

RWB

NOVEMBER-DECEMBER 1969

# Oregon stater





# CH<sub>2</sub>MOSU

*Three students...a professor...  
a campus...a formula...*

**By Chuck Boice**  
**Editor**

**W**E'RE HERE in Corvallis because of Oregon State University."

This was the right-to-the-point explanation of why Benton County is the headquarters site of the largest completely integrated engineering and planning organization in the Pacific Northwest and one which ranked 59th in 1968 on Engineering News-Record's list of the top 500 design firms with an annual gross billing in the \$5-\$7.5 million classification.

Cornell, Howland, Hayes & Merryfield is the firm, officially known throughout the world of major construction by the intriguing name of CH2M, Inc.

**James C. Howland, '38**, general manager of CH2M and a native of Oregon City, relaxed briefly in his Corvallis office only two short blocks from the campus and explained further.

"There are many advantages to Corvallis as far as we're concerned," he said. "There is the intellectual climate in a university town which is very attractive to professional people. This encourages the exchange of ideas. There is the library, which is very important to us. Courses are available for our people. Also, many excellent young people are graduated who may be interested in joining a firm such as ours."

In some ways, CH2M is unique. But in this matter of location, it is part of the trend of today and tomorrow, a trend that is now evident in Corvallis.

From the time of the early years of the industrial revolution until very recent times, the industrial plant and its related service firms usually have been located many miles from the ivy covered campus—many miles geographically and in other respects.

## **Modern industry comes to the campus**

The pre-transistor alumnus is startled by the appearance of some campus areas today. Practically adjacent to major campuses one can see complexes of the most modern industry in the world. And the location is not by chance. Strange buildings dot the campus itself. These are for research. Some of this research has a direct tie to the university's personnel and academic structure. Some of it is entirely independent.

Yet, it is all there only because a university is there. There is an unchartable intellectual linking and

it has aided this country put its vast new knowledge into production.

CH2M is such a story.

But for many, the real story of CH2M is one of close college friends getting together later to form a company, and a block-buster success, at that. Furthermore, not only did these friends set up headquarters a few blocks from the campus, but they were joined by dozens of other alumni.

Howland, **Holly A. Cornell**, who attended high school in Portland, and **Thomas B. Hayes**, Pendleton, all are Class of '38 and were close friends. **Fred Merryfield**, a native of England, is Class of '23 and was a professor of civil engineering at OSU when the other three were engineering students.

## **Graduate study in the East**

All three continued for master's degrees; Cornell's study was structural engineering at Yale. Hayes and Howland both attended Massachusetts Institute of Technology where Hayes earned his advanced degree in electrical engineering and Howland in civil engineering.

World War II had struck the country by this time and they went into the service. All the while, however, they kept in contact with each other and with Professor Merryfield.

Cornell was the first out of the service and in 1945 stopped by for a supposedly brief visit in Corvallis. He found Professor Merryfield doing some consulting as well as teaching. He was involved in a big project, too big to handle by himself. The Oregon State Sanitary Authority had ordered a cleanup of pollution in the Willamette River Valley. Cornell set up a drafting board in his bedroom to help his professor.

The engineering team worked well and it was decided that Hayes and Howland would join when they completed their service obligations in 1946. So, CH2M was born.

In early 1946, they formed the professional partnership and opened offices (two rooms) in the Smith Building in downtown Corvallis. By August, they needed more space and moved to the Rennie Building. This was a major move. The new quarters had 1,519 square feet, and the foursome spent \$1,126 in time and materials fixing up the space.

A recent count showed 303 full-time and 35 part-time employees with the corporation. Of these, 196





*Thomas B. Hayes, '38;*

*James C. Howland, '38*

*Holly A. Cornell, '38*

*Fred Merryfield, '23*



are in Corvallis and the others at branch offices in Portland, Seattle, and Boise.

The catchy nickname—C for Cornell, H2 for Hayes and Howland, and M for Merryfield—was not part of the quiet beginning. In fact, the source of the name, which would make a Madison Avenue agency proud, is not firmly established. It first appeared and was adopted in 1950. Some credit the idea to the late Hugh Curran, chief engineer for the Eugene Water and Electric Board, who became impatient with the long series of names. Others say partner Archie Rice came up with it while playing the water-dog—H20K9—game.

### Second office opened at Boise

The history of CH2M, even as highlighted by a few dates, is an amazing picture of success.

By 1949, the 200th project had been completed. The following year, the firm moved to its own building at 1600 Western Avenue, Corvallis, and offices were opened at Boise, Idaho.

