

MONTHLY NEWS REVIEW

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Monthly News Review is prepared by the Oklahoma Climatological Survey. Its purpose is to provide a summary of weather and climate news or related issues that may help guide policy-makers in the Oklahoma Weather Center. Along with weather, climate, environmental, and science issues, the review includes issues on the national and state agendas and events that affect major businesses in Oklahoma that bear some relation to demands for weather-related information. The summaries and any opinions expressed herein are those of the author, and in no way reflect positions of the Oklahoma Climatological Survey or the University of Oklahoma.

NATIONAL

Ambitious Agenda set for rest of session (AP/Oklahoman 9/1/2002) – President Bush has a long list of items he wants Congress to address before their October recess: additional resources for the Pentagon, the energy bill, legislation guaranteeing pension security, terrorism insurance, and a new Homeland Security Department. First on the Senate agenda is the Homeland Security proposal, up for debate beginning the 3rd. President Bush will also have to press his case on military spending; the \$355 billion in the Senate budget is a \$35 billion increase over last year but \$11.4 billion less than Bush requested. Also on the President's agenda is a ban on human cloning, legislation making government services available to religious groups, and welfare reform that would increase work requirements for recipients. The White House is also considering requesting additional tax cuts to stimulate the economy, but recent Congressional Budget Office projections show the federal budget will remain in deficit until the current tax cuts expire in 2010.

Drought relief stalled (AP/Oklahoman 9/18/2002) – A measure to provide \$6 billion in drought relief funds was attached to the Interior appropriations bill, only to fall to an impasse over logging. The amendment was approved on September 10 by a 79-16 vote, but when an amendment that would remove legal obstacles for harvesting damaged trees and thinning overgrown forests failed, a near party-line vote stalled the bill, falling short of the 60 votes needed to end debate.

Additional funding for Weather Center secured (Oklahoman 9/12/2002) – The U.S. Senate has supported a \$6 million increase in funding for the Weather Center in Norman, on top of the previously-allocated \$30 million. In addition, NOAA anticipates spending \$10 million to relocate its agencies to the new building. The Weather Center will have about 222,000 square feet, of which 115,000 square feet will be occupied by federal agencies and the remainder by university units, including the School of Meteorology. Construction is expected to begin this fall, with a ground-breaking ceremony being scheduled, likely for October.

Progress report on climate research and technology (NOAA 9/23/2002) – Secretary of Commerce Don Evans and Secretary of Energy Spencer Abraham submitted a progress report on federal climate change science and technology programs to President Bush. The report outlines steps taken in research, technology development, voluntary emissions reduction, and collaborative international activities (<http://www.climate-science.gov/Library/climateletter.pdf>). Specific work is being done on hydrogen-based energy systems, biofuels, wind turbines, fuel cells, energy efficiency, carbon sequestration and land management. An interagency inventory of climate and global change research programs is expected to be completed shortly. A draft report on a strategic plan for U.S. global climate change research will be available for public comment in November 2002, with a corresponding workshop scheduled December 3-5 in Washington, D.C.

<http://www.publicaffairs.noaa.gov/releases2002/sep02/noaa02123.html>

Status of Legislation (newly added to report; action noted; legislation passed; legislation failed):

