent</b>
Full	9	64.3
Student	4	28.6
Retired	1	7.1
Total	14	100.0

**Table 6. Respondents by Educational Background.**

<b>Education</b>	<b>Frequency</b>	<b>Percent</b>
Ph. D.	140	61.1
M. S.	49	21.4
B. S.	37	16.2
Other	2	0.9
High School	1	0.4
Total	229	100.0

**Table 7. Respondents by Job Classification.**

<b>Job Classification</b>	<b>Frequency</b>	<b>Percent</b>
Academic	81	35.7
Industry	67	29.5
Retired	37	16.3
Government	24	10.6
Student	15	6.6
Other	2	0.9
Consultant	1	0.4
Total	234	100.0

**Table 8. Respondents by Residency.**

<b>Resident of:</b>	<b>Frequency</b>	<b>Percent</b>
Virginia	20	8.9
Washington	20	8.9
Wisconsin	20	8.9
Oregon	19	8.5
Mississippi	11	4.9
California	9	4.0
North Carolina	8	3.6
Pennsylvania	8	3.6
New York	7	3.1
Colorado	6	2.7
Florida	6	2.7
Georgia	6	2.7
Idaho	6	2.7
Massachusetts	5	2.2
Michigan	5	2.2
Tennessee	5	2.2
Indiana	4	1.8
Kentucky	4	1.8
Louisiana	4	1.8
Minnesota	4	1.8
Illinois	3	1.3
Maine	3	1.3
Maryland	2	0.9
Montana	2	0.9
West Virginia	2	0.9
Alabama	1	0.4
Arizona	1	0.4
Washington, DC	1	0.4
Delaware	1	0.4
Hawaii	1	0.4
Iowa	1	0.4
Missouri	1	0.4
New Hampshire	1	0.4
New Jersey	1	0.4
<b>Other Countries</b>		
Canada	12	5.4
Germany	2	0.9
Ghana	2	0.9
Australia	1	0.4
Austria	1	0.4
Brazil	1	0.4
Great Britain	1	0.4
Japan	1	0.4
Korea	1	0.4
Sweden	1	0.4
Taiwan	1	0.4
Turkey	1	0.4
<b>Total</b>	<b>224</b>	<b>100.0</b>

**Table 9. Attitudes Towards Selected SWST Services.**

<b>Service</b>	<b>Frequency</b>	<b>Percent</b>
<b>Publication of Wood &amp; Fiber Science</b>		
Important	199	87.7
Moderately Important	24	10.6
No Opinion	4	1.7
<b>Total</b>	<b>227</b>	<b>100.0</b>
<b>Annual SWST Meeting</b>		
Important	83	37.7
Moderately Important	76	34.6
No Opinion	61	27.7
<b>Total</b>	<b>220</b>	<b>100.0</b>
<b>SWST Membership Directory</b>		
Important	109	48.4
Moderately Important	80	35.6
No Opinion	36	16.0
<b>Total</b>	<b>225</b>	<b>100.0</b>

**Table 10. Attitudes Towards SWST Annual Awards.**

<b>Service</b>	<b>Frequency</b>	<b>Percent</b>
<b>Student Poster Competition</b>		
Important	94	42.3
Moderately Important	81	36.5
No Opinion	47	21.2
<b>Total</b>	<b>222</b>	<b>100.0</b>
<b>Distinguished Service Award</b>		
Important	87	39.4
Moderately Important	79	35.7
No Opinion	55	24.9
<b>Total</b>	<b>221</b>	<b>100.0</b>
<b>George Marra Award</b>		
Important	87	40.3
Moderately Important	82	37.9
No Opinion	47	21.8
<b>Total</b>	<b>216</b>	<b>100.0</b>
<b>International Visiting Scientist Award</b>		
Moderately Important	77	36.0
Important	73	34.1
No Opinion	64	29.9
<b>Total</b>	<b>214</b>	<b>100.0</b>