In 1953, the 500th project was completed. They made studies on a Eugene pumping station that led to the invention of a variable speed pump motor controls by Hayes and **Carl Ryden**, '49. Later, this was successfully marketed.

In 1959, the 2,000th project had been completed, and a year later the Seattle office was opened.

In 1964, offices were opened in Portland, and

urban and regional planning were added to the services.

The staff passed the 250 mark in 1967 and that year CH2M received the international grand award for engineering excellence from Consulting Engineers Council of the United States for the Lake Tahoe, Calif., water reclamation plant. A new wing was added to the Corvallis offices, making a total of 30,000 feet.

This year, there has been more office and staff growth and the firm is approaching the 6,000th project.

Many laymen are confused as to just what CH2M does.

*Consulting Engineer*, a leading professional magazine, described the CH2M offering as: "A complete engineering service in the civil, electrical, mechanical, and chemical fields, and a comprehensive planning service including urban and regional planning, economic investigations, and resource studies."

In simpler terms, CH2M provides the complex, vital engineering study necessary for major projects of industry and governments.

These can be fascinatingly varied and located throughout the world.

There was Tahoe and there were the filter plants at Hanford, Wash., for the U.S. Atomic Energy Commission, and the relocation of Northern Pacific and

### OSU alumni with CH2M . . .



The Corvallis office—Front row, l. to r., Jim Howland, '38, Harry McKay, '39, Orv Rasmussen, '58, Sue Wolf, '69, Dick Humphrey, '58, Jack Thatcher, '61.

Second row, l. to r., Archie Meadows, '61, Jim Fuller, Larry

Well, '62, Jim Adamek, Dale Cannon, '64, Bill Shrader, Bob Chapman, '65.

Back row, l. to r., Dick Gordon, '66, Ken Hopkins, Rod Berk-lund, Bill Wilson, Bob Mooney, Dean McCluskey, '69.



Union Pacific railroads because of Snake River dams. The Port of Portland called for a comparison of sites for industrial development and participation in a comprehensive plan.

#### Help after the Alaskan earthquake

There have been nearly 6,000 more, including one that began with the Good Friday Earthquake in Alaska in 1964. Valdez, a community of 1,500 population, was almost totally destroyed. Twenty-nine persons died. A decision was made to move the whole town four miles from the original, earthquake-prone site. The U.S. Corps of Engineers called on CH2M, which had worked on the relocation of Boardman in Eastern Oregon to make way for the John Day Reservoir and had previous experience in Alaska.

People are the key at CH2M.

"We want the individual to be able to grow here," Howland emphasized.

This is possible not only in the variety of projects, but also in the structure of the organization. It is designed with a broad, flexible base to keep new ideas flowing.

It is misleading to consider the firm a four-man organization, even at the top. In 1948, **Archie Rice, '41**, and **Ralph Roderick** from Kansas State were made partners and there were others along the way. **E. C. Reynolds, Jr., '47**, became a partner in 1960 and **Bob Adams, '48**, and **Wayne Phillips**, and **Sid Lasswell**,

**both '49**, the following year. In 1962, **Fred Harem, '50**, and **Bill Watters, '51**, were named partners.

"We consider the team approach very important . . . to have a variety of people adding their thinking to a project," Howland said.

In 1966, as the staff passed the 200 mark, CH2M became a corporation, adding 15 stockholders from within the organization. The board is changed annually, mainly to keep the ideas flowing and the policy flexible.