- Appropriations Bills: As of October 3 (the time of this writing), NO appropriations bills have been passed by both houses of Congress. Funding for agency operations is continuing under a Continuing Resolution (HJ Res 111), which became law (PL 107-229) on 9/30/2002, extending FY2002 funding levels until October 4 or until agency appropriations bills are passed, whichever comes first. Additional Continuing Resolutions are likely. The following bills had been approved by the House: Defense, Interior, Legislative Branch, Military Construction, and Treasury / Postal. The following bills have been approved by the Senate: Defense, Legislative Branch, Military Construction. None have gone to Conference Committee or sent to the President.
- HR 4: “Energy Policy Act of 2002” – In Conference; Conference sessions held on 6/27, 7/25, 9/12, 9/19, 9/25, 9/26, and 10/2.
- HR 4754 / S 2528: “National Drought Preparedness Act of 2002” – Introduced 5/13/2002; Referred to House Transportation and Infrastructure, Agriculture, and Resources committees and Senate Committee on Environment and Public Works (5/16)
*** The Western Governors Association has asked for help in passing this legislation
- H.R. 5310: “Emergency Farmer and Rancher Assistance Act of 2002” – Introduced 7/26/2002; Referred to House Committee on Agriculture (7/26); provides emergency livestock and crop loss assistance to agricultural producers.
- S. 2830: “Emergency Agricultural Disaster Assistance Act of 2002” – Introduced 7/31/2002; Referred to Committee on Agriculture, Nutrition, and Forestry (7/31); provides emergency disaster assistance to agricultural producers.
- HR 4900: “Weather Safety Act” – Introduced 6/6/2002; Referred to the House Committee on Science (6/6); establishes a National Climate Change Vulnerability and Resilience Program.
- HR 64: “Strengthening Science at the Environmental Protection Agency Act” – Introduced 1/3/2001; passed by House (4/30/2002), now in Senate Committee on Environment and Public Works (5/1/2002); establishes the position of Deputy Administrator for Science and Technology and assigns a research mission to EPA: “Conducting, sponsoring, and evaluating environmental science and technology research shall be a central mission of the Agency.”
- HR 3908: “North American Wetlands Conservation Reauthorization Act” – Introduced 3/7/2002; passed by House (5/7/2002), Referred to Senate Committee on Environment and Public Works (5/8/2002), reported with amendments favorably 9/26/2002; reauthorizes the North American Wetlands Conservation Act.
- HR 5486: “Geologic Research Enhancement Act” – Introduced 9/26/2002; Referred to House Committee on Resources; authorizes the Secretary of the Interior to cooperate with the High Plains Aquifer States to conduct a hydrogeologic characterization, mapping, modeling and monitoring program for the aquifer.

AGENCY NEWS

NOAA strategic plan process continues (NOAA 9/23/2002) – NOAA completed a series of regional stakeholder meetings to gain input for its new strategic plan. Meetings were held in New Orleans, Boston, Washington D.C., and Boulder CO during September (and previously in Seattle in August). The meetings included invited presentations and public discussion. NOAA will now use input from the meetings to formulate its strategic plan. The plan replaces one originally drafted in 1993 and revised in 1998. It will incorporate recommendations developed by an internal program review team (see <http://node3.hpcc.noaa.gov/internal/>). The goals include promoting integration across the agency, increasing efficiency, increased responsiveness, and supporting President Bush's Management Agenda (see <http://www.whitehouse.gov/omb/>). A draft should be available in early December and will be accessible on the NOAA website, <http://www.osp.noaa.gov/>. The plan is scheduled for release in March 2003. <http://www.publicaffairs.noaa.gov/releases2002/sep02/noaa02905.html>

NOAA plans cooperative observer network modernization (NOAA 9/12/2002) – NOAA met with stakeholders on September 18 to discuss modernization of the 112-year-old cooperative observer network, the backbone of temperature and precipitation readings used to document weather and climate in the United States. The modernization seeks to replace outdated technology and practices to provide timely, higher-resolution climate and weather data. [Note: Ken Crawford presented at the forum.] <http://www.publicaffairs.noaa.gov/releases2002/sep02/noaa02r217.html>

EPA announces new watershed initiative (OceanSpace 8/29/2002) – The EPA began implementing a new Watershed Initiative, first announced in the president's State of the Union address last January. The initiative would provide \$21 million in grants to encourage community-based approaches to protect water resources. The first part will be awarding projects in 20 watersheds, selected from nominations submitted by state governors and tribal leaders. Projects would be awarded from \$300,000 to \$1.3 million each. The selected watersheds will be announced early next year. More information on the initiative is on the EPA's website at <http://www.epa.gov/owow/watershed/initiative/>. <http://www.oceanspace.net/index.cfm?issue=207>

