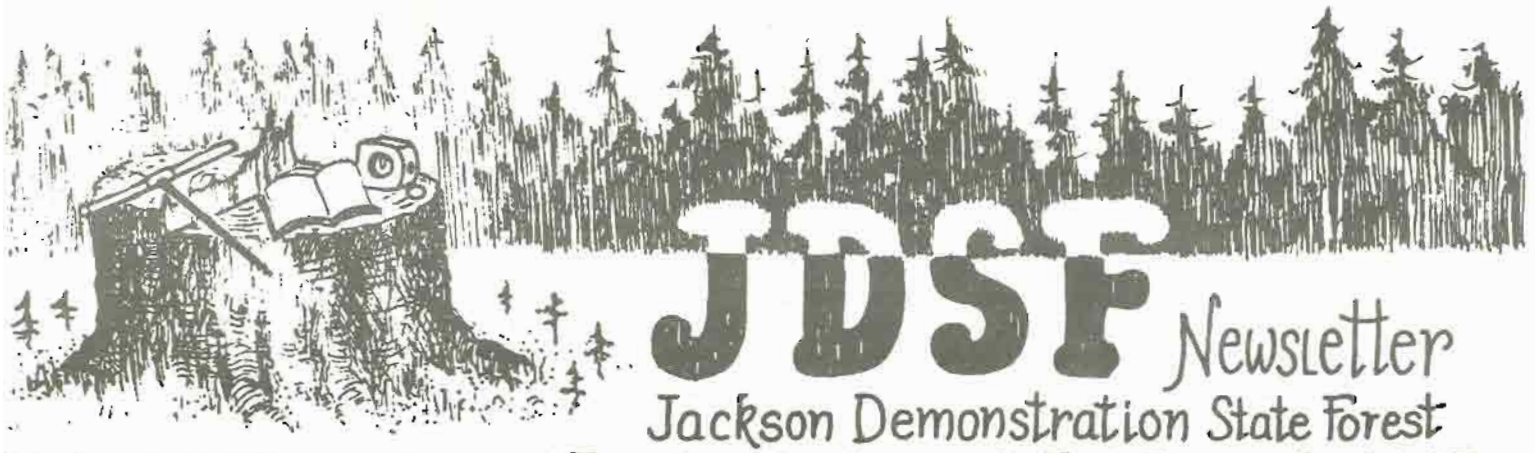

JDSF Newsletter

Jackson Demonstration State Forest

State of California Dept. of Forestry P.O. Box 1185 Fort Bragg, CA. 95437

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RECREATION USE STUDY FOR JDSF: THE RESULTS ARE IN!

Forest Tilley and Marcia McNally[1]

During the last 16 months a study was conducted on JDSF to develop a profile of present recreation users and activities, as well as their attitudes towards JDSF and its mandates. This study, conducted by Community Development by Design (an independent contractor), utilized research funds provided by the Forest Resource Improvement Fund, which is financed by receipts from state forest timber sales. The research results are summarized in several reports; they include a statistical compilation of the data gathered and the conclusions which can be drawn from the data.

Many (21%) JDSF Newsletter subscribers took part in this study by responding to the questionnaire included in the Summer 1987 issue. The contractors also contacted a wide range of Forest users, including people who camp overnight, members of over 20 organizations, adjacent property owners, and readers of the Fort Bragg Advocate News, a local newspaper. The organizations surveyed included Boy Scout troops, horse-back riding clubs, the Georgia-Pacific quad mill, the Redwood Region Conservation Council (RRCC), the California Department of Parks and Recreation, and the Mendocino Woodlands Camp Association. In addition to distributing questionnaires, the contractors observed recreational use on JDSF by participating in the 50-mile Steam Donkey horseback endurance ride, hiking the trails, camping on the forest, and attending JDSF meetings with adjacent landowners.

As might be expected, the results of this survey have confirmed some JDSF staff perceptions of forest recreational use and refuted others. For example, it was long believed that most of the recreational users of JDSF were local people familiar with the Forest. The survey, however, showed that approximately 50% of the users came

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[1]State Forest Manager and Principal, Community Development by Design.

from outside the Mendocino county area. Similarly, half the current visitors are relative newcomers, having used the Forest for under five years, while the perception had been that most were long-time users.