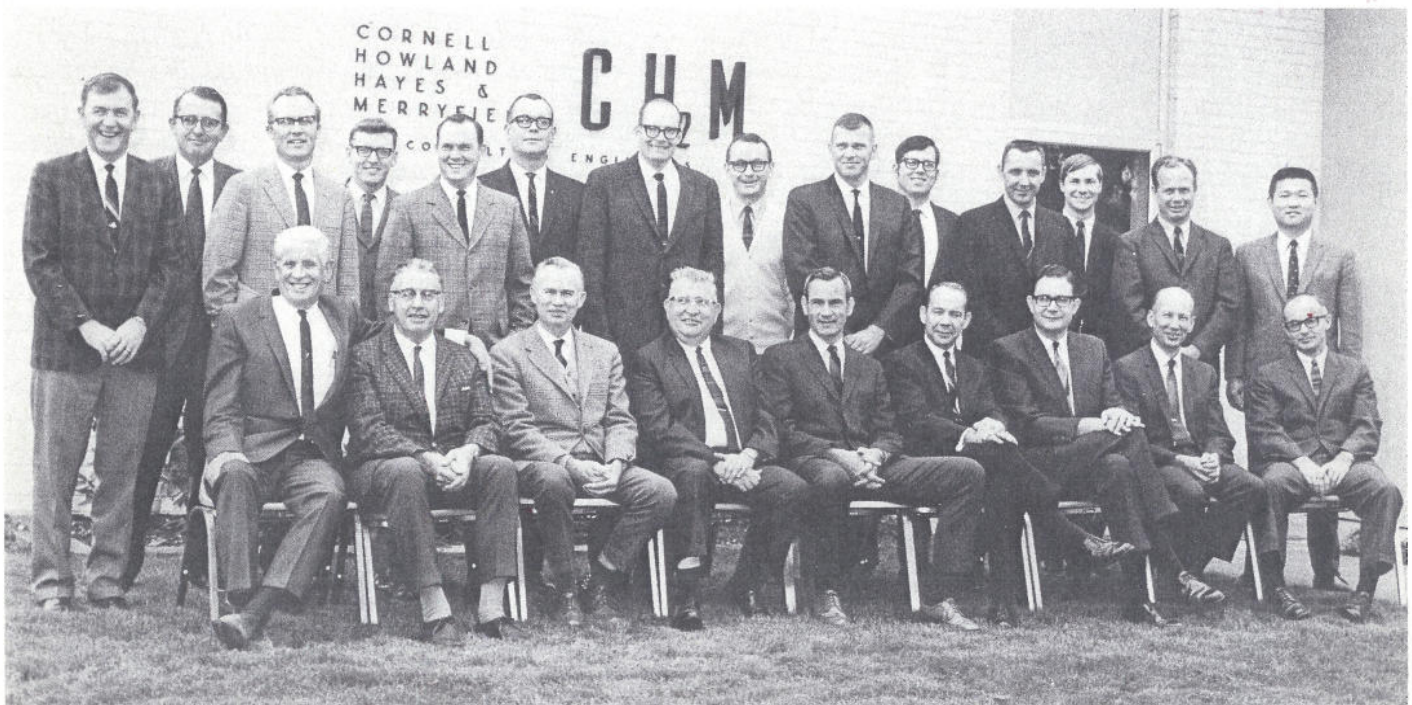
#### Required retirement for board members

For all of this infusion of young brain power, on the surface CH2M appears to be a company that will gracefully mellow and age with its four founding OSU alumni.

This will not happen under strict limitations under which they have placed themselves and the firm. At age 65, all board members must sell their stock and retire from the board. The controls must be turned over to younger men.

"We have seen companies," Howland explained, "which were outstanding as long as the top men were at their peak. But these top men did not want to let go. The company faded when these men lost their drive and imagination. We decided very early that this would not happen to us."

The policy does not mean that these men stop work. Far from it. They can continue to make excep-



The Corvallis office of CH2M—Front row, l. to r., Fred Merryfield, '23, Lex Wheeler, '31, Duane Ackerson, '38, Ralph Martin, '43, Bob Adams, '48, Wayne Phillips, Dick Nichols, Alan Hunnicutt, Sid Lasswell, '49.

Second row, l. to r., Ken Bielman, Fred Harem, '50, Harry Reeder, Roger Lindquist, '55, George Dotson, Bill Toole, Harry Mejdell, '56, Steve Lee, '57.

Back row, l. to r., Ed Worth, '57, Arlen Borgen, '56, Curt McLeod, '57, Rick Reid, '62, Arlen Rippe, '66, Mike Kidby, '67.

Corvallis office employees not shown are Burke Hayes, '38, Archie Rice, '41, Bob Pailthorp, '55, LaMont Matthews, '56, Vaughn Sterling, '57, Dave Evans, '62, Dick Horning, '66, Harlan Smith, '67, Sheridan Atkinson, John Graham, Dave Etchart, '68, Ralph Peterson, '69.





*The Boise office of employees of CH2M—  
l. to r., Roy Taylor, '53, Dick Purdy, '60,  
John Turner, '65, Earl Reynolds, '47, Wally  
Cory, '64, Earl Lyda, '52, Russ Pinard, '60.*

tional contributions and will be encouraged to work along lines of their special interests indefinitely. It simply means they will have nothing to say concerning policy.

Aside from keeping younger thinking in control, the policy has helped attract some excellent new men who like to know that eventually there may be some room at the top.

