

Summary of Federal Programs

Program Title: Federal Crop Insurance Corporation (FCIC) administered by the Risk Management Agency (RMA)

Statute: Federal Crop Insurance Act, as amended, 7 U.S.C. 1501-1502

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Risk Management

Agencies (primary agency listed first): USDA--RMA, FCIC

Who's Eligible? Customers include all farmers. RMA has increased its outreach and educational efforts to reach beginning, minority, limited-resource and small farmers.

Eligibility Criteria: RMA provides a risk management program that protects against production losses due to unavoidable causes such as drought, excessive moisture, hail, wind, hurricane, volcano, tornado, lightning, etc.

Funding History (1985 to the present): In 1998, nearly \$28 billion in protection was provided on over 181 million acres through more than 1.2 million insurance policies.

Type of Assistance / Examples: Financial assistance to manage risk for agricultural producers in order to improve the economic stability of agriculture. Crop insurance helps farmers to recover from crop losses, secure operating loans, and Financial assistance to manage risk for agricultural producers in order to improve the economic stability of agriculture. Crop insurance helps farmers to recover from crop losses, secure operating loans, and aggressively market a portion of their crop. Recent changes in farm policy have increased the risk borne by individual producers; to help them acquire the risk management skills needed to compete and win in the global marketplace, RMA has been providing education and educational grants in production risk, legal risk, marketing risk, financial risk and human resources risk.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Losses from drought are calculated on a share, or producer/farm basis. To be eligible for payments, a farmer must

have purchased crop insurance before the sales closing date established for the 70+ crop insurance programs covered.

Contact Name and Phone Number: Michael Hand (202) 720-3439 and/or Sharon Hestvik (202) 720-6685

Summary of Federal Programs

Program Title: National Fire-Danger Rating System

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): USDA--FS;DOI--BLM, NPS, BIA, FWS, & OAS; DOC--NWS

Who's Eligible? Federal, state, county, and local government agencies engaged in wildland fire control and planning

Eligibility Criteria: Not applicable

Funding History (1985 to the present): All funds are annual appropriations; about 15 to 20% of program benefits drought activity: FY2000, \$227K (1992-99, \$227-337K); Weather stations FY2000, \$300K (1989-99, \$ unavailable).

Type of Assistance / Examples: Technical assistance as a means of monitoring and predicting conditions for wildland fires throughout the fire season. The data on 1000-hour fuel (i.e. large, dead fuel), moisture, and energy release component are most closely related to drought. National Fire-Danger Rating System uses daily input from some 1,500 weather stations that comprise the Fire Weather Network to run various models and algorithms to create maps, graphs, and tabular products, which yield predictions of fire danger.

Integration with State, Tribal, or Local Government: Information is provided to state, county, tribal, and local government entities.

Effectiveness: No data

Program Limitations/ Recommendations: Interpretation requires knowledge of spatial and temporal context of normal and drought conditions.

Contact Name and Phone Number: Patti Hiram (202) 205-1498

Summary of Federal Programs

Program Title: Keetch-Byram Drought Index

Statute: Not applicable

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction

Agencies (primary agency listed first): USDA--FS; DOI--BLM, NPS, BIA, FWS, & OAS; DOC--NWS

Who's Eligible? Federal, state, county, and local government agencies engaged in wildland fire control and planning

Eligibility Criteria: Maps are used throughout the fire season as a means of monitoring soil moisture conditions as a measure of drought; also used in wildland fire control and planning.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Technical assistance to produce maps of the conterminous U.S. and Alaska which display the Keetch-Byram (soil moisture) Drought Index. This soil/duff drought index ranges from 0 (no drought) to 800 (extreme drought), is based on a soil capacity of 8 inches of water, and includes factors such as maximum daily temperature and daily, antecedent, and annual precipitation.

Integration with State, Tribal, or Local Government: Information is provided to state, county, tribal, and local government entities.

Effectiveness: No data

Program Limitations/ Recommendations: 1. Designed for use in forested conditions. 2. Interpretation requires knowledge of spatial and temporal context of normal and drought conditions.

Contact Name and Phone Number: Patti Hiram (202) 205-1498
www.fs.fed.us/land/wfas

Summary of Federal Programs

Program Title: Vegetation Greenness Maps

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): USDA--FS; DOI--BLM, NPS, BIA, FWS, and OAS; DOC--NWS

Who's Eligible? Federal, state, county, and local government agencies engaged in wildland fire control and planning

Eligibility Criteria: Maps are used throughout the fire season as a means of monitoring conditions for wildland fires. Drought places stress on live vegetation that can be monitored using these maps. FAO uses data in maps for early warning of food shortages (see www.fao.org/giews/english/windisp/windisp.htm).