Survey respondents who use JDSF comprise a wide spectrum of social classes, and demonstrate different degrees of educational interest in the Forest. Some groups, such as the RRCC, university classes, and others interested in forest management practices, use the forest primarily as an educational tool. Others utilize the recreational facilities as a temporary home while passing through the area. Most people seem to come for many of the traditional forest recreational uses, such as to be outdoors (78%), to camp overnight (60%), to observe trees and flowers (58%), or wildlife (52%), or to be with nature (54%). Many people, both those from the local area and those from farther away, utilize the forest for family gatherings, such as barbecues, reunions, or picnics in the sunshine.

Marcia McNally conducting the recreation survey.

Another distinct user group are those who use JDSF as an extension of their backyards, particularly those who live adjacent to the Forest. These people do such diverse things as: work on their truck while the family plays in the river, ride horseback after work, jog or mountain bike on a Forest road, and hike trails. Some local users carry on a tradition started when JDSF was in private ownership before 1947. It was common in those days for families to move to the woods in the summer to be closer to their fathers' and husbands' job sites. A few people have even reversed this trend and camp on the Forest while commuting to town for work.

One of the main appeals of JDSF is that it is the only large public land holding where recreation, particularly camping, is free. The contractors were asked many times while talking with campers if this survey meant a fee was going to be charged. The public was

assured that no changes in our policy would occur. Similarly, the forest is popular with users because it is large and relatively free from regulation and control. Uses are permitted which are not allowed in the state parks. Not only is camping and hiking possible, but so are hunting, target shooting, wood cutting, and limited off-road vehicle (ORV) use. Visitors feel more at ease to partake of and enjoy their particular recreational interests, sometimes to the extent that JDSF has been called the "last refuge for the renegade."

The questionnaire asked those people who use the Forest if they found unpleasant areas on JDSF. Only 21% of all respondents answered yes to this question. Logged areas were cited as the most unpleasant place by almost half (49%) of this group. This is particularly significant since this choice was not part of the check list but had to be written in. It is not surprising, however, since most users go to the Forest to be near nature, not because it is a working forest. Recreationists or neighbors who use the Forest to hike and ride or whose backyard is the State Forest object to logging for many reasons. They dislike the change in the landscape, the limited access during the harvest period, the dust and noise resulting from harvest operations, and the perceived impact on the forest's health.

Logging is the primary conflict between Forest management and those who view it as a recreational area. There are conflicts between different recreational users as well. For example, while Camp One, or the Egg Taking Station, was named their favorite area by the most respondents, several others listed it as an unpleasant place to be. It is the most heavily used camping area on the Forest; on a given weekend many people may camp, use an ORV, or hold a loud party all in this small area. Horseback riders, hikers and campers don't like ORVs. During hunting season, hunters and other recreationists compete for certain campsites.

Several of the survey groups were asked to choose amongst a list of possible changes which would make JDSF a better place to use. The top response (31%) was to eliminate dirt bikes and ORV's from the Forest altogether. The second most frequent response was to provide more directional signage, a finding which depends little on where the respondent was from or how long he or she had used the forest. The need for more signs is currently being met by heavy use of paper plates and hand painted signs.

Finally, survey participants were asked to consider how silvicultural management and recreation can co-exist. The most frequent answer (68%) by JDSF Newsletter respondents was to accommodate recreation without limiting timber harvesting and research. When considering the responses from all of the survey groups, however, the most frequent answer was to limit logging along streams where campsites currently exist (49%).

What does all this mean and where do we go from here? The results of the survey pose the challenge for the JDSF staff of better informing and educating Forest users about management practices and alternatives. Staff recognizes the challenge of providing recreational opportunities to the diverse groups using JDSF while maintaining the informal atmosphere of the Forest. While some

additional regulations may be necessary to reduce conflicts between users, the intent of this regulation will be to preserve many of the freedoms and opportunities which make JDSF attractive. The major challenge will be to determine how precisely recreation is best located on the Forest and how the user experience can be maximized and still carry out our silviculture mandate.

The Department of Forestry is currently reviewing State Forest policies regarding recreation. The next step will be to develop a recreation plan for JDSF. This plan will address many of the issues raised in the study and set forth a strategy for maintaining much of the unique ambiance provided by JDSF. We hope to have this plan developed within the next year to 18 months.

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WHAT'S BECOME OF THE BIG APPLE?

The latest on JDSF's Use of Computers

Norm Henry

The first time we reported on our use of computers in the newsletter was eons ago in terms of their development (see No. 9, December 1982). Since we received our Apple computer in 1981, enormous technological progress has been made in all areas of computer development. As a field unit, Jackson Demonstration State Forest was one of the first CDF Offices to get permission to acquire a personal computer. JDSF is the largest state forest in the system and sells close to thirty million board feet of timber each year. Therefore, we felt justified in acquiring this new technology. It offered tremendous potential in speeding up all the computational phases of timber cruises and surveys. Additionally, the expanding demonstrational and experimental program and newly developing forest inventory program on the State Forest held great promise for computer application.