EPA removes mention of greenhouse gasses from report (NY Times 9/15/2002) – In their annual report on air quality standards, the EPA removed mention of carbon dioxide levels. The report, "Latest Findings on National Air Quality: 2001 Status and Trends" (<http://www.epa.gov/airtrends/reports.html>) monitors air pollution restricted under the Clean Air Act. First published in the 1970s, the report began including greenhouse gasses in 1996. Citing other publications that focus on climate change, the EPA chose to remove the section from this year's annual report. <http://www.nytimes.com/2002/09/15/politics/15CLIM.html>

STATE / LOCAL

State revenues fall short for second consecutive month (Oklahoman 9/11/2002) – Just two months into the new fiscal year, Oklahoma revenues have substantially missed their marks. Following a 15% decline in expected revenues in July, August came in 11% below estimates and 6.3% below August 2001 revenues. The Office of State Finance implemented immediate cuts in agency budgets to account for these and expected future weak revenues. Agency budgets will be reduced 2.85% in September and 6.02 percent, on average, from October to June 30, the end of the fiscal year. This translates to an average annual reduction of 4.75%. The Oklahoma Board of Education, state Corrections Department, and Oklahoma Health Authority will take the biggest hits in across-the-board budget cuts. Income tax collections are down 4.9%, sales tax revenue 6%, and other revenue sources – including investment income – down by 15.7%. The Tulsa school district has already eliminated annual raises, reduced substitute teacher pay, delayed the start of the school year, and curtailed bussing to reduce transportation expenses. Higher Education’s budget will be trimmed by \$36.2 million (\$5.5 million for the Norman campus, \$5.0 million for Oklahoma State University’s Stillwater campus). The governor said that while the sky is not falling “there are clouds.”

Corrections Department announces furloughs (Oklahoman 9/14/2002) – The state Department of Corrections announced that it will furlough all employees for 23 days, the maximum allowed under state law. This will save the department \$15 million of the \$18.6 million it needs to cut from its budget. The agency will cover furloughed positions with existing non-uniformed personnel. They also announced a total hiring freeze, a purchasing freeze, a ban on out-of-state travel, and termination of support for conference participation.

Boren seeks tuition increase (Oklahoman 9/12/2002) – University of Oklahoma President David Boren, speaking at a meeting of the board of regents, said that without tuition increases, OU would not be able to keep pace with other Big12 institutions. Unless the university is able to raise more money, layoffs, furloughs, or cutting adjunct professors may be needed. The state authorized a 7% annual increase in tuition for each of the next five years; the average annual increase this past year at Big12 schools was 14%. Boren would like to have tuition account for one-third of the revenues of the university.

State not as poor (Oklahoman 9/26/2002) – Per capita income in 2001 increased 4.8% over 2000, to \$25,071, moving Oklahoma from 42nd to 39th in state rankings. Although it moves Oklahoma from among the bottom-ten in pay, Oklahoman’s are still \$5,401 behind the national average. Connecticut was the highest-ranked, with a per capita income of \$42,435, while Mississippi held the bottom spot at \$21,750. Neighboring states ranked 27th (Texas), 28th (Kansas), and 29th (Missouri), each with a per capita income between 28 and 29 thousand dollars. Oklahoma’s economy usually lags the rest of the nation, so the gains may be temporary as the effects of the recession become apparent in Oklahoma.

Hog farm permit approved (Oklahoman 9/26/2002) – The Oklahoma Water Resources Board granted approval to a water permit for a hog farm in Hughes County. The farm, which has been opposed for three years, will house 10,000 piglets. Tyson already has a processing plan in Holdenville.

