

Water institute will study Colorado River basin use

A two-year study of reservoir operations and water uses in the upper Colorado River basin will begin July 1, announced Dr. Jack R. Runkles, director of the Texas Water Resources Institute.

The \$30,000 study will include personnel from Texas A&M, Angelo State University and the Agricultural Research and Extension

Center at San Angelo, Dr. Runkles said.

Principal investigator is Dr. Robert A. Clark, A&M meteorology professor. He will be assisted by Dr. Chia S. Shih, associate professor of industrial engineering, and U. S. Air Force Capt. Gary O'Connor, a doctoral student.

Clark said the area includes 12

reservoirs and three proposed reservoirs from Lake J. B. Thomas to Lake Buchanan.

All the reservoirs were designed separately to solve a particular problem, Clark explained and each is operated as separate units.

He expects the study to show a single operation of the reservoirs would solve some of the severe water shortages for domestic and industrial use in West Texas.

Clark said San Angelo has extreme water problems. The Concho River basin, a tributary of the Colorado, has had extremely low flows since 1962 and its has prevented effective use of three reservoirs in Tom Green County.

Clark will employ both historical data and synthesized hydro-meteorological data to determine optimum operation. Included is a study to determine the adequacy of the reservoirs based on historical precedent.

"We are interested in the water supply, not site selection," Dr. Clark emphasized.

"At the same time we will have to consider economic and legal restraints, such as satisfying existing water rights," he said.

Clark said it will not be necessary to yield more water, but to get the water to the places it is needed. A possible solution may be transfer of water from reservoirs through canals or pipelines.

Part of the historical study, Clark explained, will attempt to determine if the region would have the same water problems today if the reservoirs had been operated as one integrated system the past 20 years.

Class project Student designs powered glider

Incorporation of a small jet engine to make a sailplane independent of a powered-aircraft tow has been suggested by a Texas A&M student.

William K. Puckett's arrangement, while not a new idea, encloses the glider's auxiliary power source within the fuselage.

In that location the light-weight jet engine does not intrude into the airstream nor detract from the sailplane's aerodynamics, de-

signed to keep it aloft by taking life advantage of rising columns of warm air.

Similar auxiliary power has been obtained for gliders by mounting small reciprocating engines externally, said Puckett, a spring Texas A&M aerospace engineering graduate of Baytown.

However, the mounting pylon, engine and propeller introduce unwanted drag when the craft is flown as a sailplane. Such ar-

rangements cause other problems too, he noted.

Puckett's design utilizes a low-cost, 20-pound pulse jet manufactured at Ingram.

"It has no parts and produces 80 pounds thrust," the area major reported in a paper for Dr. Charles A. Rodenberger, aerospace engineering professor who let students develop ideas in a senior seminar course.

"The engine burns propane-bu-

tane gas and is extremely simple to operate. It can be started on the ground or in the air with a small spark-producing device such as a hand-cranked magnet," Puckett said.

The Therm-Jet engine operates on resonating shock waves and has a total burning time of 10 minutes on 10 gallons of fuel, enabling unassisted takeoff and some powered flight to return the sailplane to a selected landing sight.

Puckett figured 100 extra pounds would be added to the weight of an average sailplane, allowing for fuel tanks, mountings, a stainless steel shroud and asbestos insulation to protect the plane's fuselage from engine heat.

Cockpit instrumentation would include a pressure gauge on the fuel system, the magneto, and control to open air scoops to the engine for powered flight.

"This type of scoop enable the pilot to reduce drag when the engine is not in use and could also serve as air brakes for the sailplane, as needed," explains Puckett.

Residence halls will get summer renovation

Fluorescent lights, tiled showers and paint are going into Law and Puryear Halls as part of summer renovation projects involving five residence halls.

Davis-Gary Hall also is getting an interior paint job, Hotard Hall will have asbestos tile on room and hall floors and new furnishings will go into Law, Puryear, Hart and Walton Halls.

Civilian students reside in the five buildings during Texas A&M's regular school year.