If you happen to save all the old copies of the JDSF newsletter (just like National Geographics!), pull out issue No. 9 and read about all the latest in pc's in those days and what one paid for them. You will see that it cost the state $8,000 to purchase the Apple II with monochrome monitor and five megabyte Winchester hard disk. This hard disk alone was as big as our current computer, which has a built-in hard disk. And of course, the cost of per byte has dramatically declined in the last seven years. In that first article, note the very limited memory capacity of the early models of personal computers relative to present day standards. In spite of this, Joe Ontiveros, a very capable Forestry Aide, was able to develop and install several programs on this system. These included a variable plot cruise program, a survey program, a specialized data base program, and a simple word processor. Joe even managed to fit a large timber stand growth simulator into just 48 K (kilobytes) of RAM (random access memory) using a Pascal language compiler.

Today, most of JDSF's computer application work is being done on two MS-DOS based Sperry computers which are IBM compatible. The first computer of this type, a 10 megabyte (M) hard disk machine, was acquired in 1985. Its primary use was intended for the forest

practice inspector who was stationed at the State Forest office. The computer quickly became a high demand item, with use spread amongst the secretarial staff, JDSF foresters, and the forest practice inspector. The State Forest received its own Sperry computer with a 20 M hard disk in 1986 and the 10 M machine went to the Forest Practice Office at Howard Forest. Both of these computers were of the XT generation (8086 chip) and had 512K (kilobytes) of RAM. Due to the heavy demand for computer usage, a proposal for an additional more powerful AT class (80286 chip) computer was made. This was approved, and the newest computer with 640K of RAM and a 40M hard disk arrived in 1987. It is used for timber sales work, timber inventory, demonstration and experimental studies, and general word processing (such as writing this newsletter article!). Specific programs for the 40 M machine include: a land survey program which complements the one we developed on the Apple, and SHRUB, a harvest scheduling model developed by Dr. Richard Barber of Humboldt State University.

Several software programs have been purchased for the new generation of Sperry computers. These include: Wordstar-4 for word processing, Lotus 1-2-3 for spreadsheet applications, and Rbase-5000 for database applications. Over time other programs have been acquired as well. Among these are a file utility called Directory Magic, and a printer utility program called Sideways (which, you guessed it, prints spreadsheets with a large number of columns sideways on the paper). We have also purchased a Hercules-plus graphics card for the newest computer. This device allows screen display of almost twice the normal number of spreadsheet columns and rows, and has the ability to display many different text fonts. With all of these programs, data files can develop at an astounding rate, and even with a large hard disk, storage room can diminish rapidly. To alleviate this problem, a backup utility was purchased which allows rapid archiving of data and program files on to floppy disks. Frequent backups are a must, as weeks or months of work can literally vanish with a hardware failure (we have experienced several failures over the past seven years!). The risk of losing data has recently been minimized with the acquisition of a battery backup power source in case of a commercial power failure. Finally, a hard disk utility has been purchased to speed up file access time, particularly on a full disk.

One of the most important functions of the newest Sperry computer is the computation and storage of forest inventory data for JDSF. A description of the new forest inventory system can be found in Newsletter No. 28, December 1987. Hammon, Jensen, Wallen and Associates (HJW) developed the new inventory system currently being installed on the State Forest. The various uses of the inventory system require a flexible data analysis architecture. Therefore, three distinct program areas have been linked together to form an integrated data base. They are an inventory processor, a statistical analysis package, and a growth simulator.

The inventory data is first input using a program called CFI. This provides a structured format for data entry, editing, and storage. The data files are verified with the original plot cards and then converted to files for transport to CRUNCH, which forms the backbone of the system. CRUNCH is a statistical database which allows

sorting and filtering capabilities to produce task-specific data sets. These files can then be transferred out of CRUNCH and used to either produce detailed inventory reports or model growth and yield on the forest. The inventory reports are generated using FRIS (Forest Resource Information System), developed by HJW, and the growth modeling is done using CRYPTOS (Cooperative Redwood Yield Timber Output Simulator), developed by the Biometrics Group at the Department of Forestry and Resource Management at U.C. Berkeley.