Water disputes will intensify (Oklahoman editorial 9/1/2002) – Oklahoma and neighboring states have been battling over water for decades, and disputes are likely to continue. Kansas and Colorado are negotiating terms for Colorado’s excessive use of the Arkansas River – a dispute resolved by the U.S. Supreme Court, Oklahoma claims Texas is storing too much water along the Canadian River, and Oklahoma and Arkansas are filing counter-claims about pollution along the Illinois and Arkansas rivers. Earlier this year, a proposed sale of water from Lake Sardis in southeastern Oklahoma to Texas collapsed amidst issues of local access to water supplies, economic development, and Native American sovereignty. In most cases, negotiations seem to be resolving problems, but the article cautions: “at a time when everyone is asserting his or her rights and lawyers far outnumber snail darters, it won’t be long until the next water dispute breaks the surface.”

Low lake levels prompt concerns (Oklahoman 9/29/2002) – The Quartz Mountain Conservation Coalition is seeking changes to the operation of Lake Altus-Lugert. Unlike other lakes, Lake Altus was created solely for providing water for irrigation to area farmers. Lake levels fluctuate drastically, filling in the winter and springtime and depleting throughout the summer and early fall. In 1998, the lake held 130,000 acre-feet of water in June, but irrigation demands during a hot, dry summer depleted that to 35,000 acre-feet by September. Levels have been as low as 5,653 feet in 1985. The Coalition wants to maintain a minimum storage for recreation and wildlife purposes. Other lakes operated by the Bureau of Reclamation were created for municipal water supplies and flood control, and have much more modest fluctuations in water supply.

BUSINESS

Trade boost economic growth (AP/Oklahoman 9/19/2002) – July’s trade deficit fell to \$34.6 billion as exports rose for a fifth straight month. The decline in the value of the U.S. dollar has made U.S.-made goods cheaper overseas and boosted the price of imports, contributing to a projected 4.5% growth in the U.S. economy for the third quarter. The second quarter reported a 1.1% growth. With the growth come early signs of inflation. Inflation was 0.3% overall for August, buoyed by a 0.6% increase in energy prices.

Jobless rate falls slightly in August (AP/Oklahoman 9/7/2002) – For a fourth straight month, the net change in jobs in the U.S. was positive. Companies added 39,000 jobs in August, mostly in construction, government and the service sector. The gains were offset by cuts in manufacturing and retail. Analysts had expected a slight increase in the jobless rate, but instead saw it drop to 5.7 percent, a 5-month low. The economic outlook is still uncertain, with most analysts expecting a “choppy, gradual, and modest” recovery.

Conoco, Phillips merger approved (Oklahoman 8/30/2002) – The Federal Trade Commission approved the \$15.12 billion merger of Conoco and Phillips Petroleum, clearing the way for the company to move its headquarters to Houston. The merger makes ConocoPhillips the third-largest major oil company in the United States and the six-largest publicly held energy company in the world. The new company will sell several assets to comply with federal antitrust laws.

Wheat prices peak but too late for Oklahoma farmers (Oklahoman 9/7/2002) – Wheat prices soared to \$4.45 per bushel, a price not seen since 1996. However, the price jump comes too late, especially for farmers in Southern Oklahoma, who harvested their wheat earlier in the season and sold it for around \$2.88 per bushel. Farmers in northern Oklahoma may still be able to cash in. Higher wheat prices are encouraging additional production for harvest, with some expectations of a 50% increase over this year’s harvest. If that happens, though, expect wheat prices to fall once again. The prices have been driven up due to a drought extending across much of the plains states and a five-year decline in grain storage nationally. U.S. wheat production is about half of the record 950 million bushels set in 1999, and the world’s stock has declined from 6.48 billion bushels in 1997 to 5.1 billion bushels projected this year. Despite the best planning of market conditions and optimal production, weather is still the driving factor in wheat production. Low soil moisture across the winter wheat areas of the U.S. may foreshadow a poor wheat crop for next year. In April 1996, wheat surged to \$7 per bushel following a dismal winter wheat harvest. Experts do not expect prices to rise so drastically this time around. Mark Hodges, executive director of the Oklahoma Wheat Commission, notes that December contracts are still lower than current prices.