Funding History (1985 to the present): Funded since about 1992 at \$30K/yr

Type of Assistance / Examples: Technical assistance to produce Greenness maps to assess the condition of live vegetation over time. Actively photosynthesizing biomass, or vegetation "greenness," is used to assess relative fire danger in forests and grasslands.

Integration with State, Tribal, or Local Government: Information is provided to state, county, tribal, and local government entities.

Effectiveness: Can be an effective predictive tool; however, 1) uses AVHRR satellite imagery that provides only coarse (1 km) resolution; 2) best viewed as time series to detect and monitor change; 3) clouds may totally or partially obscure certain portions of the images (need to calculate replacement values for pixels); 4) need to develop procedures to quantify change over large areas rather than pixel by pixel.

Program Limitations/ Recommendations: 1. Uses AVHRR satellite imagery. Provides only coarse (1 km) resolution. 2. Best viewed as time series to detect and monitor change. 3. Clouds may totally or partially obscure certain portions of the images.

Contact Name and Phone Number: Roberta Bartlette (406) 329-4828
www.fs.fed.us/land/wfas

Summary of Federal Programs

Program Title: Wetlands Reserve Program (WRP)

Statute: 16 U.S.C. 3837

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--NRCS; DOI--FWS. Other agencies, such as USDA's USFS and FSA and state wildlife agencies, participate as partners.

Who's Eligible? Landowners

Eligibility Criteria: Program is more geared toward alleviating flood rather than drought conditions. Not an emergency or disaster assistance program, although 70 percent of all lands in the program are subject to frequent flooding. With limitations, certain acreage may be utilized for haying or grazing providing it is authorized as a compatible use.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial and technical assistance to restore and protect wetlands. Financial assistance is in the form of cost-share payments to establish wetland and wildlife practices, easement acquisition payments, and costs associated with filing the easement. **Examples:** Gives landowners options for managing their lands. They can voluntarily sell an easement to the property and restores wetland conditions. Provides the landowner with a fair price of the restrictions conveyed, creates enhances or restores the wetland and provides excellent wildlife habitat.

Integration with State, Tribal, or Local Government: Voluntary assistance for any private landowner with eligible land based on competitive selection.

Effectiveness: Funds are spent only on wetland restoration and protection.

Program Limitations/ Recommendations: The authorizing language provides that the purpose of the program is to restore and protect wetlands while placing priority on habitat for migratory birds and other wildlife. Compatible uses may only be authorized if such uses are consistent with the long-term protection and enhancement of the wetland and other natural values of the easement area. National policy prohibits the wetlands from being used as a water supply, such as

for irrigation withdrawal. Total acreage enrollment limitation is 975,000 acres.
Acreage cap is expected to be met in FY2000.

Contact Name and Phone Number: Leslie Deavers (202) 720-1067

Summary of Federal Programs

Program Title: Snow Survey and Water Supply Forecasting (SS/WSF) Program

Statute: CFR, Title 7, Volume 6, Parts 400 to 699, revised as of Jan. 1, 1998. From U.S. Govt. Printing Office via GPO Access, CITE: 7CFR612 Authority: 26 Stat. 653; Sec. 8, Reorg. Plan No. Iv of 1940, 54 Stat. 1234 (5.S.C. App. II); 5 FR 2421, 3 CFR 1938-1943 Comp. R. 1288. Source: 40 FR 12067, Mar. 17, 1975, unless otherwise noted.

Direct or Indirect Linkage to Drought: Direct

Functions: Communication, Monitoring and Prediction, Planning, Mitigation, Risk Management, Response

Agencies (primary agency listed first): USDA--NRCS, FS; DOC--NWS, NCDC, RCCs; DOI--NPS, BLM

Who's Eligible? a) Any individual or group who is a significant water user. b) Agricultural interests, particularly those served by or affiliated with soil, water, and other conservation districts. Information is also available to other federal, state and private agencies and to the public without charge. Cooperator's financial contribution is usually required for special measurements or interpretations beyond the scope of the regular program.

Eligibility Criteria: None

Funding History (1985 to the present): 1999: \$5,990,000. From 1990 to 1998 funding ranged from \$5.4 mil. to 5.8 mil., increasing incrementally each year.