"You key your operation to people with an idea," Howland said in elaborating on the tie with Oregon State. "A company such as ours is people, brain power. Many people with this brain power, innovative people, like to live in a major university community. It's important to them personally and professionally."

He recalled that the strong relationship with OSU came about naturally.

"If you build for strength," he declared, "look where it is, that's OSU. We still look to OSU for strength. It has a great school of engineering, a great engineering faculty. And don't overlook the other members of the faculty. We have benefited from the entire university, I'm sure, and not only with engineers. For example, we need topflight secretaries. We are able to get them from the secretarial science program at the university."

But CH2M offers no pleasing music to the sentimental alum who would like to rest securely in the thought that one's own alma mater, if not the only one, certainly was by far the best.

#### **Want more than OSU grads**

The four founders make it clear. If CH2M was all OSU, it would be a pale, weak organization compared

to its present stature. The main, home-grown ingredient is a superb substance on which to build a company. When it completely dominates, however, without international seasoning and strong staples from other states, it will not remain among the leaders in this fast-moving age.

The thinking is similar to that expressed by university officials concerned that Oregon universities may soon be limited to only Oregon high school graduates, with a very few exceptions. This inbreeding does not produce the people sought by today's technological industry.

"Only one idea!" Merryfield, an eloquent professor never known to mince words, snorted. "The outfit that represents only one background and encourages this approach reminds me of Gertrude Stein's quote of the '30s: 'We're good because we're good because we're good' and so on. They can always reassure each other that they're great."

"In our case, for example, we wanted some of that Midwestern strength here, and we have it. They add tremendous ability to our firm, as do those from other Western schools and elsewhere. And we've all felt extremely fortunate to have the engineers we have from throughout the world. They've done more than help us become international, they've brought international thinking to us. These men are a great help to each other."

Howland noted that a number of engineers had "dual" alma maters, i.e., they had a bachelor's degree from one school and a master's from another.

Exchange of ideas and study programs are encouraged at CH2M. For example, there are the noon



“brown bag” sessions at which one engineer will make a presentation on an engineering problem. This not only assists the engineers in keeping pace with new knowledge and different ideas, it helps them verbalize their thinking.

Merryfield likes these sessions. “The young can tell the old some of the new things. The old can tell the young how to put the hardware together. It helps keep them both afloat,” he grinned.

### Alumni find their way back

Some of the OSU alumni figured all along they would find a job to their liking in the Pacific Northwest. Others thought and hoped they were on a one-way trip to faraway places when they picked up their engineering diploma.

**Dr. Jim Adamek, '64**, attended Stanford for his master's and Utah State for his doctorate, but was sure that somehow or other he was coming back to Oregon. A native of Powers in Southwestern Oregon where he and his brother had a logging operation, Adamed didn't require much convincing that he should join CH2M.

His main work has been on the economic aspects of waste water, which frequently requires long-range planning.

“This ties in very well with industrial land use,” he said, “although most of the work so far has been related to municipalities. I like it. I'm in a particular area, but not overly specialized. I've been on about 60 jobs thus far.”

*The Seattle office of CH2M—Front row, l. to r., Dale King, '49, Bill Watters, '51, Holly Cornell, '38, Carl Ryden, '49, Donna Sorenson, '65. Back row, l. to r., Jim Poirot, '53, Gary Ganz, '69, Fred Kern, '60, Collins Martin, '63, Bill Johnson, '58.*



**Rick Reid, '62**, a mechanical engineer, is a native of Corvallis. After two years in the Army and a master's degree, Reid and his wife, the former **Caroline Edwards, '65**, of Roseburg, headed for San Francisco and a major oil company job.

