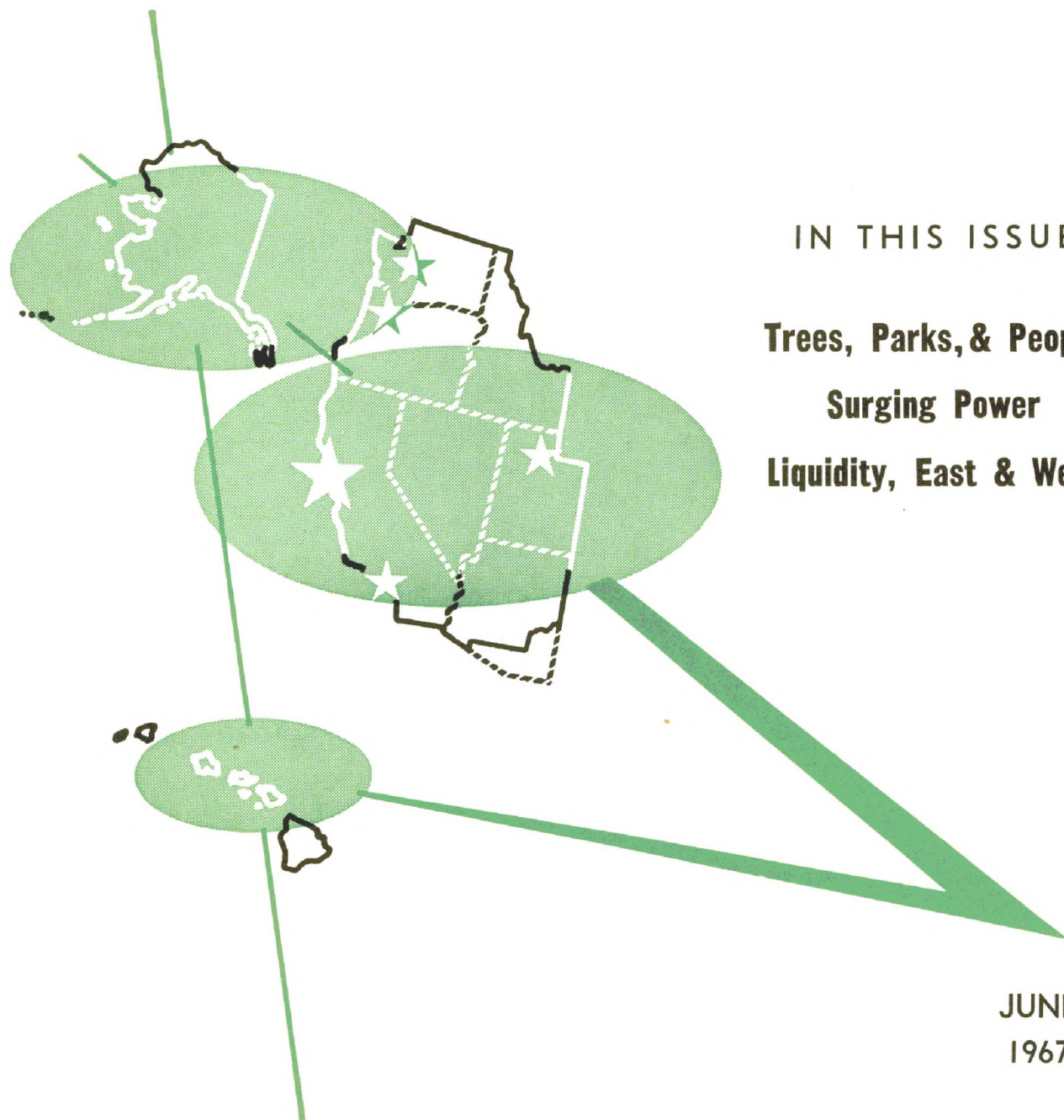


FEDERAL RESERVE BANK OF SAN FRANCISCO

# MONTHLY REVIEW



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JUNE  
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## **Trees, Parks, and People**

... The redwood-area economy will continue to depend on trees, but it will depend increasingly on parks and people too.

## **Surging Power**

... Electric-power consumption by Western industries has risen almost 50 percent over the past several years.

## **Liquidity, East and West**

... Bank liquidity has declined everywhere during the postwar period, but District banks have suffered a smaller relative decline.

**Editor: William Burke**





## Trees, Parks, and People

**T**HE northwestern corner of California—an area closer to Canada than to Southern California in terms of distance, climate, and economic resources—contains some superlative redwood trees, many of them hundreds and even thousands of years old, which conservationists want to maintain for the benefit of the nation's population of a thousand years from now. The area also contains a wood-products industry which cuts and processes timber for the benefit of the population of today. The conflict between these two worthy purposes lies at the heart of the controversy over the establishment of a Redwood National Park in the region.

The type of controversy that has developed here — a controversy over a governmental attempt to attain long-term goals through the reallocation of resources within a small narrowly-based local economy—may be encountered more and more frequently in this increasingly crowded nation in future years. In this particular case, a number of

long-term objectives are designed to be met through the national-park proposals — the preservation of a unique scenic asset, the promotion of ecological balance, the promotion of proper resource-management procedures, the stimulation of tourism, and the creation of a more diversified local economy. This article, although not concerned with the pros and cons of this sometimes heated controversy, attempts to cast some light on the economic issues involved by describing the present structure of the redwood area's economy and the direction in which it may be heading.

### The coast redwood

Two types of trees are commonly called redwoods—the big tree of the Sierra Nevada (*Sequoia gigantea*) and the coast redwood (*Sequoia sempervirens*)—but only the latter is involved in the recent park proposals. The California coast redwood once inhabited a great part of the northern hemisphere, and



fossil remains have been found in Alaska, Canada, Greenland, Europe, and Asia. Climatic changes, however, have limited the natural range of this redwood to the fog belt, 6 to 30 miles wide, of the coast of California, from southern Monterey County to the southern tip of Oregon.

The dense, pure stands of superlative redwoods are mainly found on flat land, usually near a creek or river. (Only about 5 to 10 percent of the redwood region is flatland.) The redwoods on the slopes are usually smaller and are mixed with Douglas fir and other conifers.

The redwood is a fast-growing tree and is considered to be of commercial size in 40 to 120 years, depending on soil conditions and the intended usage of the logs (pulp, particle board, or lumber). Most redwoods die within 400 to 600 years, but some have lived beyond 1,000 years—the oldest one is 2,200 years old. These trees are usually found on flat ground near creeks or rivers and have lived much longer than the average tree because of flooding and silting. When two to three feet of fine silt is deposited around a redwood during a flood, the tree develops a