Type of Assistance / Examples: Technical assistance to monitor the climate and hydrologic elements necessary to produce water supply forecasts for the West.

1. Elements monitored include snowpacks, soil moisture and temperature, precipitation, air temperature, and associated climate information.
2. These data are combined with other water resource information, such as streamflows and reservoir storage, to forecast the seasonally variable water supplies (amounts and timing) and to make drought risk assessments.

Examples: Near real time information is collected from remote mountain sites. The information is electronically transferred to a master station. The information provides scientists with information on the moisture contained in the snow on the mountain as well as precip and temperature information.

Integration with State, Tribal, or Local Government: The SS/WSF program activities are fully integrated with state, tribal and local governments. The program has funded specific enhancements to data collection efforts on tribal lands in AZ and NM to enhance water management activities.

Effectiveness: Recent GPRA results indicate 98% satisfaction with Snow Survey and Water Supply Forecasts. Water supply forecasts are produced annually (January to June) in partnership with the National Weather Service. During the 1999 forecast season, NRCS issued 6,835 seasonal water supply forecasts for 747 locations in 12 Western states. Snow Survey and Water Supply Forecasts are an integral part of the Weekly U.S. Drought Monitor, published by the USDA, DOC and National Drought Mitigation Center.

Program Limitations/ Recommendations: Limitations: 1. Limited scope of application (Parent agency priority and resource assignments (human and fiscal) are insufficient to effectively implement existing data acquisition technology and data analyses / management on a national basis to meet known needs and opportunities). 2. Resources are limited in the general downsizing of USDA / agencies. 3. Program is unable to utilize opportunities to leverage considerable available partnered in-kind and fiscal support without parent agency endorsement and robust infrastructure. 4. Disparate, non single-point national leadership prevents comprehensive and widely cost effective mitigation and response. Recommendations: Establish a new USDA Budget Line item specifically for drought monitoring and risk assessment. Identify funds to complete the SNOTEL network in the West to meet requests for new water supply forecast points and products. Expand the SCAN network to the entire United States for drought assessment. Augment NRCS state staffs to provide local interpretations and direct assistance with local drought and water supply issues.

Contact Name and Phone Number: Jon Werner, Director, National Water & Climate Center, (503) 414-3107, email jwerner@wcc.nrcs.usda.gov

Summary of Federal Programs

Program Title: Livestock Indemnity Program (LIP)

Statute: Emergency Supplemental Appropriations Act (1997, 1998, 1999) Pub. L. 105-18 and Pub. L. 105-174

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--CCC, FSA

Who's Eligible? Livestock producers who suffered livestock losses

Eligibility Criteria: Natural disaster, including drought, that has been proclaimed in a Secretarial or Presidential disaster declaration

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance for losses of eligible livestock from natural disasters occurring during specific periods.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Livestock producers must have possessed a beneficial interest in eligible livestock which were lost as a result of the disaster condition in the Presidential or Secretarial disaster declaration.

Contact Name and Phone Number: Rebecca Davis (202) 720-9882

Summary of Federal Programs

Program Title: Livestock Assistance Program (LAP)

Statute: Agriculture, Rural Development, and Drug Administration, and Related Agencies Appropriations Act, 1999 Act. Pub. L. 105-277. Regulations can be found at 7 CFR, Part 1439.

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--CCC, FSA

Who's Eligible? Livestock producers who suffered grazing losses

Eligibility Criteria: Natural disaster, including drought, that has resulted in a 40 percent or greater grazing loss for 3 consecutive months

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance for grazing losses suffered by livestock producers in calendar year 1998 in counties that have suffered a 40 percent or greater loss of normal grazing as a result of a natural disaster.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Livestock producers in an approved county must have suffered at least a 40 percent loss of normal grazing for a minimum of 3 consecutive months for the producer's eligible livestock. Livestock must have been owned or leased for at least 3 months.

Contact Name and Phone Number: Lynn Tjeerdsma (202) 720- 6602

Summary of Federal Programs

Program Title: Noninsured Crop Disaster Assistance Program (NAP)

Statute: 7 U.S.C. 7333

Direct or Indirect Linkage to Drought: Direct and Indirect

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--CCC, FSA

Who's Eligible? Farming and ranching enterprises

Eligibility Criteria: Natural disaster, including drought, that has resulted in crop loss (due to prevented planting) on greater than 35 percent of the crop's intended area, or low yield (lost yield in excess of 60%) of production of one or more crops.