West Africa becoming primary U.S. oil supplier (AP/Oklahoman 9/20/2002) – Nigeria, Equatorial Guinea, and Gabon are among several West African countries that are rapidly expanding their oil supplies to the United States. U.S.-based business activity is readily apparent in the region, and the United States acknowledges the region as a strategic interest. Nigeria already provides about 15% of the oil used in the U.S., comparable to that supplied by Saudi Arabia. The area is expected to increase production to 25% by 2015, surpassing the amount of oil provided by Persian Gulf countries.

WEATHER

Burn ban (finally!) lifted in Texas County (Oklahoman 9/17/2002) – The governor lifted a 14-month-long burn ban for Texas County in the Oklahoma Panhandle. Texas County has been especially hard-hit during the prolonged drought affecting northwestern Oklahoma, but two months of near-normal rainfall has improved conditions to a point where the ban is no longer needed. The burn ban in neighboring Cimarron County, implemented in April of this year, remains in effect. Several counties in southwestern and east-central Oklahoma are under a Red Flag Fire Alert, meaning residents in those areas should take caution with outdoor fires.

Hot, dry summer across much of United States (NOAA 9/13/2002) – The National Climatic Data Center (NCDC) reported that June through August 2002 was among the warmest and driest on record. The average temperature for the contiguous states was the highest since the 1930s and drought affected approximately half of the country. The global average temperature was the third warmest on record. Twenty-nine states had significantly below-average precipitation, while only four states in the upper Midwest, Texas, and Florida had significantly above-normal rainfall. The Texas rainfall, while above-normal, came largely in one event, causing \$1 billion in damages from the resulting floods. Drought conditions, after a brief respite, worsened in the Northeast, and drought continued to rage in the Southeast and the West, beginning in some locations in 1998. Eleven states recorded their driest or second-driest September-August precipitation since 1895. Moderate to extreme drought covered 45% of the contiguous United States, the greatest since the 1930s but well short of the 80% of the contiguous U.S. that experienced drought conditions in July 1934. More than 50% of rangeland and pastures in 24 states were classified as poor or very poor by the U.S. Department of Agriculture.

<http://www.publicaffairs.noaa.gov/releases2002/sep02/noaa02119.html>

Drought taking a toll (AP/Oklahoman 9/14/2002) – The hot, dry summer has stressed local resources. In drought-ravaged areas, the Agriculture Department has opened up conservation lands for grazing or hay harvesting. Fires have consumed six million acres of forests – twice the annual average at a cost of about \$1.5 billion, with more fires still burning. Water rationing is commonplace across the western U.S., and in New England, the cranberry crop is threatened because there is not enough water to flood the bogs where the berries grow.

Drought-breaker? (Various sources 9/17/2002) – Parts of Georgia received over 14 inches of rain from the remnants of Tropical Storm Hanna. While southwestern parts of Georgia received the most rainfall, northwestern areas of the state as well as neighboring South Carolina received upwards of seven inches of rain as well (Source: <http://www.srh.noaa.gov/atr/>). The area is in the midst of a long-term ‘exceptional’ drought according to the Drought Monitor (<http://www.drought.unl.edu/dm/monitor.html>). However state climatologists in Georgia and South Carolina caution that the rainfall, while helpful in the short term, does not mean the drought is over. Unless more rain comes soon, water tables and stream levels are expected to decline rapidly.