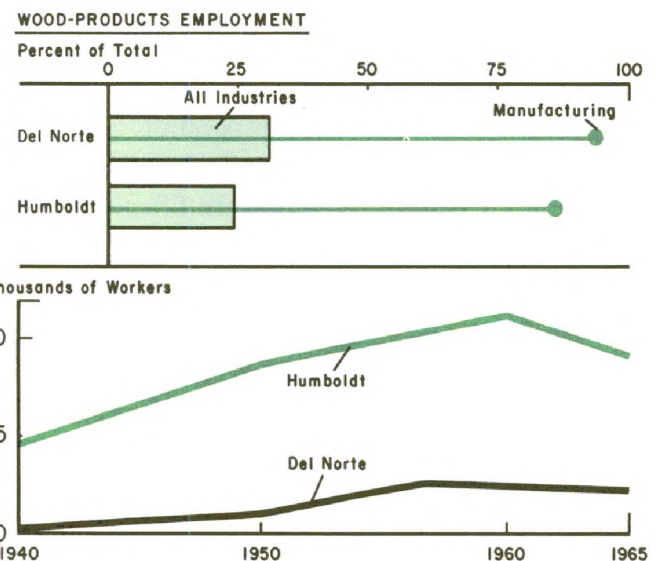
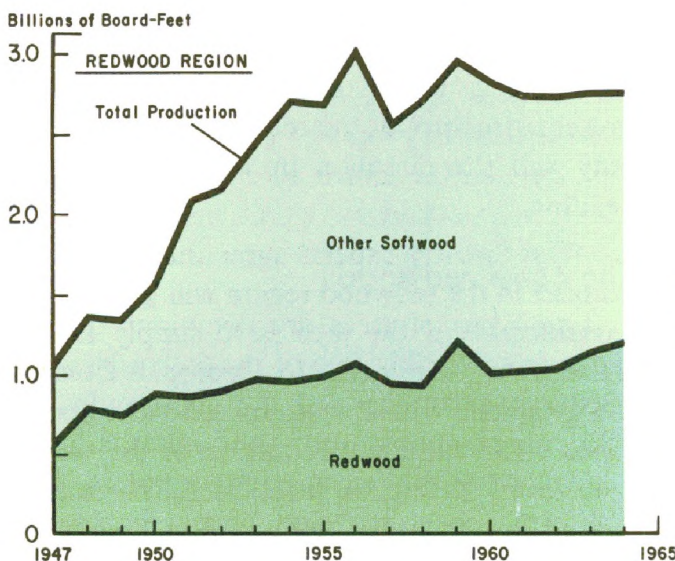
new root system and is given a new lease on life through the new nutrients and increased moisture-absorbent area.

Thus, the extreme longevity and size of some redwoods are due to natural flooding. On the slopes, redwoods do die, but the species is ever-living because of the ability of trees to sprout whenever the parent tree is killed or disabled. Perpetuation of the redwood forest can be accomplished by cutting the trees before they die of old age, or by leaving the forest in its natural state, including exposure to fires and floods; over-protection may result in groves dying out.

### Where the trees are

Redwood and mixed redwood forests account for 1.6 to 1.9 million acres of *commercial* forest land, mostly in Del Norte, Humboldt, and Mendocino Counties. Remaining old-growth redwood accounts for 275,000 to 340,000 acres, mostly on private land. (Some 50,000 to 60,000 acres of old growth are in state parks, although less than 7 percent of such acreage consists of superlative primeval redwoods.) Another 450,000 acres of land which has been selectively logged still con-

### Lumber production in redwood area drops below earlier peak . . . despite decline, wood-products industry still dominates local economy





tains considerable amounts of old-growth redwood.

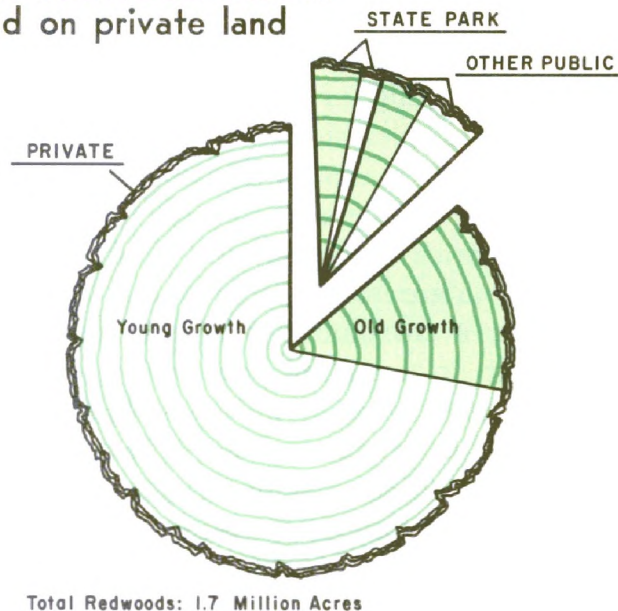
The two counties affected by the Redwood National Park proposals, Del Norte and Humboldt, contain large amounts of national forest land and other, public land holdings. The national forest lands, which are largely in the eastern portion of the counties, contain Douglas fir and other whitewoods, but little redwood. The bulk of the redwood forest, except for that portion in state parks, is on private land. In establishing a national park, therefore, about 28,000 acres of private land and 15,000 acres of state-park land, mainly in Del Norte County, would be set aside under the Administration proposal, while about 78,000 acres of private land and 12,000 acres of state-park land in Humboldt County would be set aside under the Sierra Club plan. Action on these and several alternative proposals is still pending before Congress.

The stock of redwood sawtimber on commercial forest land, according to U. S. Forest Service estimates, dropped from about 36 to 31 billion board-feet between January 1953 and January 1963. In the same period, the stock of redwood growing stock, which includes not only sawtimber but also trees too small to be classified as sawtimber, dropped from about 38 to 33 billion board-feet. Reliable estimates are not available for Douglas fir, the other main commercial tree in the redwood region, but it is generally agreed that the volume of Douglas fir on private land has been significantly reduced by the heavy cutting of the past 15 years.

### Timber and people

The economy of Humboldt and Del Norte Counties is heavily based on forest products. The lumber and wood-products industry employs 29 percent of the labor force in Del Norte County and 22 percent of the labor force in Humboldt County. Moreover, these percentages understate the importance of

### Most redwood forest found on private land



lumber and wood products to the local economy, for that industry makes possible the existence of derivative economic activities, such as wholesaling and retailing, services, and even local government.

The economy of the region faces severe problems in the near future regardless of the fate of the national-park proposal, partly because of declining timber availability and partly because of declining trends in both employment and production since the housing boom of a decade ago. Redwood production has held up better in this region than other softwood-lumber production, but production in 1965 was roughly 5 percent below earlier peak levels. And a firm which owns land within the proposed park area harvested less than half as much acreage in 1965 as it did at the peak of its operations in 1958.

Most forestry experts agree that the cut of lumber in the redwood region will have to fall considerably if the area is to supply timber on a continuing basis. In Humboldt County, for example, a shift to sustained-yield operations could require a reduction in the timber cut from the recent level of 1,280 million board-feet to about 900 million board-feet in 1975 and 750 million board-feet in 1985.



Employment prospects in the lumber and wood-products industry will be influenced by other factors besides the projected drop in production. Rising productivity through automation is expected to contribute to a reduction in employment. On the other hand, the present trend toward greater timber utilization is expected to provide an increasing number of jobs for each million board-feet of cut timber. Two pulp mills are already in operation near Eureka (Humboldt County), while an integrated forest-products complex is under construction and a saw mill has been operating for several years near Crescent City (Del Norte County), within the boundaries of the proposed national park.

Projects of this type, which are designed to meet the demand for those products with the greatest market potential—for example, pulp and various forms of particle-board and chipboard—will not eliminate the dependence of northwestern California on a timber economy. Yet, opportunities to diversify in other directions are somewhat limited. Expansion of other manufacturing industries is limited by high transportation costs, because

of the area's distance from major population centers. Fishing and agriculture also may not grow much beyond present size. And the discovery of major mineral resources may be hampered by the region's discontinuous rock formations.