**Table 11. Attitudes Towards Other Selected SWST Services.**

<b>Service</b>	<b>Frequency</b>	<b>Percent</b>
<b>Visiting Scientist Program</b>		
Important	86	40.8
Moderately Important	78	37.0
No Opinion	47	22.2
<b>Total</b>	<b>211</b>	<b>100.0</b>
<b>SWST Newsletter</b>		
Important	123	54.4
Moderately Important	81	35.8
No Opinion	22	9.7
<b>Total</b>	<b>226</b>	<b>100.0</b>
<b>SWST Webpage</b>		
Moderately Important	76	38.6
Important	72	36.5
No Opinion	49	24.9
<b>Total</b>	<b>197</b>	<b>100.0</b>
<b>SWST Accreditation of University</b>		
<b>Wood Science Programs</b>		
Important	149	67.1
Moderately Important	46	20.7
No Opinion	27	12.2
<b>Total</b>	<b>222</b>	<b>100.0</b>
<b>SWST Teaching Units</b>		
Important	78	40.8
Moderately Important	78	40.8
No Opinion	35	18.4
<b>Total</b>	<b>226</b>	<b>100.0</b>
<b>SWST Critical Publications</b>		
Important	110	50.9
Moderately Important	81	37.5
No Opinion	25	11.6
<b>Total</b>	<b>221</b>	<b>100.0</b>

**Table 12. Attitudes Towards National Certification and Visibility Enhancement.**

Aspect	Frequency	Percent
<b>Enhance Visibility to Potential Clients or Employers</b>		
(All respondents)		
Important	121	54.0
Moderately Important	55	24.6
No Opinion	48	21.4
<b>Total</b>	224	100.0
<b>Enhance Visibility to Potential Clients or Employers</b>		
(Positive respondents)		
Important	74	71.8
Moderately Important	24	23.3
No Opinion	5	4.9
<b>Total</b>	103	100.0

**Table 13. Attitudes Towards National Certification and Professional Recognition.**

Aspect	Frequency	Percent
<b>Recognition of Professional Accomplishments and Expertise</b>		
(All respondents)		
Important	117	51.8
Moderately Important	61	27.0
No Opinion	48	21.2
<b>Total</b>	226	100.0
<b>Recognition of Professional Accomplishments and Expertise</b>		
(Positive respondents)		
Important	75	72.8
Moderately Important	22	21.4
No Opinion	6	5.8
<b>Total</b>	103	100.0

**Table 14. Attitudes Towards National Certification and Improved Networking.**

Aspect	Frequency	Percent
<b>Improved Networking With Accomplished Professionals in Wood Science and Technology</b>		
(All respondents)		
Important	103	46.0
Moderately Important	71	31.7
No Opinion	50	22.3
<b>Total</b>	<b>224</b>	<b>100.0</b>

**Improved Networking With Accomplished Professionals in Wood Science and Technology**

(Positive respondents)

Important	61	59.3
Moderately Important	33	32.0
No Opinion	9	8.7
<b>Total</b>	<b>103</b>	<b>100.0</b>

**Table 15. Attitudes Towards National Certification and Recognition of Wood Science Discipline.**

Aspect	Frequency	Percent
<b>Recognition of Wood Science Discipline Through Coordination Of A National Certification Program</b>		
(All respondents)		
Important	114	50.9
Moderately Important	71	31.7
No Opinion	39	17.4
<b>Total</b>	<b>226</b>	<b>100.0</b>

**Recognition of Wood Science Discipline Through Coordination Of A National Certification Program**

(Positive respondents)

Important	75	72.8
Moderately Important	24	23.3
No Opinion	4	3.9
<b>Total</b>	<b>103</b>	<b>100.0</b>

**Table 16. Attitudes Towards National Certification and Knowledge Incentive in the Wood Science and Technology Discipline.**