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Assistance is equivalent to the catastrophic risk protection otherwise available under Section 508 (b) of the Federal Crop Insurance Act (7 U.S.C. 508 (b)). Natural disasters, including drought, may result in payments to producers of eligible crops in an area suffering from prevented planting in excess of 35% or loss of yield in excess of 60%.

Integration with State, Tribal, or Local Government: Close linkage to the catastrophic level of crop insurance

Effectiveness: Effective program but underutilized. Following a natural disaster event or when the impact of an event is known, e.g. drought and excessive heat, a determination is made as to the geographic size and extent of the impacted area. If the impacted area comprises a minimum of 320,000 acres, produces annually \$80 million worth of agricultural commodities, and contains at least five producers of crops which have suffered loss, a NAP "area" is recognized. Any crop in the recognized area which has at least a 35% loss is eligible for NAP payments. Any producer of the approved crop that has a 50% or greater loss can apply for NAP payments. Payments are calculated for losses in excess of 50% of an approved yield at 55% of approved market price.

Program Limitations/ Recommendations: Eligible crops include each commercial crop or other agricultural commodity, except for livestock, for which

catastrophic risk protection under section 7 U.S.C. 1508(b) is unavailable and which is produced for food or fiber. Other eligible crops are specifically included. Payment limitation is \$100,000 per person per crop year. Persons with qualifying gross revenues in excess of \$2 million in most recent tax year prior to year of disaster are ineligible. Multiple benefit exclusion precludes assistance under NAP and other USDA benefits with some exceptions.

Contact Name and Phone Number: G. Sean O'Neill (202) 720-9003

Summary of Federal Programs

Program Title: Tree Assistance Program (TAP)

Statute: Emergency Supplemental Appropriations Act (1997, 1998, 1999) Pub. L. 105-18 Pub. L. 105-174

Direct or Indirect Linkage to Drought:

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--CCC, FSA

Who's Eligible? Owners of eligible trees or vines

Eligibility Criteria: Natural disaster, including drought, that has resulted in a loss of eligible trees or vines

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance for eligible owners who replant or rehabilitate eligible trees or vines lost or damaged by natural disasters during the qualifying period.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Owners of eligible trees or vines must have suffered qualifying tree or vine losses of 20 percent or greater due to an eligible natural disaster.

Contact Name and Phone Number: Rebecca Davis (202) 720- 9882

Summary of Federal Programs

Program Title: Crop Loss Disaster Assistance Program (CLDAP)

Statute: Agricultural, Rural Development and Drug Administration, and Related Agencies Appropriations Act, 1999 Act. Pub. L. 105-277. Regulations can be found at 7 CFR Part 1477.

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--CCC, FSA

Who's Eligible? Crop producers

Eligibility Criteria: Natural disaster, including drought, that has resulted in crop loss

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance is available for single-year 1998 crop losses or multiple-year crop losses which resulted in crop insurance indemnity payments or payments under the Noninsured Crop Loss Disaster Assistance Program or ad hoc disaster program payment in at least 3 of the years from 1994 to 1998.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Producers must have suffered a qualifying 1998 crop loss due to a natural disaster or have received qualifying payments for crop losses in at least 3 of the years 1994 to 1998.

Contact Name and Phone Number: Rebecca Davis (202) 720- 9882

Summary of Federal Programs

Program Title: Fire Severity Authorization

Statute: Internal policy

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--FS

Who's Eligible? National Forests with interagency coordination

Eligibility Criteria: Requests from National Forests for funds

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Provides authority to spend funds for fire pre-suppression and preparedness.

Integration with State, Tribal, or Local Government: Funds are distributed regionally to National Forests.

Effectiveness: Effective in mitigating drought conditions long before they occur.

Program Limitations/ Recommendations: Limited to appropriated funds

Contact Name and Phone Number: Jose Cruz (202) 204-1483

Summary of Federal Programs

Program Title: Federal Excess Property Program

Statute: Federal Property Administration Act of 1948

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--FS

Who's Eligible? State and local governments

Eligibility Criteria: Existence of excess property for fire preparedness

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Excess fire-fighting equipment is available to states to fight fires. The federal government retains title to the equipment.

Integration with State, Tribal, or Local Government: Program distributes equipment to state governments.

Effectiveness: Effective in mitigating drought conditions long before they occur.