The redwood region does contain major water resources, for it receives the heaviest rainfall of any part of California, but the development of water resources for export to other areas is likely to stimulate economic activity for the most part only during the period in which facilities are being constructed. However, one major opportunity for economic diversification is in the field of tourism and recreation—which leads to the question of the proposed national park.

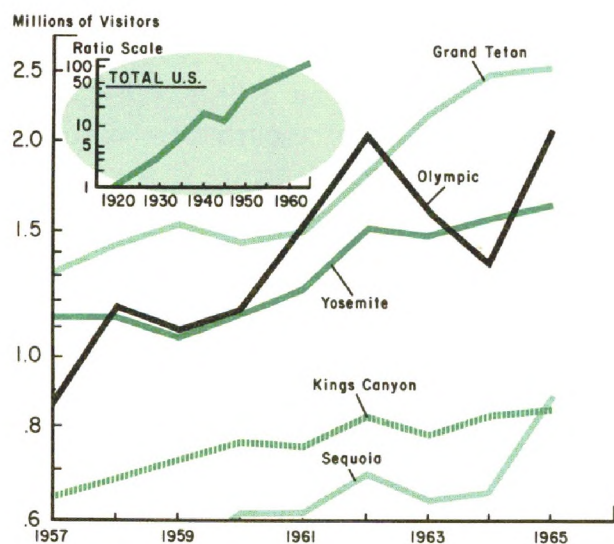
### Parks and people

The main purpose of any national park is to preserve a unique scenic asset—and everyone involved in the present controversy agrees that the redwoods are just such an asset. They are the tallest trees in the world, they can be found in their natural state only along the northern coast of California, and they provide almost unparalleled scenic beauty.

In view of the nation's growing population and its fixed land base, however, friction may increasingly develop between the attempt to preserve natural areas such as this for recreational purposes, and the attempt to utilize such areas to meet other economic needs of society. The national-park proposal thus gives rise to discussions concerning ecological balance and proper resource management—and it also focuses attention on the amount of tourism-based diversification which it may generate in the local economy.

Rapid increases in the nation's recreational needs are expected on the basis of the continued expansion in per capita income, leisure time, travel, and population. The number of visits to all national parks has risen at an increasing rate throughout this century, more

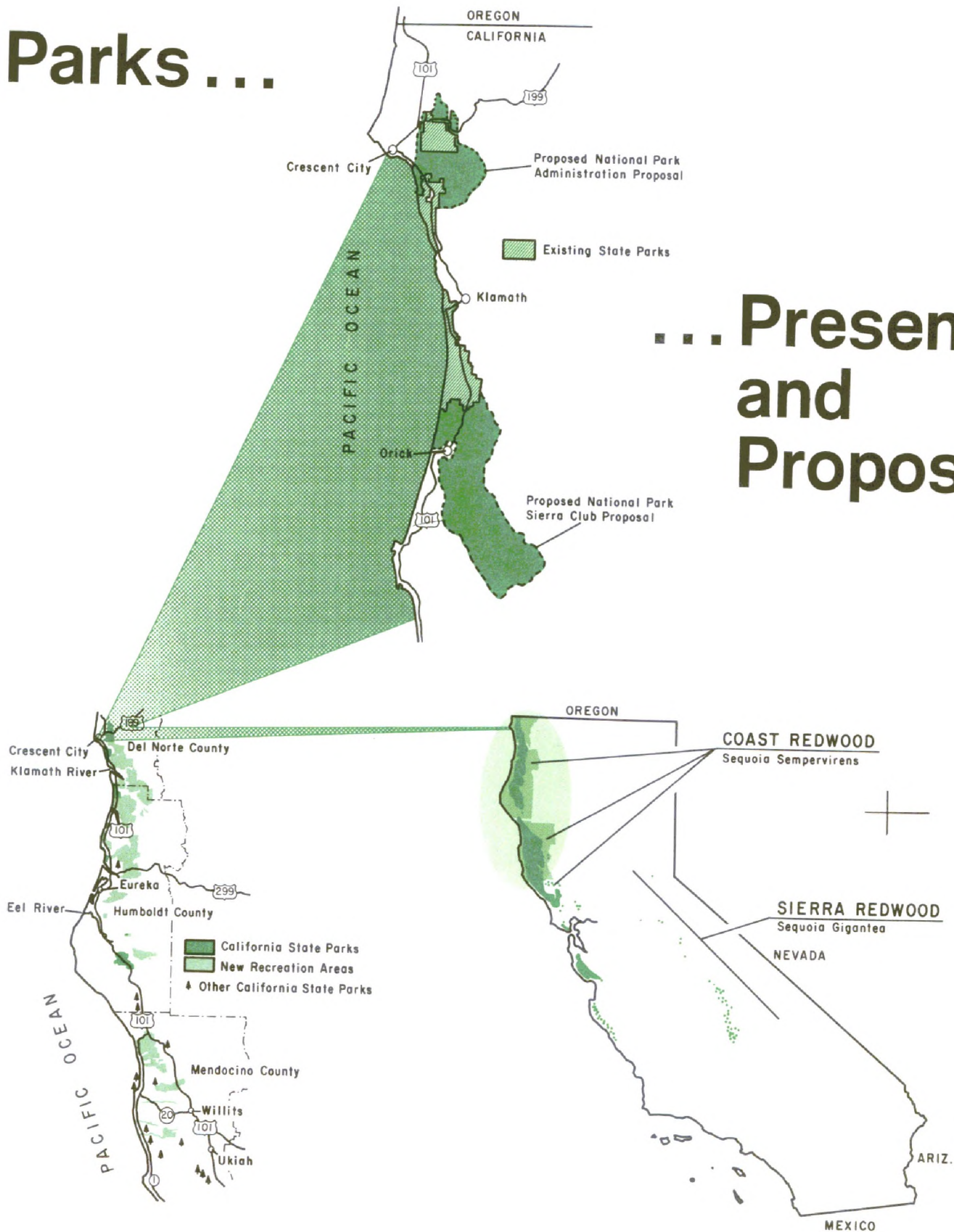
### National-park visits soar as more people obtain more time and money





# Parks ...

# ... Present and Proposed





than doubling in the last decade alone. Similar growth trends have been shown by Western national parks and California state parks.

According to official estimates of park visits, recreation activities should increase fourfold in California between 1958 and 1980. Recreation activities in the redwood area should increase at a slightly faster rate, so that the North Coast share of the state total may rise from 2.0 to 2.2 percent. But, as these figures suggest, the area may well remain a secondary recreational center, partly because of its cool, cloudy weather and partly because of its distance from major population centers.

Yet, despite such disadvantages, the drawing power of the redwoods is still very great. In 1958, 23 percent of the visitors to Jedediah Smith Redwood State Park (Del Norte County) came from the San Francisco Bay Area, 21 percent from the Los Angeles area, and 35 percent from outside California—and similar figures are projected for 1980.

Recreation is a seasonal activity in the North Coast region, just as it is at every other state and national park in the West. In the 1964-65 period, about 80 percent of day and overnight use at Jedediah Smith Park occurred between July and September. Moreover, border crossings on U. S. 199 and 101, the redwood highways, were more concentrated during the summer quarter than were

border crossings on Highway 99, the main north-south route.