Aspect	Frequency	Percent
<b>Incentive to Remain Current and Retain Knowledge in the Wood Science and Technology Discipline</b>		
(All respondents)		
Important	107	47.6
Moderately Important	78	34.7
No Opinion	40	17.7
<b>Total</b>	226	100.0
<b>Incentive to Remain Current and Retain Knowledge in the Wood Science and Technology Discipline</b>		
(Positive respondents)		
Important	66	64.1
Moderately Important	35	34.0
No Opinion	2	1.9
<b>Total</b>	103	100.0

**Table 17. Attitudes Towards National Certification Criterion.**

Criterion	Frequency	Percent
<b>A Minimum Number of College Credits in Wood Science and Technology Course Work</b>		
(All respondents)		
Important	148	67.0
Not Important	52	23.5
No Opinion	21	9.5
<b>Total</b>	221	100.0
<b>A Minimum Number of College Credits in Wood Science and Technology Course Work</b>		
(Positive respondents)		
Important	80	78.4
Not Important	17	16.7
No Opinion	5	4.9
<b>Total</b>	102	100.0

**Table 18. Attitudes Towards National Certification Criterion.**

Criterion	Frequency	Percent
<b>Passing A Comprehensive Exam in Wood Science and Technology (All respondents)</b>		
No Opinion	98	44.7
Important	67	30.6
Not Important	54	24.7
<b>Total</b>	219	100.0
<b>Passing A Comprehensive Exam in Wood Science and Technology (Positive respondents)</b>		
Important	47	46.1
Not Important	37	36.3
No Opinion	18	17.6
<b>Total</b>	102	100.0

**Table 19. Attitudes Towards National Certification Criterion.**

Criterion	Frequency	Percent
<b>Demonstrated Work Experience In Wood Science and Technology (All respondents)</b>		
Important	151	68.6
Not Important	52	23.6
No Opinion	17	7.8
<b>Total</b>	219	100.0
<b>Demonstrated Work Experience In Wood Science and Technology (Positive respondents)</b>		
Important	80	77.7
Not Important	17	16.5
No Opinion	6	5.8
<b>Total</b>	103	100.0

**Table 20. Attitudes Towards National Certification Criterion.**

<b>Criterion</b>	<b>Frequency</b>	<b>Percent</b>
<b>Participation in a Minimum Number of Contact Hours</b>		
In Approved WS & T Symposia/Short Courses		
(All respondents)		
No Opinion	108	49.3
Important	58	26.5
Not Important	53	24.2
<b>Total</b>	219	100.0
<b>Participation in a Minimum Number of Contact Hours</b>		
In Approved WS & T Symposia/Short Courses		
(Positive respondents)		
No Opinion	47	46.6
Important	37	36.6
Not Important	16	15.8
<b>Total</b>	100	100.0

**Table 21. Attitudes Towards Annual Fees for National Certification.**

<b>Fee Amounts (U.S. Dollars)</b>	<b>Frequency</b>	<b>Percent</b>
<b>All Respondents</b>		
Zero	64	29.6
Twenty-five	64	29.6
Fifty	56	25.9
One hundred	15	6.9
Other	9	4.3
Seventy-five	8	3.7
<b>Total</b>	<b>216</b>	<b>100.0</b>
<b>Positive Respondents</b>		
Twenty-five	37	36.6
Fifty	36	35.6
Other	12	11.9
Zero	8	7.9
One hundred	4	4.0
Seventy-five	4	4.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Table 22. Attitudes Towards Initial Fees for National Certification.**

Fee Amounts (U.S. Dollars)	Frequency	Percent
<b>All Respondents</b>		
Zero	81	37.9
One hundred	76	35.5
Other	24	11.2
One hundred-fifty	13	6.1
Two hundred-fifty	12	5.6
Two hundred	8	3.7
<b>Total</b>	214	100.0
<b>Positive Respondents</b>		
One hundred	49	49.0
Zero	15	15.0
Other	13	13.0
Two hundred-fifty	9	9.0
One hundred-fifty	8	8.0
Two hundred	6	6.0
<b>Total</b>	100	100.0