Additional sources via the Southeastern Regional Climate Center:

http://www.onlineathens.com/stories/091802/new_20020918047.shtml

<http://www.heraldonline.com/local/story/1738791p-1751634c.html>

Mild summer has benefits (Oklahoman Editorial 9/24/2002) – The lack of 100-degree days helped Oklahoma City remain in compliance with federal clean air standards this past summer. Hot, stagnant air is a principal contributor to poor air quality, and the mild conditions helped both Oklahoma City and Tulsa remain below the threshold for ozone of 0.12 parts per million, the federal standard for ‘serious’ violations of federal standards. [Note: earlier this summer, the Association of Central Oklahoma Governments expressed concerns of El Nino contributing to a heightened number of clean-air alert days – see August 2002 OCS Monthly News Summary, *Clean Air Alerts expected to be above-average*).

Isadore teaches some lessons (AP/Oklahoman 9/28/2002) – Evacuation and mitigation plans in Louisiana went awry as Tropical Storm Isadore dropped up to 20 inches of rain in Louisiana. Evacuation routes in New Orleans and elsewhere were flooded. Agencies disagreed over who should respond to a breached levee. A large oil refinery was left isolated when the only route in or out was flooded. Despite the problems, officials were relieved to learn of them with a tropical storm rather than a strong hurricane. Three deaths were related to Isadore; two in Mississippi and one in Tennessee where a motorist drove around a barricade onto a flooded road from the ten inches of rain that fell across the Ohio Valley.

Heavy rain with a 30% chance of volcanic eruptions (New Scientist 9/4/2002) – Scientists studying the Soufriere Hills volcano in Montserrat found an unexpected link between heavy rain and volcanic eruptions. The last three eruptions coincided with heavy rainfall – the most recent happening last year when tropical storm Barry hit the Caribbean island. The researchers think that rainwater seeps in through cracks in a lava dome. As water is vaporized, pressure builds up leading to a blast. Although rainfall does not account for all such eruptions, it could be a good predictor, especially for pyroclastic flows that are more hazardous than lava.
<http://www.newscientist.com/news/news.jsp?id=ns99992755>

CLIMATE

El Nino expected to affect fall & winter weather (NOAA 9/12/2002) – El Nino has returned, albeit weaker than the last event during the 1997-1998 seasons. Forecasters anticipate that it will bring some relief from drought in parts of the Southwest and southern and central plains, but is not likely to help in the Northwest, Northeast, mid-Atlantic, or Ohio Valley, which are typically drier-than-average and warmer-than-average during the winter of El Nino years.

<http://www.publicaffairs.noaa.gov/releases2002/sep02/noaa02118.html>

Thicker clouds form over warm water (NASA 9/18/2002) – Researchers from NASA's Tropical Rainfall Measuring Mission (TRMM) found that warmer water is correlated with thicker clouds and greater areal extent. The finding contradicts a prevailing theory in which warmer clouds produce more rainfall, and dissipate more quickly, leaving behind more thin cirrus clouds which do not retain outbound radiation as well. The impact of the more prevalent, thicker clouds is to prevent as much heat from escaping the Earth, thereby not offsetting the greenhouse effect as much as theory predicts.

<http://www.gsfc.nasa.gov/news-release/releases/2002/02-138.htm>

New satellite to investigate climate change (OceanSpace 8/29/2002) – the Meteosat Second Generation weather satellite was launched successfully in late August. The satellite, carrying the geostationary earth radiation budget (GERB) instrument, is the first such satellite to be able to measure radiation balance from geostationary orbit. This means that data will be studied frequently enough to examine the impact of weather systems on the radiation balance. The instrument will be switched on in November. Additional details about the satellite can be found at <http://www.sstd.rl.ac.uk/Launches/Gerblaunch.html>.

<http://www.oceanspace.net/index.cfm?issue=207>

Unusually small Antarctic ozone hole (NOAA 9/30/2002) – In September, the ozone hole over Antarctica is only about 60% of the area of the hole for the same time period during the past six years. NOAA and NASA scientists claim that unusual stratospheric weather patterns are the primary cause of the smaller hole, and the smaller area is not necessarily an indication of recovery. The scientists note higher temperatures around the edges of the polar vortex, which inhibits the development of stratospheric ice crystals that contribute to ozone depletion.