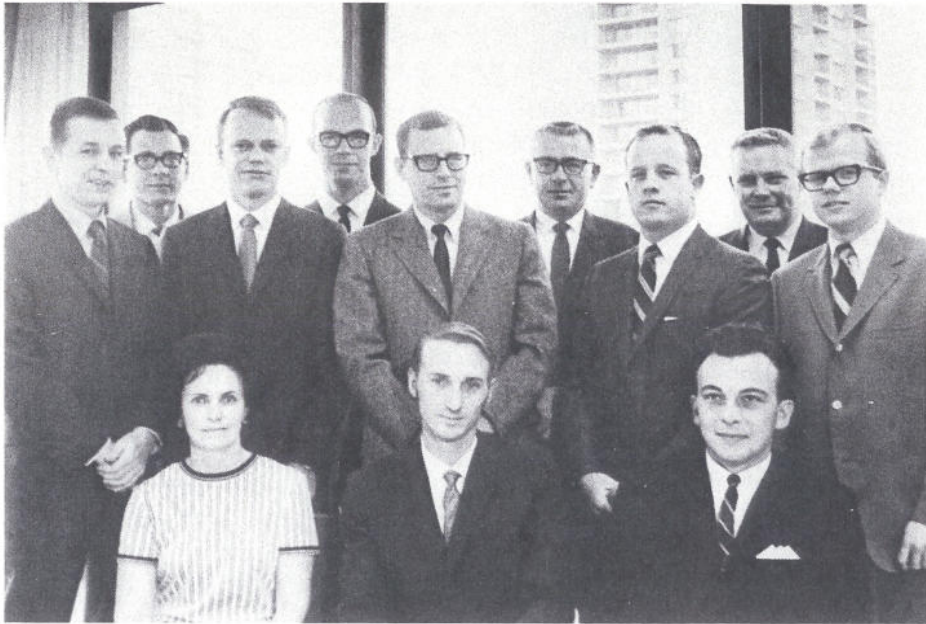
“A year was enough,” Reid said. “We wanted to get back . . . I feel we all owe a great deal to the university. It's an excellent program.”

**Bill Toole, '56**, a former Beaver basketball star, is an electrical engineer. At first, he did not think a firm such as CH2M, which deals mostly in civil engineering projects, would have need for his services, and he was eager to leave quiet Corvallis behind and see other places. By the time he returned to Corvallis in 1962 to join CH2M, Toole was another Oregon Stater who had seen considerable country and elected to return to the Northwest.

In half-a-dozen years with the General Electric sales training program, the ex-Klamath Falls all-stater, worked in New York, Virginia, Massachusetts, Pennsylvania, and finally, two years in San Leandro, Calif. The California duty was about to be changed to a permanent assignment elsewhere when the Tooles, Bill and the former **Connie Kinser, '57**, figured they would try for the Northwest. An application with Professor Marvin Haith's OSU engineering placement service revealed that CH2M was looking for engineers to work with the electrical side of projects.

“After all the places I'd worked, such as Philadelphia,” Toole said, “my most pleasant surprise in Corvallis probably was being able to go home for lunch. I guess I'd forgotten anybody could do that . . .





*The Portland office of CH2M—Front row, l. to r., Jane Bower, '49, Stuart Cato, '60, Tony Krutsch, '69. Second row, l. to r., Gary Buford, '62, Dann Madden, '60, Ken Durant, '61, Bob Wright, '60, Jim Baker, '66. Back row, l. to r., Bob Gladden, '67, Don Miller, '65, Joe Worth, '58, Roy Howard, '49. Not shown is Les Wierson, '58.*

"Being able to take courses at the university and working with the faculty is wonderful, as is the opportunity to go to the games and take part in other aspects of campus life."

**Les Wierson, '58**, has a dozen Oregon Staters in his staff of about 30 in Portland and they are able to attend many of the major campus functions. Wierson, who joined CH2M immediately after graduation and spent three years in the Corvallis office, said most of the Portlanders were able to combine the advantages of suburban living with city conveniences.

The Portland office does considerable work in assisting city and county planning. The former area manager of the Portland office is Lloyd E. Anderson, a University of Washington graduate. He resigned recently to accept an appointment to replace the late Portland City Commissioner William Bowes.

Flexibility to meet the needs of an industry, agency, or government anywhere has been a CH2M trademark and it is illustrated in the Seattle office, headed by **James Poirot, '53**.

Poirot pointed out that the Seattle staff has two strong economists who do national and international work such as some recent power studies in Thailand. Economic benefits from projects or industry have become an important type of study.

In Washington, there also is a demand for freeway and highway work. CH2M has a large group in this activity. A major bypass at Vancouver and another in King County were recent projects. Boeing also called on CH2M in the planning of its new 747 plant.

There is a permanent staff of 80 in Seattle, 10 of them Oregon Staters, including Poirot and Cornell. There are a number of engineers from the "Big Ten country" of Illinois, Michigan, Wisconsin, and other

Midwestern states. This results in some interesting football discussions as well as an exchange of engineering ideas. There also are a number of engineers from foreign countries.

Cornell and Poirot opened the Seattle office in 1960. Poirot, originally from Roseburg, prior to graduation had been convinced by Merryfield he should be a member of the firm.