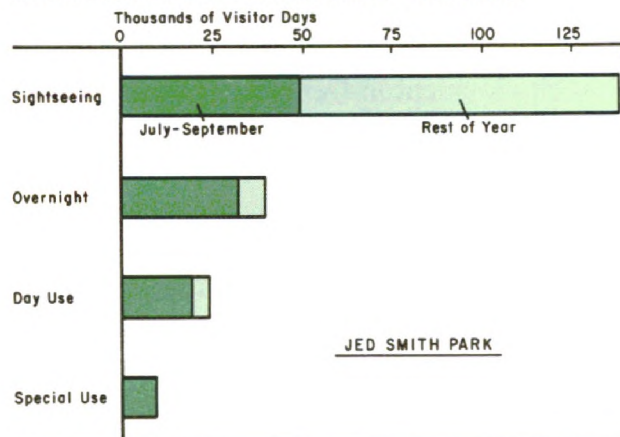
A national park would help meet the growing need for recreational facilities in the North Coast region, but existing park areas also have a role to play in this regard. The 25 state parks—with their 105,000 acres—could be developed further, especially since eight of them have no facilities for camping or picnicking at present. The 365,000 acres opened up by the lumber industry for public use and the 753,000 acres of national forest in Humboldt and Del Norte Counties already provide facilities for fishing, hunting, and hiking. And future plans envision the development of the region's water resources through the building of reservoirs on the Eel, Trinity, and Klamath Rivers. These reservoirs, being located in the warmer inland section of the region, could be used for water-oriented recreational activities.

Park supporters argue that the development of the park area for recreational purposes would assist the diversification of the North Coast economy. Since lumber production in the area may drop during the next two decades, and since increased mechanization could counteract the effect of increased timber utilization, employment in the forest-products industry may well decline in the near-term future. But as recreational facilities are developed, increased tourist expenditures in Del Norte and Humboldt Counties would also make possible the employment of more persons in the trade and service industries.

### Impact: local jobs

One analysis, prepared by Arthur D. Little for the National Park Service, considers the direct and indirect effects of future timber production and tourist attendance in Del Norte County on other local industries. Assuming the adoption of the Administration's plan for a national park, the study estimates

### Redwood-region park use concentrated in summer months







that employment in the county will be reduced by 250 in 1973, but raised by 1,650 in 1983, relative to the situation without a park. Employment in the forest-products industry alone would be 600 lower in 1973 but only 140 lower in 1983.

This study's conclusions have been criticized as being overly optimistic, on the grounds that they do not take full account of the seasonality of recreation-oriented jobs in the area—although the study does note that the tourist season is only about 100 days long. The study has also been criticized for assuming that the large forest-products complex now partly completed on land within the proposed park boundaries will be

constructed somewhere else in the county if the park is established.

A second study, prepared by H. Dewayne Kreager for the redwood industry, analyzes the effects of a park removing 22,000 acres in Del Norte County or 41,000 acres in Humboldt County. This study concludes that total employment in Del Norte County would decline immediately by 440 jobs, and that 165 more jobs would be lost in the future because of the loss of potential new-growth timber on withdrawn land. The corresponding figures for Humboldt County would be an immediate loss of 729 jobs and a future loss of 425 jobs due to lost potential growth on withdrawn land.



Figures cited in this second study suggest that direct employment losses could be offset by additional tourist "visitor-days" of 576,000 in Del Norte and 1,104,000 in Humboldt County. These figures are not unattainable, since the National Park Service estimates that the proposed park in Del Norte County will attract an additional 1,200,000 visitor-days in 1978, and 2,500,000 in 1983. Furthermore, estimates of the number of tourists required to make up for job losses do not take into account the "multiplier" effect of the tourist dollar, a portion of which will be spent by local recipients in buying goods and services from other local residents.

Most employment generated by the park will be seasonal. As already noted, tourism in Humboldt and Del Norte Counties—and at most Western national parks—is concentrated in the summer months. Park employment thus should be concentrated in the summer period, and park positions also may be filled by non-residents to a large extent. But the park should, of course, contribute to year-round employment in the initial years when facilities are being constructed.

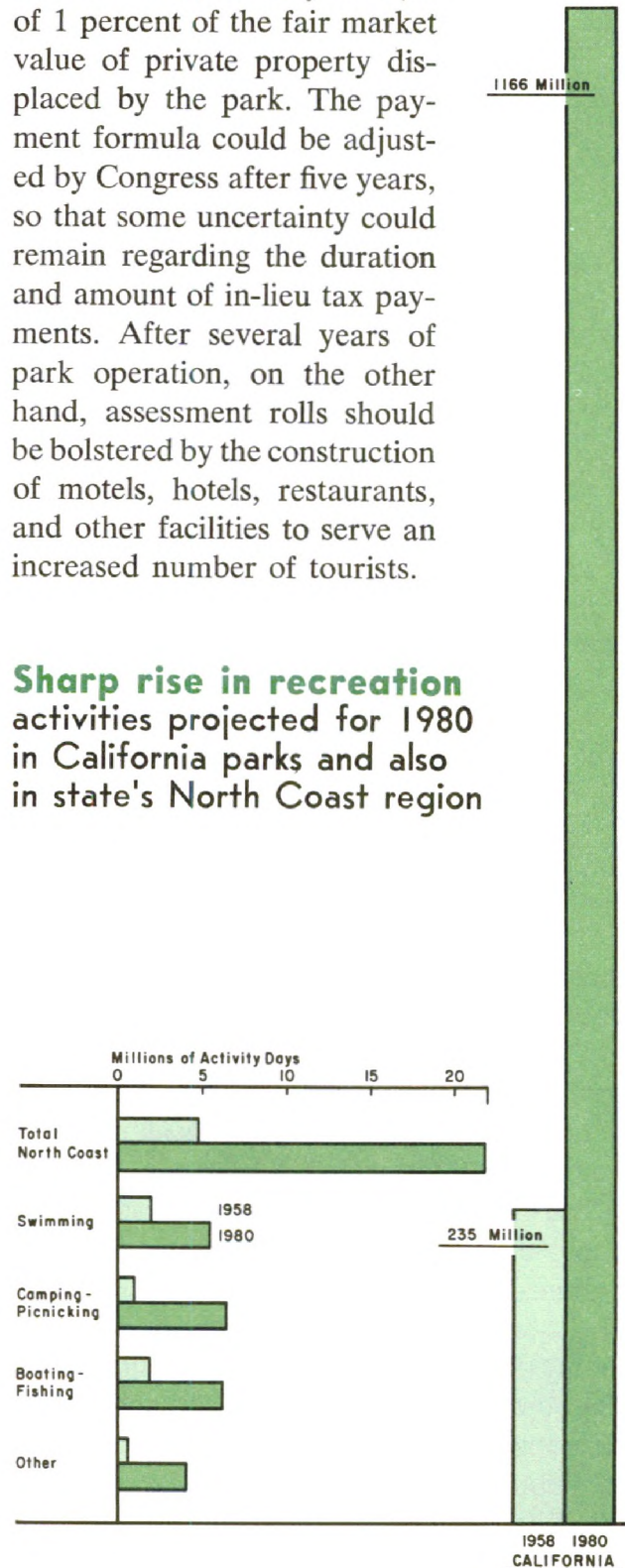
**Impact: local taxes**

The establishment of a national park would also have an impact on the local government units in the redwood area. Timberland, timber, and forest-products plants account for over two-fifths of total assessed valuation in Del Norte County and over one-fourth of total assessed valuation in Humboldt County. The Administration's park plan would reduce the assessment rolls in Del Norte County by about \$3 million, or 10 percent, while various alternative plans would probably reduce the Humboldt County assessment rolls by a somewhat smaller amount, depending on the final decision regarding park boundaries.