<http://www.noaanews.noaa.gov/stories/s1035.htm>

ENVIRONMENT

Water Board to review applications (Oklahoman 9/15/2002) – The Oklahoma Water Resources Board (OWRB) has scheduled a prehearing conference for September 30 to hear issues related to water use from the Arbuckle-Simpson aquifer. The aquifer is at the heart of a contest over use of spring water outside of the basin. Canadian County communities struck a deal with PESA LLC to develop a pipeline from the aquifer, located near Ada, Sulphur, and Tishomingo, to Canadian county communities such as El Reno and Yukon. PEASA LLC is purchasing water rights in the aquifer region, and the OWRB plans to hold the hearings to review those applications. Nobody is certain how much water the aquifer can safely yield. Residents of the area have noted a decrease in production over the last several years, dating back to a series of droughts beginning in the mid-1990s. Protests are expected from the National Park Service, the cities of Ardmore, Wynnewood and Ada, the Arbuckle Master Conservancy District, the Chickasaw Nation, and citizens.

Illinois River claims and accusations continue (Oklahoman 9/25/2002) – Duane Smith, executive director of the Oklahoma Water Resources Board, dismisses recent claims of improvements in Arkansas water quality. According to Smith, each year, before the annual meeting of the Arkansas River Commission, Arkansas officials claim that the phosphorus problem isn't bad as previously believed. Earlier this year, Oklahoma unilaterally mandated a phosphorus concentration in the Illinois River of 0.037 milligram per liter, after years of impasse in negotiations between the two states.

Final cleanup on Cushing refinery (Oklahoman 9/11/2002) – The EPA is beginning final cleanup of the Hudson refinery site in Cushing, using \$3 million from the Superfund. The refinery, shut down in the early 1980s, was partially cleaned up by EPA in the late 1990s. Beginning in late September, the EPA will complete removal of asbestos, purging chemicals out of the lines, and dismantling the structure. The EPA has already spent \$6.8 million cleaning up loose asbestos, leaking chemical drums, storage tanks, and sludge. Details of the project are on the EPA's superfund site: <http://www.epa.gov/superfund/sites/locate/hudsonref.htm>.

Massive hydroelectric project slated for Congo (New Scientist 10/2/2002) – Development of the world's largest hydroelectric project could start as early next year. Plans call for development of a 10,000 megawatt hydroelectric generator at Inga Falls in the Congo. From there, electricity would be distributed across a continent-wide electric grid, including main distribution lines to South Africa, Egypt, and Nigeria. The single project alone would be sufficient to meet all present-day electricity demands for all of Africa. The project would cost \$6 billion plus \$10 billion for the electricity grid. Another project calls for \$6 billion to construct a trans-Sahara pipeline to take natural gas from Nigeria to Europe. Protests have emerged from those at the recent World Summit on Sustainable Development, held earlier this year in Johannesburg, South Africa. There, talks was of constructing distributed energy systems, based largely on wind and solar power, that would be more capable of reaching the continent's poorer population areas.
<http://www.newscientist.com/news/news.jsp?id=ns99992839>

Ranches best bet to protect environment (NY Times 9/10/2002) – Recent studies are showing that large ranches play an essential role in the western United States’ ecosystem. Environmentalists are concluding that ranching practices co-exist with native species, preserve grasslands and allow for periodic fires that prevent brush and cactuses from taking over. Recent trends of “ranchettes” – small ranches of 40 acres or less – introduces invasive species and pets and limits the role of fire. A study by Dr. Richard Knight, a biologist at Colorado State University, found that ranches had at least as many species of birds, carnivores, and plants as areas protected as wildlife refuges, while having fewer invasive weeds. Aside from the weather, fire is the most significant aspect of grasslands management. By maintaining large tracts across which fires can burn, invasive species are reduced, leaving a healthier ecosystem.