"It took about five years, but now CH2M is recognized in Seattle," Poirot said proudly. He and Mrs. Poirot (Raedea Reece, '53) have enjoyed it.

The big Seattle office is now seeking to add "some of those Corvallis advantages."

The main office is to be moved from downtown Seattle to the suburban community of Bellvue, east of Lake Washington, where most of the employees live. The human factor again was taken into consideration in CH2M planning.

Another Corvallis native with the firm is **Bob Adams, '48**. Adams is well-known to many alumni. He served on the Alumni Association board 1958-64 and was treasurer, 1959-63. In recent years he has been a member of the Benton County Planning Commission.

Like a number of others, Adams did not plan to remain in Benton County. He was at Yale University in a master's program when he was contacted by the ever-operative Merryfield personnel radar. Some friends were in the young firm and it seemed as if it might grow.

That was 1949.

"There were 12 or 15 in it then," he recalled. "We're bigger now than we thought we'd be then, I can tell you. We've had steady growth and we expect to continue to grow."

CH2MOSU is a formula for success.



*We encouraged the four founders to go beyond CH2M in their reflections. Some of their comments are included below—Editor.*

**JAMES HOWLAND, '38**, President and General Manager: "The most important element in any organization, commercial or otherwise, is the people. In the organization, the goals of the people and those of the organization should mesh. If this can be accomplished, you have a 'go show.' For this to happen, both the goals and the 'tone' of the operation must be right. . . .

"In our particular city and state, if we could wave a wand and do away with all man-made ugliness—the garish signs, shacks, junk piles, litter—we would have such an influx of high capability people that the progress would be phenomenal. . . .

"People with brain power search for pleasant environment. Except in nature, only brain power makes good things happen. Upgrade the environment and the full range of good things will happen because that is where the creative people will be."

**FRED MERRYFIELD, '23**, Secretary of the Corporation and Staff Manager, Professor Emeritus, civil engineering, OSU: "If we could just 'collapse' the period between the time the young man leaves college and when he knows he's an engineer. . . . Cut it from three to two years, say. Then, we would have accomplished something.

"I believe there is a real opportunity to do this sort of thing with programmed learning of various types, tapes and slides. . . . The sort of learning one would do by choice on his own, quietly in the office on a Sunday afternoon.

"Maybe these learning hardware people missed the best target with this type of teaching. Perhaps it would work better with older people than youngsters. . . . Now that I'm going to have a little time, I'm going to find out. . . .

"The engineers need not necessarily more humanities, but BETTER humanities. . . . And political scientists and the others need more engineering. . . . Many people are professionally competent and read a great deal, but they are fearful of other fields. This is silly. . . .

"In this world today we need to ask ourselves not just why are we doing it this way, but why are we doing it?"

**T. BURKE HAYES, '38**, Vice President and Director of Business Development: "A thought-provoking problem we engineers must face up to concerns where our economic growth is taking us and how fast we are getting there.

"During the past 25 years, growth has been based upon minimum dollar cost and the resultant wastes are threatening our very existence. . . . From now on, we must consider all of the relevant factors—the whole system.

"The Willamette Valley is a good case in point. Livability and economic growth factors must be considered simultaneously if we are to remain a completely healthy community. . . .

"We have to have a plan, and soon. . . . Environment is a badly overworked word these days. . . . I like to see it used in the broadest sense . . . to include the money we make, the water we drink and the water we send down to the next fellow.

"We do have an area here we can logically look at and work with—the Willamette drainage basin. We must decide what it can do and what we want it to do. . . . Then we can bend our efforts to meet these needs."

**HOLLY CORNELL, '38**, Vice President and Director of Advanced Planning: "For generations we've had the same idea of engineering—application of scientific knowledge for the use and benefit of mankind. Our definition of benefit once was almost entirely dollars. Now we have to include some other factors—environment and the welfare of people as well as economics. . . .

"There's a new, heavy burden on the scientific community concerning the methods of evaluating. . . . We, the scientist and the economist, were getting very good. A concise system was developed. Cost benefits were arrived at with great precision and that was all we wanted. Much more is needed now.

"This, obviously, also places a great burden on the universities and the high schools. . . . I believe our young people are bringing in some of this needed new understanding. . . . They will make many mistakes, but they are capable of achieving the main goals. . . .

"I'm optimistic. I believe there are solutions to our big problems such as those involved with the population explosion. We can do the type of thing necessary for a happy satisfying life. . . . Obviously, however, we should be planning. . . ."