**Table 23. Should SWST Establish a National Certification Program**

(by Age Group)?				
Age Group	Yes	No	No Opinion	Total
41-50	23	19	12	54
31-40	22	10	19	51
51-60	14	18	7	39
61-70	18	7	12	37
21-30	13	2	8	23
70+	10	3	5	18
<b>Total</b>	100	59	63	222
<b>Percent</b>	45.0	26.6	28.4	100.0

**Table 24. Should SWST Establish a National Certification Program  
(by Education Level)?**

<b>Education Level</b>	<b>Yes</b>	<b>No</b>	<b>No Opinion</b>	<b>Total</b>
Ph. D.	52	52	35	139
M. S.	26	8	13	47
B. S.	21	2	14	37
High School	1	0	0	1
Other	1	0	0	1
<b>Total</b>	<b>101</b>	<b>62</b>	<b>63</b>	<b>226</b>
<b>Percent</b>	<b>44.7</b>	<b>27.4</b>	<b>27.9</b>	<b>100.0</b>

**Table 25. Should SWST Establish a National Certification Program  
(by Job Classification)?**

<b>Classification</b>	<b>Yes</b>	<b>No</b>	<b>No Opinion</b>	<b>Total</b>
Academic	28	31	21	80
Industry	30	14	22	66
Retired	18	5	13	36
Government	12	9	3	24
Student	10	1	4	15
Other	1	1	0	2
Consultant	1	0	0	1
<b>Total</b>	<b>100</b>	<b>61</b>	<b>63</b>	<b>224</b>
<b>Percent</b>	<b>44.6</b>	<b>27.2</b>	<b>28.2</b>	<b>100.0</b>

**Table 26. Should SWST Establish a National Certification Program in Wood Science and Technology (All Respondents)?**

	Frequency	Percent
Yes	104	45.2
No	63	27.4
No Opinion	63	27.4
<b>Total</b>	230	100.0

**Table 27. Perceptions Towards Topics in Wood and Fiber Science.**

	Frequency	Percent
Interesting	198	88.8
Not Interesting	13	5.8
Sometimes	12	5.4
<b>Total</b>	222	100.0

**Table 28. Perceptions Towards W & FS Being Informative and Helpful.**

	<b>Frequency</b>	<b>Percent</b>
Informative	202	91.0
Not Informative	13	5.9
Sometimes	7	3.1
Total	222	100.0

**Table 29. Perceptions Towards a W & FS Table of Contents Being Published on the SWST Webpage**

<b>W &amp; FS.</b>	<b>Frequency</b>	<b>Percent</b>
Useful	166	75.8
Not Useful	50	22.8
No Opinion	3	1.4
Total	219	100.0

**Table 30. Perceptions Towards W & FS Abstracts being Published on the SWST Webpage**  
Articles on the SWST Webpage.

	Frequency	Percent
Useful	169	77.2
Not Useful	47	21.4
No Opinion	3	1.4
Total	219	100.0

**Table 31. Perceptions Towards Entire Papers Being Included on the SWST Webpage.**

	Frequency	Percent
Not Useful	139	64.7
Useful	73	34.0
No Opinion	3	1.4
Total	215	100.0

**Table 32. Perceptions Towards Papers from Outside North America Being Included in W & FS.**

	<b>Frequency</b>	<b>Percent</b>
Include	184	85.2
Do Not Include	31	14.4
No Opinion	1	0.4
Total	216	100.0

**Table 33. Perceptions Towards Obtaining a Compact Disk Version of W & FS.**

	<b>Frequency</b>	<b>Percent</b>
Do Not Obtain	134	65.0
Obtain	71	34.5
No Opinion	1	0.5
Total	206	100.0