<http://www.nytimes.com/2002/09/10/science/earth/10RANC.html>

U.S. attempting to mediate Mideast water dispute (NY Times / Reuters 9/16/2002) – An American expert in water law is attempting to mediate a dispute over Lebanon’s use of water from the Hasbani River. The plan would pipe water from the tributary to local villages, but Israel says it “cannot agree to this”. Lebanon has asked the United Nations to mediate. Water flows from the Hasbani into the Jordan River and ultimately to the Sea of Galilee and is a critical source of water for Israel and its agriculture.

<http://www.nytimes.com/2002/09/16/international/middleeast/16LEBA.html>

Environment much like it was 100 years ago (Oklahoman Editorial 9/20/2002) – U.S. Forest Service officials told Insight Magazine recently that the U.S. has the same area of forests today as it did in 1920, making a strong comeback from a long-time trend of deforestation. In addition, wildlife is recovering. “Today we kill twice as many deer on the highways of America than existed in the entire eastern United States in 1890” according to Doug MacCleery of the Forest Service in Insight.

SCIENCE & TECHNOLOGY

Terabit transfer possible (New Scientist 9/7/2002) – Researchers in England announced discovery of the means to improve data transfer through fiberoptic cables from present 10 gigabits per second to up to two terabits per second. The technique utilizes equipment on either end of a cable, and does not necessitate upgrading the cable. The technique is based upon using a subcarrier frequency to transmit information on top of the normal one. Transfer rates can be further increased by using a number of lasers to send different wavelengths of light simultaneously. The group is presently studying the use of polarization techniques to further increase transfer rates.

<http://www.newscientist.com/news/news.jsp?id=ns99992769>

Speed of light broken at Middle Tennessee State University (New Scientist 9/16/2002) – Using off-the-shelf equipment costing about \$500, physicists at Middle Tennessee State University were able to send an electronic signal along a 120-meter-long coaxial cable at four times the speed of light. The group created interfering waves, in which the peak of the signal was able to achieve warp speeds. The total energy of the pulse, however, remained at sub-warp speeds, preserving Einstein's relativity. Super-fast signals also get distorted, limiting the usefulness of high-speed communication. However, the technology could prove useful in improving computer speeds whose electrons are transmitted over short distances. Scientists have been able to achieve similar results for decades, but only with complicated, expensive equipment. [Comment: No, this is *not* a story from 'The Onion'!]

<http://www.newscientist.com/news/news.jsp?id=ns99992796>

Antimatter created in Geneva (AP/Oklahoman 9/20/2002) – Scientists at the particle physics laboratory near Geneva created antihydrogen – a positron orbiting an antielectron – according to their recent findings presented in the journal Nature. The scientists have created enough 'antimatter' to test theories on the makeup of the universe. Scientists believe that both matter and antimatter were formed at the creation of the universe. When the two atoms collide, both are destroyed while producing a large burst of energy. Some speculate that sufficient quantities of antimatter could be used to produce either vast amounts of power or new weapons.

New Moon? (NASA 9/11/2002) – Astronomers trying to figure out the origin of a 'second moon' detected on 3 September this year, have concluded it is most likely a leftover Saturn V third stage from one of the Apollo missions. NASA simulations show that a rocket booster may have circled the earth in the 1960s or 70s, before being captured by the Sun and then returned to Earth orbit in April 2002. The object's trajectory places it on a 2003 collision course with the moon. <http://neo.jpl.nasa.gov/>

Physicist sacked for data fabrication (New York Times 9/26/2002) – A well-known scientist, Jan Hendrik Schon, was fired from Bell Labs for scientific misconduct. An investigation of his research indicated that the data used in 16 publications was manipulated and misrepresented. The work pertained to molecular-scale transistors, hailed at the time as breakthroughs in physics. Reviewers noticed identical graphs in several publications, purported to be from different experiments. Subsequent investigations indicated that all data and notes from the experiments had been destroyed, and Dr. Schon could not reproduce any of the findings.