Law and Puryear, 44 and 43-year-old structures respectively, are receiving primary attention. In addition to improved light fixtures, 206 rooms and ramps of the buildings will be replastered and painted in four colors.

Metal shower stalls will be replaced with plaster and ceramic tile facilities. Exterior work also is under way. A courtyard between the buildings was landscaped earlier.

Blue, gold, green and burgundy paint used in Law, Puryear and Davis-Gary was selected by a student committee, said Howard Perry, civilian student activities director. The committee worked with hall councils, residence advisors and Eugene C. Oates Jr., hall programs adviser.

New chairs will also go into Hart Hall and Walton will be equipped with new bureaus. Furniture purchase is through the university's management services, directed by Howard L. Vestal.

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4-H honors '71 teen miss, winners

Winning 4-H teams and individuals were honored at a special awards banquet in Sbisa Hall June 3 as the 1971 edition of the State 4-H Roundup came to a close.

The 4-H honorees also heard a plea for youth involvement in the anti-pollution fight by Rewa Collette Walsh, Miss Teenage America 1971, from Anaheim, Calif. Miss Walsh told the approximately 2,400 youth, adult leaders and Extension Service agents that "knowledge is a major key for community education, and we need to unite young people to help keep America beautiful."

"The anti-pollution battle takes on new significance when one lives in an area where physical activity must be restricted on certain smog alert days. A fast game of checkers is often the most activity permitted for teenage girls during these alerts, which might be more accurately labeled poison alerts," Miss Walsh said. She urged all young people to get involved in pollution abatement projects.

Chronicle features A&M inauguration

Dr. Jack K. Williams' inauguration as president of Texas A&M, along with the inauguration of Dr. Elliott T. Bowers of Sam Houston State, will be featured in the Sunday issue of the Houston Chronicle's Texas Magazine.

The six-page cover story was written by Mrs. Josie Weber with photographs by Darrell Davidson.

In addition to describing inaugural ceremonies at the two institutions, the article in the Chronicle Sunday supplement includes profile-type material based on interviews with the new presidents.

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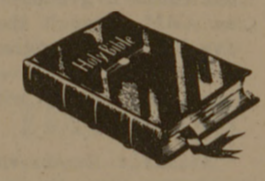
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A BOY THAT MISUNDERSTOOD



As a boy, I was always disturbed by this Biblical passage in Matthew: "For I have come to set a man against his father and a daughter against her mother . . . He who loves father and mother more than me is not worthy of me."

In those days of innocence, it seemed that my greatest love should go to Mother and Father. They gave me life, love and visible physical needs that seemed all-important.

But what I did not understand was that this life of mine came directly from God through my parents. I had tried to separate God's love from the love of Mother and Father. It was through Him that they received the great gift of human love. And because a mother has God's love implanted in her heart, she will instinctively love me. Matthew was emphasizing the fact that God's love must come first and that human love will then follow in its proper perspective.

Take your child with you to church and church school so that both may gain a better understanding of God's will. One who really loves God supremely will invariably develop a deeper love for family, friends and neighbors.

Scriptures selected by the American Bible Society

- Sunday
Isaiah 61:4-11
- Monday
Luke 10:1-20
- Tuesday
John 15:7-11
- Wednesday
Philippians 3:1-10
- Thursday
John 16:19-24
- Friday
Luke 15:7-10
- Saturday
Psalms 16:1-11