The establishment of a park would probably not cause an immediate loss of tax

revenue, however, since provisions would be made for some sort of temporary in-lieu payment. The Administration bill, for example, contains a provision for payments to Del Norte County of 3/5 of 1 percent of the fair market value of private property displaced by the park. The payment formula could be adjusted by Congress after five years, so that some uncertainty could remain regarding the duration and amount of in-lieu tax payments. After several years of park operation, on the other hand, assessment rolls should be bolstered by the construction of motels, hotels, restaurants, and other facilities to serve an increased number of tourists.

**Sharp rise in recreation activities projected for 1980 in California parks and also in state's North Coast region**





The counties affected will still face the problem of diminishing *timber* assessments over the next several years, whether or not a national park is developed. The remaining volume of timber on land which has been 70 percent or more logged is not taxed, so that as lumbering activity continues to outpace new timber growth—as is projected for at least the next two decades—the assessed value of timber will decline. This loss may be partially offset, however, by additions to the tax rolls of new plants as the wood-based industries move towards more complete timber utilization.

Whatever the outcome of the controversy over the national-park proposal, there is widespread agreement that the northwestern corner of California will remain strongly based on a timber economy, especially after the transition to a sustained-yield cutting policy is completed. At the same time, the scenic attractions of this magnificent big-tree country—along with the rapid expansion of the national demand for recreation—should provide increasing opportunities for redwood area businessmen to diversify into tourist-based activities.

—*Jacob Toby and Robert Hermanson*



Artwork by R. Mansfield



# Surging Power

Western industrial power consumers have sharply increased their electric-power purchases, using almost half again as much power in early 1967 as they did just four years earlier. According to a new series developed by the Federal Reserve Bank of San Francisco on the basis of data supplied by 15 reporting utilities, the index of electricity consumption by Twelfth District manufacturing and mining firms reached 141 in April 1967 (1963 = 100).

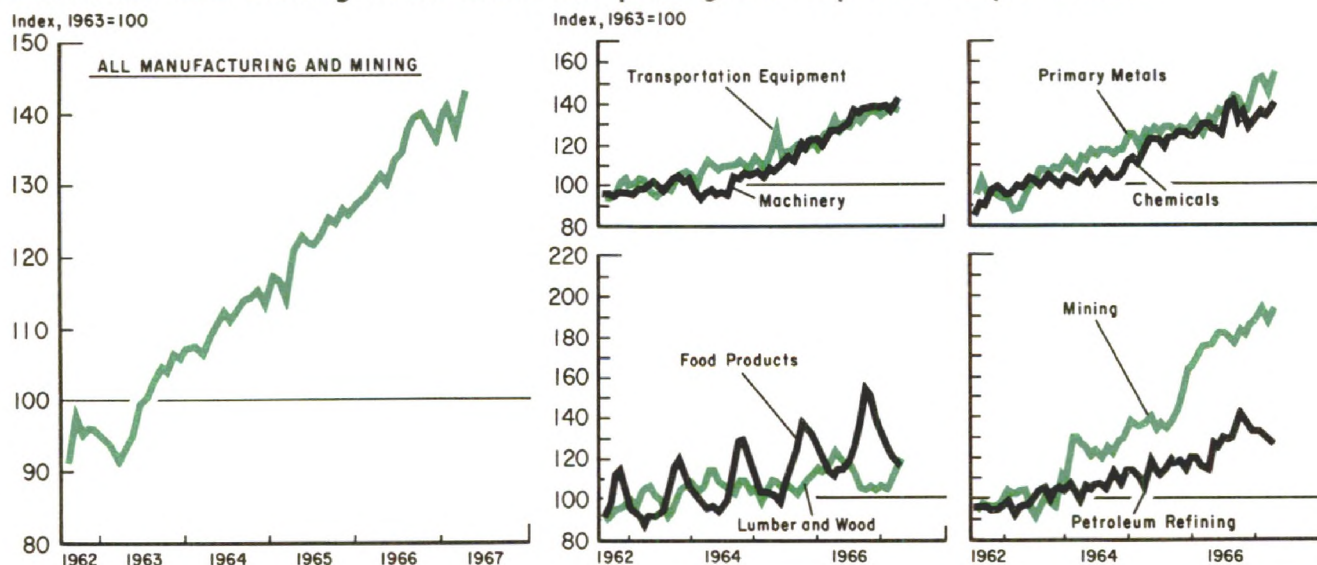
The series shows a strong uptrend over the last several years, interrupted by occasional softness as in late 1962 and again in late 1966. The data are not adjusted for seasonal variation, since the timespan covered — mid-1962 to date — is too short to permit accurate adjustment for seasonal movements.

The survey coverage, although not complete, is broad enough to cover all but the smallest electricity users. According to Survey of Manufactures data, 52.5 billion kilowatt-hours were sold to all Twelfth District industrial users in 1964, and reporting utilities in the Federal Reserve sample accounted for over two-thirds of that total. Coverage will soon be about 80 percent, partly because of an increase in the number of reporting utilities, but it will not reach 100 percent because the utilities do not report electricity consumption by small firms as is done by the Survey of Manufactures.

## Rising electricity usage

The primary-metals industry, especially aluminum, is the largest consumer of electricity in the Twelfth District. This industry is only the seventh largest regional

## Electric-power use by Western firms rises strongly in recent years . . . aluminum and mining firms show sharpest gains in power requirements





industry, accounting for less than 5 percent of value added by District manufacturers, but it uses over one-third of all electricity generated in the District. Moreover, it shows the greatest growth of any District industry, with its electricity usage rising to 154 percent of the 1963 average in March of this year.

The largest Western industries, transportation equipment and machinery—each with over 15 percent of total value added—are relatively small electricity consumers. But each has sharply expanded its electricity usage in recent years to meet the heavy demands of defense and business customers. In March, the power consumption index rose to 137 for transportation equipment and 143 for machinery (electrical plus non-electrical).

Another major regional industry, food and kindred products—with 14 percent of total value added—is most noteworthy for its sharp fluctuations in power usage. Between the post-harvest peak and the winter low each year, the food industry's power needs fluctuate as much as one-third. But with all that, the industry has exhibited a strong growth trend over the past several years.

Lumber and wood products, which accounts for 7 percent of value added by District manufacturing, has shown less growth in power usage. The industry reached its peak in consumption a year ago, declining later in line with softening business conditions, so that now (despite recent strength) its index is only 18 percent above the 1963 base.