Program Limitations/ Recommendations: No data

Contact Name and Phone Number: Jose Cruz (202) 204-1483

Summary of Federal Programs

Program Title: Cooperative Forestry Assistance

Statute: Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2101, 2103)

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--FS

Who's Eligible? State Forestry Fire programs

Eligibility Criteria: States receive assistance for preparedness.

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Financial and technical assistance to State Foresters

Integration with State, Tribal, or Local Government: Includes a new program to address wildland/urban interface areas. Fire prevention teams may be requested by states to the regional offices. States must compete and demonstrate capability to deliver services associated with the additional funding.

Effectiveness: Effective in mitigating drought conditions long before they occur.

Program Limitations/ Recommendations: Limited to resources/funds

Contact Name and Phone Number: Jose Cruz (202) 204-1483

Summary of Federal Programs

Program Title: Watershed Management Program
(PL-566 & PL- 534)

Statute: a) Organic Administration Act of 1897 (Ch. 2, 30 Stat.11, as amended; 16 U.S.C. 473-475, 477-482, 551; (b) Watershed Protection and Prevention Act of 1954, P.L.83-566,68 Stat. 666 as amended, 16 U.S.C. 1001-1010; 33 U.S.C. 701b (note); and (c) the Emergency Flood Prevention Act (Agricultural Credit Act of 1978), 92 Stat. 434; 16 U.S.C. 2203

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--FS, NRCS

Who's Eligible? All sectors and customers that depend upon water supplied from the 192 million acres of national forests and grasslands, without restriction or discrimination

Eligibility Criteria: 1. Data on below-normal precipitation, low soil moisture, and fine fuels buildup are collected at hydroclimatic stations by any agency. 2. Increasing risk of wildfire triggers restrictions on outdoor burning and outdoor recreational and access activities (road and trail closures) which can affect people's use of the national forests and grasslands and, for a few, affect their ability to access their buildings, water facilities, microwave towers, etc. located on these lands and waters.

Funding History (1985 to the present): NRCS funding in 1985-94 ranged from \$161-\$199 mil/yr; in 1995-99, ranged from \$70-99 mil/yr; for 2000, \$92 mil/yr. Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Technical assistance includes: 1. Water use conservation and restrictions at government-owned offices, garages, employee housing, fire retardant bases, livestock watering tanks and irrigation of pasture. 2. Construction and operation of water storage ponds for wildfire suppression. 3. Measurements of snowpack, rainfall, streamflow, groundwater levels, air temperature and other meteorological parameters at hydroclimatic stations on national FS lands in over 500 locations, often in support of NRCS and NOAA programs.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: No special funds, staffs, or agency priority are normally assigned to drought mitigation or response until drought becomes very severe.

Contact Name and Phone Number: Steve Glasser (USFS)-(202) 205-1172;
Russell Collett (NRCS) (202) 720-8770

Summary of Federal Programs

Program Title: Disaster Transfers -- Peanuts

Statute: The Agricultural Adjustment Act of 1938, as amended by the Federal Agriculture Improvement and Reform Act of 1996

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--FSA

Who's Eligible? Peanut producers

Eligibility Criteria: Underproduction of quota due to drought, flood, or any other natural disaster, or any other condition beyond the control of the producer

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Financial assistance is available to producers who produce Segregation 2 or Segregation 3 peanuts marketed as additional loan peanuts, to upgrade the production from additional loan to quota loan through a Disaster Transfer, on a farm on which the poundage quota was not harvested because of drought, flood, or other natural disaster conditions beyond a producers control. Peanuts transferred under this provision will be supported at 70 percent of the quota support rate on 25 percent of the effective quota.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Peanuts transferred under this provision are supported at 70 percent of the quota support rate in lieu of 100 percent in previous legislation and transfers cannot exceed 25 percent of the farms effective quota.

Contact Name and Phone Number: Tonye Gross, Branch Chief, Peanuts Branch, (202) 720-4319 e-mail Tonye_Gross@wdc.fsa.usda.gov

Summary of Federal Programs

Program Title: Fall Lease and Transfers -- Peanuts

Statute: The Agricultural Adjustment Act of 1938, as amended by the Federal Agriculture Improvement and Reform Act of 1996

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--FSA

Who's Eligible? Peanut producers

Eligibility Criteria: Underproduction of quota due to drought, flood, or any other natural disaster, or any other condition beyond the control of the producer

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Financial assistance is available to producers in the fall of the year to transfer the balance of the quota remaining on the marketing card, if the producer made a good-faith effort to produce a normal crop on the acreage devoted to peanuts and the poundage was not produced due to conditions beyond the producer's control such as drought, flood, or other natural disaster, to any other farm in the State where the quota was established to market the production on the receiving farm.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Must meet 90 percent planting requirement to be eligible.