CALENDAR OF CHURCH SERVICES

<p>ST. THOMAS EPISCOPAL 906 Jersey Street, So. Side of Campus Rector: William R. Orley Asst.—Rev. Wesley Seeliger</p> <p>8:00 A.M. & 9:15 A.M. Sunday Services</p>	<p>A&M CHURCH OF CHRIST</p> <p>8:00 & 10:00 A.M. Worship 9:00 A.M.—Bible Study 5:15 P.M.—Young People's Class 6:00 P.M.—Worship 7:15 P.M.—Aggie Class 9:30 P.M.—Ladies Bible Class 7:15 P.M.—Wednesday - Bible Study</p>	<p>FIRST CHRISTIAN CHURCH Homestead & Ennis</p> <p>9:45 A.M.—Sunday School 10:50 A.M.—Morning Worship 6:30 P.M.—Young People</p>	<p>UNITARIAN FELLOWSHIP 305 Old Highway 6, South</p> <p>10:00 A.M.—Sunday Service 7:00 P.M.—Adult Service 8:05 Old College Road South</p>	<p>A&M PRESBYTERIAN</p> <p>7-9 A.M.—Sun. Breakfast - Stu. Ctr. 9:45 A.M.—Church School 11:00 A.M.—Morning Worship 6:00 P.M.—Sun. Single Stu. Fellowship 7:15 P.M.—Wed. Student Fellowship 6:45 A.M.—Fri. Communion Service Wesley Foundation</p>	<p>ST. MARY'S CATHOLIC</p> <p>Sunday Masses—9:00 and 11:00 A.M. Saturday Mass—7:00 P.M.</p>	<p>CHURCH OF THE NAZARENE</p> <p>9:45 A.M.—Sunday School 10:45 A.M.—Morning Worship 6:30 P.M.—Young People's Service 7:30 P.M.—Fellowship Service</p>	<p>CHRISTIAN SCIENCE SOCIETY</p> <p>9:30 A.M.—Sunday School 11:00 A.M.—Sunday Service 11:00 A.M.—2 P.M.—Tues. Reading Rm. 7:00-8:00 P.M.—Wed., Reading Room 8:00 P.M.—Wed. Evening Worship</p>	<p>FIRST BAPTIST</p> <p>9:30 A.M.—Sunday School 10:45 A.M.—Morning Worship 6:10 P.M.—Training Union 7:30 P.M.—Evening Worship 6:45 P.M.—Choir Practice & Teachers' meetings (Wednesday) 7:45 P.M.—Midweek Services (Wed.)</p>	<p>SECOND BAPTIST 710 Eisenhower</p> <p>9:45 A.M.—Sunday School 11:00 A.M.—Church Service 6:30 P.M.—Training Union 7:30 P.M.—Church Service</p>	<p>OUR SAVIOUR'S LUTHERAN</p> <p>8:30 & 10:45 A.M.—The Church at Worship 9:30 A.M.—Bible Classes For All Holy Communion—1st Sun. Ea. Mo.</p>	<p>CENTRAL CHRISTIAN CHURCH 3205 Lakeview</p> <p>9:45 A.M.—Bible School 10:45 A.M.—Morning Worship 6:00 P.M.—Youth Hour 7:00 P.M.—Evening Worship</p>	<p>FAITH CHURCH UNITED CHURCH OF CHRIST</p> <p>9:15 A.M.—Sunday School 10:30 A.M.—Morning Worship 7:30 P.M.—Evening Service</p>	<p>COLLEGE HEIGHTS ASSEMBLY OF GOD</p> <p>9:45 A.M.—Sunday School 11:00 A.M.—Morning Worship 6:30 P.M.—Young People's Service 7:30 P.M.—Evening Worship</p>	<p>A&M METHODIST</p> <p>9:45 A.M.—Sunday School 10:55 A.M.—Morning Worship 6:30 P.M.—Campus & Career Class 6:30 & 8:00 P.M.—MYF Meetings</p>	<p>CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS 26th East and Coulter, Bryan</p> <p>8:30 A.M.—Priesthood meeting 10:00 A.M.—Sunday School 5:00 P.M.—Sacrament Meeting</p>	<p>GRACE BAPTIST CHURCH 2506 S. College Ave., Bryan An Independent Bible Church</p> <p>9:45 A.M.—Sunday School 10:50 A.M.—Morning Worship 7:00 P.M.—Prayer and Bible Study</p>	<p>SEVENTH-DAY ADVENTIST CHURCH North Coulter and Ettie, Bryan</p> <p>9:30 A.M.—Sabbath School (Saturday) 11:00 A.M.—Worship Service 7:30 P.M.—Prayer Meeting (Tuesday)</p>
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