—Joan Walsh

### ELECTRIC POWER CONSUMPTION—TWELFTH DISTRICT MANUFACTURING AND MINING FIRMS

(1963 = 100)

	1962	1963	1964	1965	1966	1967
January	—	93.4	107.1	116.3	128.0	141.1
February	—	90.4	105.9	112.4	124.9	135.6
March	—	92.3	108.5	120.3	131.2	142.6
April	—	94.9	110.5	122.5	129.7	141.1
May	—	99.0	112.6	121.6	132.7	—
June	—	99.9	110.2	121.4	133.5	—
July	91.0	102.4	112.1	122.5	137.3	—
August	99.0	104.8	113.8	125.1	139.1	—
September	94.7	103.9	114.0	124.1	139.5	—
October	95.7	106.4	115.5	126.5	137.2	—
November	95.5	105.6	112.4	125.5	135.2	—
December	94.4	107.0	117.4	127.0	139.6	—



## Liquidity, East and West

**L**IKE any business, a commercial bank must stand ready to meet the due claims of legitimate creditors when presented for settlement. Unlike most businesses, however, a commercial bank's liabilities usually consist predominantly of claims due "today"—its demand deposits. A bank's problem of standing prepared to meet tenders by creditors for settlement is thus considerably more complex than the parallel problem of other businesses.

Part of the creditors' claims on a commercial bank may be met by concurrent inflows of cash. Nevertheless, the claims on a bank's cash often exceed expected money inflows, and sometimes the expected money inflows do not fully materialize. Hence, a prudent bank must maintain a cushion of cash and assets readily marketable into cash (hopefully, without loss)—in short, it must maintain "liquidity."

With respect to the claims arising from the present deposits of a commercial bank, the liquidity cushion must be sufficient to cover not only *expected* withdrawals and adverse clearings but also those unpredictable deposit drains which sometimes reach substantial proportions. In addition, the cushion must suffice to cover withdrawals and adverse clearings arising from deposits to be engendered in the immediate future, especially deposits credited in the lending process, which are unaccompanied by cash. This would include provision for withdrawals and adverse clearings resulting from both the implementation of current loan commitments and the servicing of extra loan demand that the bank decides to meet.

### Both sides of balance sheet

By its very nature, the concept of "liquidity" must encompass both sides of a bank's

balance sheet, including the liabilities which represent potential claims on assets as well as the assets themselves. This is the rationale underlying such basic and traditional measures of bank liquidity as the ratio of short-term government securities to deposits and the ratio of loans to deposits.

The limitations of such ratios have, of course, long been recognized. For example, the actual liquidity of two banks (or even two groups of banks) with the same loan-deposit ratio may differ considerably depending upon a host of factors: the composition of their loan portfolios, the composition and maturity distribution of security holdings, the existence or absence of a secondary market for various types of assets, the structure and relative volatility of deposits, the presence or absence of seasonality in both loan demands and deposit flows, access to Federal funds, and so on.

Nevertheless, these ratios may still be useful in tracing differences in these particular aspects of liquidity, both through time and through space. It is thus instructive to look at the principal changes affecting the structure of bank assets and liabilities in recent years, along with the relative impact of these changes upon bank liquidity, East and West.

### Growth and shrinking liquidity

Since the end of World War II, the loan-deposit ratios of commercial banks in both the Twelfth District and the rest of the nation have risen virtually without interruption. This development—a reflection of rising postwar levels of employment, income, and expenditure—was largely made possible by the huge liquidity, in the form of holdings of U.S. Government securities, acquired by the banks in the course of helping to finance World War II. At the end of 1945, in the West as



elsewhere in the nation, portfolios of U.S. Government securities represented 75 percent of total bank credit outstanding, while loans amounted to less than 20 percent of deposits. By the end of April 1967, loans of U.S. commercial banks constituted two-thirds of their outstanding credits.

In the early post-war years, and, in fact, until the beginning of the expansion of the '60s', Twelfth District member banks outperformed their counterparts elsewhere in most major loan categories—and in some cases did so by a substantial margin. By the end of 1950, District banks' loans as a proportion of deposits (less cash items) had already reached 43 percent, a slightly higher proportion than at New York City member banks and considerably higher than the 33-percent figure posted at member banks elsewhere. And in the following year, Twelfth District banks' loans exceeded their investments, a condition not realized by member banks elsewhere (except New York City) until 1956.

The decade of the '50's was a period of considerable expansion for banks everywhere, but particularly for Western banks. The faster Western pace stemmed from a vigorous expansion in job opportunities (partly in response to defense demands of the Korean War and the Cold War), which triggered an attendant increase in immigration to the District and a surge in local population. Over the 1950-60 decade, District employment rose by 30 percent and population by 40 percent—in both cases, increases  $2\frac{1}{2}$  times as great as those in the rest of the nation. And banking data showed a similar (although narrower) disparity; District bank deposits, for example, rose by 71 percent, compared with gains of 32 percent in New York City and 44 percent at member banks elsewhere.

### Shifts in structure

These gains were accompanied, too, by shifts in the relative composition and structure of bank assets and liabilities, shifts which in some respects found District banks and their counterparts elsewhere becoming more like one another, while at the same time, Twelfth District banks experienced a *relatively* smaller decline in their liquidity. This reflected the fact that the growth of deposits relative to loans was more rapid at District banks than at banks elsewhere. As a result, District banks' loan-deposit ratio rose more slowly over the decade—about 19 percentage points, to 61.7 at year end 1960—compared with a 25-point increase (to 67.8 percent) at New York Reserve City banks and a 21-point increase (to 53.5 percent) at member banks in the rest of the nation.

Furthermore, structural changes in loan portfolios, as exemplified by the declining relative importance of long-term mortgage loans, also led to a comparatively smaller loss of liquidity by Twelfth District banks. Real-estate loans actually doubled in dollar amount at District member banks in the 1950-60 period, but their share of total loans declined from 40 to 35 percent over the decade. Outside of the District, real-estate loans rose somewhat more rapidly, but as a percent of total loans remained fairly steady—at about 5 percent in New York City and 25 percent elsewhere. At the same time, business loans—virtually all short-term loans—increased more rapidly at District banks than elsewhere. The business-loan share of total loans thus rose slightly in the District, to 35 percent, but declined from 65 to 59 percent in New York and from 42 to 35 percent elsewhere.

### Other measures

In general, the other widely used liquidity measure considered here—the ratio of short-



term Government security holdings to deposits (less collection items)—showed even more deterioration over the decade than the loan-deposit ratio. District banks suffered a 1-percentage point decline in this ratio, to 5.8 percent, between 1950 and 1960. (The ratio rose by 2 percentage points at New York City banks, to 8.8 percent, but declined by 1½ points to 7.2 percent at banks elsewhere.) Actually, District-bank holdings of short-term Governments increased 46 percent over the decade, and their holdings of longer-term Governments and municipal securities also advanced more rapidly than at other banks. Yet, with their very substantial inflow of deposits, they found themselves with less liquidity than their counterparts in the rest of the nation.