Contact Name and Phone Number: Tonye Gross, Branch Chief, Peanuts Branch (202) 720-4319 e-mail Tonye_Gross@wdc.fsa.usda.gov

Summary of Federal Programs

Program Title: Transfer of tobacco allotment/ quota that cannot be planted or replanted due to a natural disaster

Statute: Agricultural Adjustment Act of 1938, as amended

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--FSA

Who's Eligible? Tobacco producers

Eligibility Criteria: Counties affected by natural disaster (including but not limited to hurricane, rain, flooding, hail, drought and any other severe weather) which prevents the timely planting or replanting of any kind of tobacco.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Tobacco acreage/quota may be transferred to another farm(s) in the same or any other nearby county/state if such acreage cannot be planted or replanted due to a natural disaster.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: None

Contact Name and Phone Number: Tom Burgess, Branch Chief, Tobacco Branch (202) 720-4318 e-mail Tom_Burgess@wdc.fsa.usda.gov.

Summary of Federal Programs

Program Title: Disaster transfer of tobacco acreage allotment/quota: flue-cured and burley tobaccos

Statute: Agricultural Adjustment Act of 1938, as amended

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--FSA

Who's Eligible? Tobacco producers

Eligibility Criteria: Disaster-related underproduction on the transferring farm

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: The allotment/quota established for a farm may be transferred to another farm by lease under natural disaster conditions.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Farm's expected production of burley and flue-cured tobacco is less than 80 percent of the farm's effective quota. Acreage planted on the transferring farm was sufficient to produce the farm's effective quota.

Contact Name and Phone Number: Tom Burgess, Branch Chief, Tobacco Branch (202) 720-4318 e-mail Tom_Burgess@wdc.fsa.usda.gov.

Summary of Federal Programs

Program Title: Emergency Conservation Program (ECP)

Statute: Section 401 of the Agricultural Credit Act of 1978 (92 STAT. 420-434), as amended by the Disaster Assistance Act of 1989, Section 502

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation

Agencies (primary agency listed first): USDA--FSA, NRCS

Who's Eligible? Farmers and ranchers

Eligibility Criteria: In the event of a natural disaster, ECP may be implemented to rehabilitate farmlands and conservation facilities. ECP provides cost-share assistance to eligible producers.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Financial assistance to make cost-share payments to agricultural producers who carry out emergency measures to control wind erosion on farmlands or to rehabilitate farmlands damaged by wind erosion, floods, hurricanes or other natural disasters when, as a result of the foregoing, new conservation problems have been created that (1) if not treated, will impair or endanger the land; (2) materially affect the productive capacity of the land; (3) represent damage that is unusual in character and, except for wind erosion, is not the type that would recur frequently in the same area; and (4) will be so costly to rehabilitate that federal assistance is or will be required to return the land to productive agricultural use.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: ECP is limited to funds which are generally made available by emergency supplemental appropriation, and staff available to handle requests. There is no annual appropriation.

Contact Name and Phone Number: Robert Stephenson, Director, Conservation and Environmental Protection Division (202) 720-6221

Summary of Federal Programs

Program Title: Conservation Reserve Program (CRP)

Statute: Title XII of the Food Security Act of 1985 as amended (16 USC 3831)

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation

Agencies (primary agency listed first): USDA--FSA, NRCS, FS, ERS; EPA; DOI--FWS

Who's Eligible? Farmers and ranchers

Eligibility Criteria: The Food Security Act of 1985, as amended, authorizes the Secretary in the case of drought and other similar emergency to permit haying and grazing of CRP acreage.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Financial and technical assistance to cost-effectively reduce water and wind erosion, protect the nation's long-term capability to produce food and fiber, reduce sedimentation, improve water quality, create and enhance wildlife habitat, and other objectives including encouraging more permanent conservation practices and tree planting. Under the CRP, Commodity Credit Corporation (CCC) will enter into contracts with eligible participants to convert eligible lands to a conserving use for a period of not less than 10 years and not more than 15 years in return for financial and technical assistance.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Limited to CRP participants. Emergency haying and grazing must be conducted in a manner protective of all CRP stakeholders and purposes, including soil erosion control, water quality, and wildlife.