As you can see, things have changed quite a bit (no pun) since the first Apple computer arrived in Fort Bragg in December, 1981. Computerization on Jackson Demonstration State Forest has progressed proportionately with hardware and software developments in the industry. We can look forward to increasingly sophisticated systems to help in the management of our State Forest.

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"V" NOTCH ROAD CONSTRUCTION

Glen J. Pinoli

Previously we have reported on the "Spittler crossing" and its use on the Fairbank Drive 1986 Timber Sale (see JDSF Newsletter No. 28). In addition to this innovation, we would like to inform our readers about another procedure utilized on this sale. This technique is called V-notch road construction. In order to provide yarder access and log hauling capabilities for this Timber Harvest Plan (THP), 4.5 miles of new road construction was completed. One section required crossing an intermittent stream, or Class II watercourse as defined by the California Forest Practice Rules. The proposed road entered the stream on a gentle slope via an existing skid trail used during prior harvesting activities. After crossing the watercourse, the haul road climbed at a 15% grade, traversing a steep side slope.

During the geologic inspection of this THP, State Geologist Tom Spittler expressed concern that sidecast soil would be placed in a position to enter the stream if conventional road construction practices were used here. To eliminate this problem, Tom proposed that this section of road be constructed as a full bench using a hydraulic excavator. End hauling, or trucking of spoil material which was excavated to a disposal site, would then occur. V-notch road construction was suggested as a sound and less expensive alternative, and agreed to in the THP review process.

The first phase of V-notch construction requires that the location on the ground be identified where the top of the cut slope will start. A D-6 or equivalent size crawler tractor with a U blade then starts by cutting a small V-notch at the top of the road cut. All soil is pushed ahead into the crossing at the stream, where a culvert has previously been placed. During subsequent passes, soil falls from both sides of the V-notch into its center and is channeled into the crossing requiring fill. This eventually brings up the running surface of the road over the culvert to the desired grade. Once this is obtained, the dozer operator can inslope, outslope, or crown the road. The end result is a full bench road with very little sidecast.

The V-notch road was built by the operator, L.D. Giacomini Enterprises, as part of normal road construction activities. After the logging was completed, Tom Spittler noted that very little sidecast resulted from road construction. Indeed, the majority of the sidecast here was the result of road grading by the operator. This type of construction can be successful in limiting the amount of sidecast material moving downslope, and its cost is similar compared to conventional road construction methods. Its use does require certain conditions, however. These include: 1) a construction site free of large stumps or rock outcroppings which would require additional excavation, 2) terrain which will allow access to the site with minimal environmental damage, and 3) a disposal site for soil which would have been end hauled or sidecast.

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NEW PUBLICATION AND VIDEO

A new California Forestry Note is now available. Consulting research forester James Lindquist has authored Note No. 99, which is entitled "The Caspar Cutting Trials: A Case Study Report 25 years After Harvest." This publication presents the results of five harvesting systems in terms of growth and yield, changes in diameter distributions, and regeneration success. The five systems tested were clearcut, single tree light selection, single tree heavy selection, group selection, and uncut control. Copies can be ordered by writing our office in Ft. Bragg. A new video has been jointly produced by CDF and the US Forest Service on the Caspar Creek Watershed Study. It gives a historical perspective of the study and reviews what we hope to accomplish with the North Fork Phase. Arrangements can be made with our office to view this 20 minute tape.

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STAFF NOTES

Two of JDSF's foresters have recently moved on to new jobs in CDF. **Glen Pinoli** started on the State Forest in 1979 as a Forester I and worked as a Timber Sale Officer for nine years. He supervised the harvesting of almost one hundred million board feet of redwood and Douglas-fir here. Glen was always eager to try new things, and documented them with newsletter articles, such as is included in this issue. He has accepted a Training and Development (T&D) assignment as State Forest Ranger I for the Fort Bragg Ranger District. His primary duties now will involve fire suppression and prevention, and supervision of personnel to accomplish these tasks. **Kelly Keenan** first came to JDSF in 1983 as a Forestry Aide. He worked primarily on the Caspar Creek Watershed Study and helped construct the Parshall flumes used to gage discharge at many locations in the North Fork. He left CDF to work for Louisiana-Pacific for a year, but returned in 1986 to accept a permanent position here as a Forestry Assistant II. Kelly headed up our sales preparation work and administered one large timber sale. He has been promoted to Forester I and is working out of Auburn. His new job will primarily involve forest practice, but will also deal with service forestry, vegetation management, and fire control. We thank both Glen and Kelly, and wish them the best of luck in their new jobs.

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