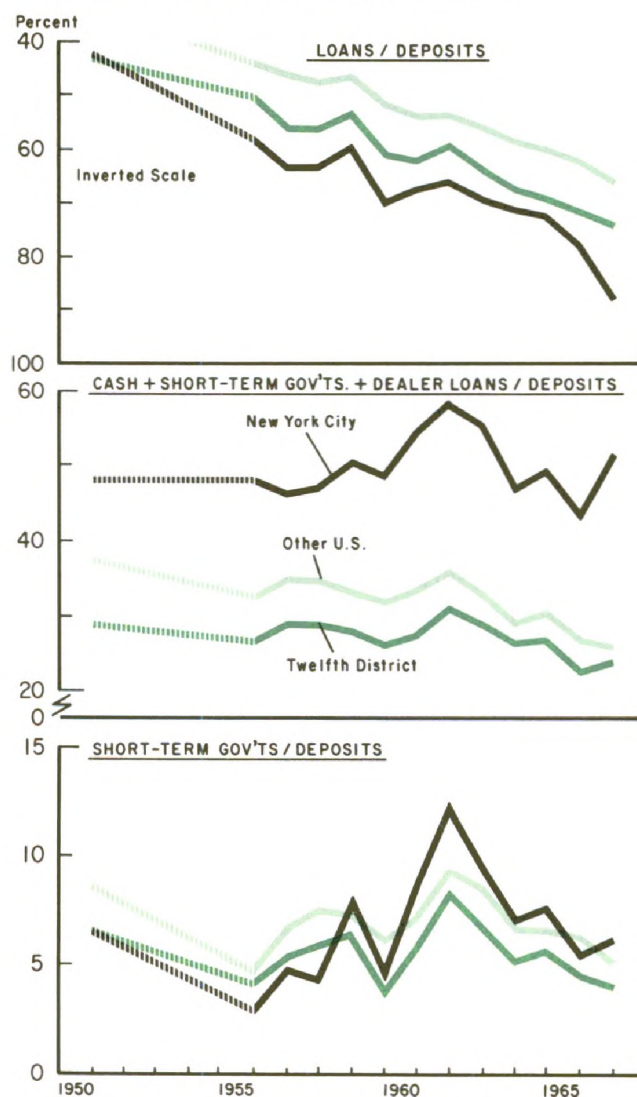
A similar picture is drawn by a more refined variation of this ratio, which again uses deposits as a denominator, but includes in the numerator not only bank holdings of short-term U.S. Governments but also cash and loans to banks (including Federal funds) plus loans to brokers and dealers in government securities. (Loans of this type are included in the numerator because they have a very short maturity and are useful for adjusting temporary variations in reserve positions.)

On the basis of this measure, the liquidity of Twelfth District banks declined by about a point, to 27.8 percent, from the end of 1950 through the end of 1960, while the ratio rose 6 points, to 54.2 percent, at New York City banks and declined 5 points, to 33.2 percent, at member banks in the rest of the nation. Thus, District banks both entered and ended the period with less liquidity than their counterparts elsewhere, but, in comparison with other banks outside of New York City, they sustained a relatively smaller liquidity decline in the interim.

The inclusion of cash in the numerator of the liquidity ratio does not mean that

these funds are an unencumbered reservoir of liquidity *per se*; rather, the greater part, by far, represents reserves required in support of deposits. Furthermore, because of the relatively high proportion of low-reserve time deposits in the District banks' total, their required reserves were comparatively small in relation to their deposits—21 percent in 1960, compared with 38 percent at New York banks and 25 percent at other banks. But even when cash is excluded from the numerator, the ratio still shows that Twelfth District banks started and ended the 1950-60 period with less liquidity than banks outside of the District.

**Liquidity ratios** weaken everywhere, but to smaller extent in District





### 1961-66: something new

Last year was the sixth year of sustained expansion in the nation's economy—an expansion which witnessed both a 50-percent growth in GNP and an accompanying surge of activity in the credit markets, as consumers, businesses and governments increased their combined debt by 50 percent to help finance rising levels of expenditure. In this process, and in their capacity as both recipients and suppliers of loanable funds, the nation's commercial banks played a greatly expanded role. Total bank credit grew by a whopping 60 percent, and the banks thereby increased their market share to one-third of all funds supplied to the credit markets—compared with less than one-fifth during the 1955-60 period.

This enlarged share reflected the increased ability and willingness of banks to compete for interest-bearing time deposits, as four successive changes in Federal Reserve Regulation Q raised the maximum rates payable on various categories of time deposit. As a result, total time deposits at the nation's banks rose by 121 percent over the 1961-66 period, and such deposits jumped from 30 to 46 percent of total deposits. In the Twelfth District, time deposits almost doubled, to just under 60 percent of total deposits—a share much greater than achieved elsewhere, despite the relatively slower growth of such deposits at District banks.

With their sources of funds thus consisting increasingly of nondemand deposits, banks felt less constraint in shifting their asset portfolios in the direction of longer-term and, generally speaking, higher-yielding assets. Because such newly available assets bolstered banks' earnings, banks also sought to "buy deposits" in order to finance their further acquisition. This development first served to narrow the yield spread by limiting the rise in yields on longer-term debt instruments and hastening the rise of yields on

bank liabilities. The overall result of the changing asset and liability mix was a further—and by some measures an appreciable—decline in liquidity.

During the 1961-66 economic expansion, District banks failed to maintain as wide a margin over other regions as they did during the 1950-60 decade, notwithstanding a relatively rapid rate of growth in District income and employment. Bank deposits increased 51 percent and bank loans 82 percent over the 1961-66 period, but these gains surpassed the gains elsewhere by only a narrow margin; in fact, the loan increase was far less than that recorded by New York banks.

### Continued liquidity decline

Loan-deposit ratios deteriorated everywhere during this period, most notably in New York City. At Twelfth District banks, this ratio increased 12 percentage points to 73.9 percent at year-end 1966, while at New York banks it rose 20 points to 87.8 percent, and at other banks it rose 12 points to an estimated 65.6 percent, by the end of the period.

Similarly, the ratio of short-term U.S. Governments to deposits showed a comparatively smaller decline (but to a lower absolute level) at District banks—a 2-point decline to 4.0 percent, in contrast to slightly larger declines in other centers, to year-end 1966 ratios of 6.1 percent in New York and 5.1 percent elsewhere. In each case the decline in liquidity resulted from a sharp rise in deposits and a much smaller gain in short-term security holdings. (Meanwhile, banks in each region severely reduced their holdings of longer-term U.S. Governments but sharply expanded their portfolios of other securities.) And, according to the measure which relates the sum of short-term U.S. Governments and loans to banks, brokers, and government-securities dealers to deposits,



Twelfth District banks experienced a slight reduction in liquidity, to 5.9 percent—again, below the figures prevailing elsewhere, and significantly so in relation to the New York banks.