Contact Name and Phone Number: Robert Stephenson, Director, Conservation and Environmental Protection Division (202) 720-6221

Summary of Federal Programs

Program Title: Farmland Protection Program (FPP)

Statute: Section 388 of the Federal Agriculture Improvement and Reform Act of 1996

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): USDA--NRCS, CCC

Who's Eligible? State, local and tribal agricultural protection entities that in turn purchase easements from farmers.

Eligibility Criteria: Farm is accepted into a state, local, or tribal farmland protection program and conservation easements are recorded.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Technical assistance: Each farm under a purchased agricultural conservation easement (PACE) is required to have a conservation plan. Part of that conservation plan should contain a drought section that includes mitigation actions, should a drought occur.

Examples: Landowners may be able to sell development rights on their property in areas eligible for this program.

Integration with State, Tribal, or Local Government: No data

Effectiveness:

Program Limitations/ Recommendations: Limited CCC technical assistance funds are available for maintaining the conservation plans for farms under the FPP.

Contact Name and Phone Number: Fen C. Hunt (202) 720-7671

Summary of Federal Programs

Program Title: Small Watershed Program (PL-566)

Statute: Watershed Protection and Flood Protection Act (Public Law 83-566)

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--NRCS

Who's Eligible? States and subunits of state government (called local sponsors) are the primary customers. However, projects are often sponsored on behalf of residents in a given watershed.

Eligibility Criteria: The Small Watershed Program contains several eligible purposes authorized by the Act that would mitigate the effects of drought. They include agricultural water management, municipal and industrial water supply, groundwater recharge, & watershed protection.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Technical and financial assistance in dealing with watershed protection and flood prevention; the Flood Control Act of 1944 authorizes USDA to undertake emergency measures for runoff retardation and soil erosion protection as needed to safeguard lives and property from floods and the products of erosion on any watershed where fire or other natural element or force had caused a sudden impairment of the watershed.

Examples: A local town can request assistance from USDA under this program to address flooding, watershed management, municipal and industrial water needs, etc. Technical and financial assistance may be available to help the community address their needs.

Integration with State, Tribal, or Local Government: Requires sponsors that have legal authority to obtain property rights, water rights and permits, and provide operation and maintenance.

Effectiveness: Project purposes only include agricultural water management, groundwater recharge, and municipal and industrial water supply.

Program Limitations/ Recommendations: Projects must contain benefits to agriculture, including rural communities, that account for at least 20% of total benefits. Cost-share rates vary, depending on the purpose. Some rates are set

at the discretion of the Secretary of Agriculture. Recent declines in Congressional appropriations for the Small Watershed Program have led to a significant backlog of unfunded, authorized projects. As of the beginning of FY 1999, the backlog is in excess of \$1.5 billion.

Contact Name and Phone Number: Director, Watersheds and Wetlands Division, (202)-720-3534

Summary of Federal Programs

Program Title: Conservation Technical Assistance (CTA)

Statute: NRCS and CTA established by Department of Agriculture Reorganization Act of 1994 (7 U.S.C. 6962) which combined the authorities of the former Soil Conservation Service (Soil Conservation Act of 1935) with seven cost-share programs for natural resource conservation.

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--NRCS

Who's Eligible? Private land users, communities, units of state and local government, and other federal agencies

Eligibility Criteria: Customers request assistance. Assistance provided is for planning and implementing natural resource solutions to natural resource concerns that could include drought.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Technical assistance to implement the following: state and local financial assistance programs; other state, local and federal conservation initiatives; technology development; disaster preparedness; technical assistance training for NRCS, state and local personnel, and administration. Technical assistance provided is in the form of soil erosion control, grazing entities, water conservation quantity and quality, wildlife habitat development, soil survey interpretations and data collection and interpretation.

Examples: Private landowners and or operators can apply for technical assistance to help the individual develop and implement a drought plan as well as address other resource concerns.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Only technical assistance is available and no financial assistance is included for landowners to implement conservation measures.

Contact Name and Phone Number: Director, Conservation Operations Division
(202) 720-1845

Summary of Federal Programs

Program Title: Plant Materials Program

Statute: The program operates under the basic authority of P.L. 74-46, Apr, 27, 1935, Ch., 85, Sec. 1, 49 Stat. 163, 16 U.S.C. 590 [a-f]. Other authorities include: 7 CFR Part 613, P.L. 95-192, P.L. 74-210 (7 U.S.C. 1010-1011), and 7 U.S.C. 6962.