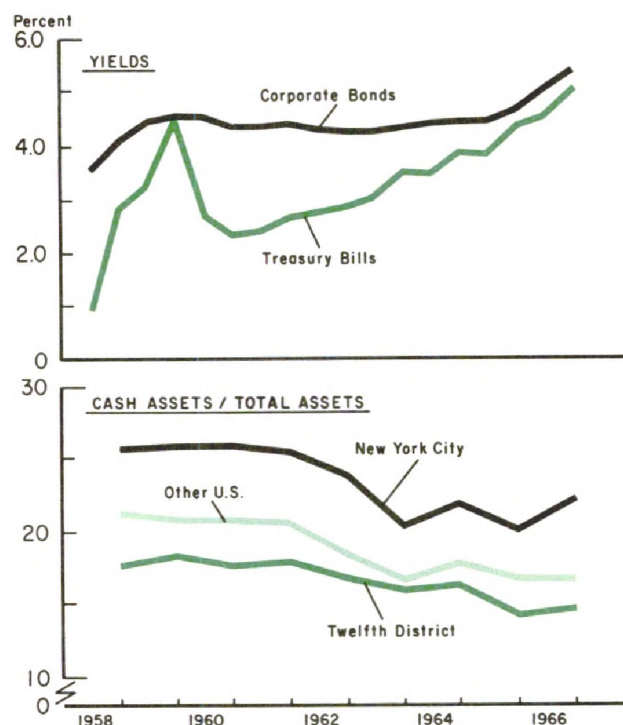
### Complicating factors

There are additional complications, however, in assessing the significance of these developments in terms of their impact upon bank liquidity. For example, none of these liquidity ratios allows for the immobilizing effect upon security portfolios of collateral requirements. In the Twelfth District, all states permitting banks to hold public deposits (except Utah) require from 100 to 120-percent collateral on such deposits. Since District banks, relative to other banks, maintain a higher ratio of public funds to total deposits and a lower ratio of security holdings to deposits, they have a greater proportion of their investment portfolios immobilized for purposes of collateral. At year-end 1966, the amount thus immobilized was over two-fifths of total securities, as against one-fourth at the New York member banks and one-third at member banks elsewhere. (This assumes a collateral requirement of 100 per cent for banks in the rest of the nation as well as in the District.)

On the other hand, District banks in some respects may be relatively less vulnerable to a liquidity squeeze stemming from sudden deposit withdrawals, since interest-sensitive time deposits have grown more slowly than elsewhere. From the end of 1963 to mid-1966, large-denomination time certificates accounted for only about 20 percent of the net increase in District banks' total deposits and for over 40 percent of the increase at the large New York City banks. (Elsewhere, the proportions were much the same as in the Twelfth District.)

At one time, of course, time deposits were considered relatively "stable," at least

### Drop in cash share of assets reflects narrowing of yield spread



relative to demand deposits, and hence, the larger were time deposits in relation to total deposits, the lesser was the presumed need for liquidity. But in an era characterized by increasing sensitivity on the part of the public to interest-rate differentials, the "stability" of certain categories of interest-yielding deposits came to assume highly volatile dimensions.

In the summer of 1966, when the rise in market yields passed the rate ceiling payable on CD's under the terms of Regulation Q, this volatility became very evident. By December, the volume of CD's had declined by over \$3.5 billion from a summer peak of \$18 billion, with New York banks accounting for over half of the decline. Elsewhere, and most notably in the Twelfth District, where large-denomination CD's amount to only 6 percent of deposits, the decline was much less. But the principal lesson of 1966's banking story—perhaps the principal lesson of the 1961-66 banking



story—was that banks can not count with certainty on their ability to “buy liquidity” at whatever price dictated by market forces, and must therefore maintain a cushion of liquid assets for financing unexpected deposit withdrawals.

### Liquidity and the future

But several other factors—some already present, others likely to become more important in the future—are also relevant to any discussion of bank liquidity. One such factor is the rise in the volume of amortized loans which has accompanied the growth of all types of loans—a growth which has tended to lengthen the maturity of bank loan portfolios.

A second factor is the rapid recent expansion of Federal-funds transactions (a major component of “loans to banks,” in the numerator of the liquidity ratios). This development helps account for the smaller volume of member-bank borrowings at the discount window during the recent tight-money period than in previous periods of credit restraint.

Twelfth District banks, in spite of their comparatively low level of liquidity, traditionally have taken relatively modest recourse to the discount window. As Professors Richard Towey and Robert Lindsay noted in their contribution to the Symposium, *California Banking in a Growing Economy*, the proportion of total reserves acquired by Twelfth District country banks by borrowing through the discount window has been appreciably lower than at country banks elsewhere, while borrowings by District reserve city banks also have been much less than elsewhere. More recently this disparity has moderated somewhat, but the demonstrated ability of Twelfth District banks to limit their access to the discount window while

operating with lower liquidity indicates a relatively more efficient management of reserves.

This efficiency, in turn, reflects the structural factors which characterize District banking, including the very high degree of branch banking. Branch systems, operating in a highly diversified economy, are able to shift funds from one locality to another, in response to the credit needs of a particular sector at a particular time, without a loss in reserves. Moreover, the high ratio of District banks’ time to total deposits, and particularly of passbook savings to total deposits, has enabled District banks to economize on their holdings of reserves, other cash, and liquid assets.

Several proposals affecting mortgage financing could also have beneficial implications for District-bank liquidity. For example, the development of a broad and active secondary market for mortgages and municipals could be useful, in view of the relative importance of these instruments in District banks’ asset portfolios.

The increasing use of electronic equipment could reduce the need for liquidity by enabling banks to effect a much closer management of their cash and portfolio positions. On the other hand, the expansion of certain services—including “instant credit” through the credit card — could require greater liquidity to make up for reduced bank control over this segment of their loan portfolios.

At any rate, both the concepts and the measures of bank liquidity, which have undergone considerable change in recent years, are likely to undergo further modifications in the years ahead. And most certainly the changes will be watched closely by the nation’s bankers—East and West alike.

—Verle Johnston



## Western Digest

### Increase in Bank Credit

Total bank credit at large Twelfth District commercial banks rose \$134 million in May, after declining slightly in the early part of the quarter. However, loan portfolios fell \$177 million—exceeding the reduction in May 1966. . . . Net repayments by securities dealers and business corporations were mainly responsible for the lower level of loans. Relatively small loan gains were recorded in the real estate, consumer goods, and agricultural categories. . . . District banks continued to enlarge their holdings of securities in May. During the month, they added \$114 million in Treasury issues, largely Treasury bills, and meanwhile added \$228 million in municipals—about one-third in warrants and short-term issues and two-thirds in longer-term tax-exempts.

### Mixed Trends in Deposits

Private demand deposits remained relatively stable at District banks between the end of April and the end of May, but U.S. Government deposits declined \$317 million. A \$208-million increase in time-and-savings deposits was not large enough to offset this decline in total demand deposits. . . . The time-deposit increase fell considerably short of the year-ago increase. In further contrast to a year ago, the increase in individual savings was about evenly divided between regular passbook-savings accounts and consumer-type time certificates. District banks also posted a net increase of nearly \$100 million in outstanding large-denomination CD's.

### Court Ruling on Snake River Dam

The Supreme Court in early June halted plans by four private utilities to construct a \$257-million dam on the Snake River between Idaho and Oregon. The Court reversed a lower-court ruling which had supported a 1964 decision by the Federal Power Commission to permit private rather than public development of the dam site near the junction of the Snake and Salmon Rivers. . . . The majority (6-2) opinion raised the question whether the dam should be built at all, since there are already eight dams on the Snake and Columbia Rivers downstream from this site, and since nuclear power may provide the means for meeting the future power requirements of the Pacific Northwest.

### Weather and Agriculture

Rainy, cold weather during the spring months sharply reduced production prospects for most deciduous fruits in Western states, but the extra moisture also helped boost the yields of grain crops and helped develop excellent pasture conditions. . . . Poor spring weather meanwhile reduced labor requirements for many fruit and vegetable crops. But because of the unusual concentration of harvest periods, the available labor supply may yet fail to meet requirements this fall.