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--NRCS

Who's Eligible? NRCS field offices receive technical information and transfer it to end users (e.g., farmers and ranchers).

Eligibility Criteria: The program is limited to conservation cooperators' properties in conjunction with Soil Conservation Districts, State Agricultural Experiment Stations, and State Cooperative Improvement Associations.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Technical assistance through plant science technology to NRCS field offices for transfer to end users (e.g., landowners and land managers). The program functions in this capacity by providing vegetative solutions for natural resource problems. It develops plant releases (i.e., materials) and information technology on how to establish and manage plant species.

Examples: Landowners, working with their local conservation districts, can test drought tolerant species of grasses to see if they are well suited for their particular farm.

Integration with State, Tribal, or Local Government: Technology is provided to NRCS field offices for transfer to end users (e.g., landowners & land managers).

Effectiveness: Drought conditions are ameliorated but not eliminated. Suitable planning and management must be implemented before drought occurs.

Program Limitations/ Recommendations: The program emphasizes field testing to determine a plant's value and restoration techniques. It is limited to

conservation cooperators' properties in conjunction with conservation districts, State Agricultural Experiment Stations, State Crop Improvement Associations and other federal and state agencies. Plants or seed are not provided to the general public, and the public is not eligible to participate in the program.

Contact Name and Phone Number: Rick White (202) 720-2587

Summary of Federal Programs

Program Title: Forestry Incentives Program (FIP)

Statute: Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2101, 2103)

Direct or Indirect Linkage to Drought: Indirect

Functions: Response

Agencies (primary agency listed first): USDA--NRCS

Who's Eligible? Eligible private landowners

Eligibility Criteria: Program can be augmented with emergency funds to assist in tree planting and timber stand improvements needed due to eligible natural disaster situations.

Funding History (1985 to the present): Specific drought funds have not been provided to the program.

Type of Assistance / Examples: Technical and financial assistance available nationwide in counties designated as potentially suitable for production of timber products. The program pays up to 65 percent of the costs of tree planting, timber stand improvements, and related practices on nonindustrial private forest lands.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Maximum payment limitation for FIP is \$10,000 per individual per fiscal year

Contact Name and Phone Number: Robert Molleur (202) 720-6521

Summary of Federal Programs

Program Title: Emergency Watershed Protection (EWP)

Statute: Sec. 16, PL 81-516; Sec. 403, PL 95-334; Sec. 382, PL 104-127

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--NRCS

Who's Eligible? Sponsoring local organizations (usually units of government)

Eligibility Criteria: FSA declares a drought.

Funding History (1985 to the present): From 1988 to 1999, funding ranged from \$300,000/yr to \$16 million/yr (1994), depending on the extent and severity of the disaster. Specific drought funds have not been provided to the program. No funds were recorded as spent on drought disaster response.

Type of Assistance / Examples: Technical and financial assistance to undertake (with sponsors) emergency recovery measures to relieve imminent hazards to life and property created by natural disasters.

Examples: If a community is impacted by a fire, they can request technical and financial assistance to reseed the area if it, left untreated, would cause a problem.

Integration with State, Tribal, or Local Government: Requires sponsors that have legal authority to obtain property rights, water rights and permits, and provide operation and maintenance.

Effectiveness: Funds are almost exclusively spent on floods and fire.

Program Limitations/ Recommendations: Efforts must be defensible and sponsors must contribute a 25% cost-share.

Contact Name and Phone Number: Ron Page (202) 690-4575

Summary of Federal Programs

Program Title: Environmental Quality Incentives Program (EQIP)

Statute: Federal Agriculture Improvement and Reform Act of 1996, P.L. 104-127, as amended; Food Security Act of 1985, Subtitle D, Title XII, 16 U.S.C. 3830aa, 3839aa

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): USDA--NRCS, FSA

Who's Eligible? Farmers and ranchers located in locally chosen areas where significant natural resource concerns exist.

Eligibility Criteria: The program can be used by farmers and ranchers to apply natural resource conserving practices, such as improved irrigation water management, which provide long-term benefits that may reduce impacts from future droughts.

Funding History (1985 to the present): Specific drought funds have not been provided to the program. No funds were recorded as spent on drought mitigation.

Type of Assistance / Examples: Technical and financial assistance and education are provided to eligible farmers and ranchers to help them address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. This program provides assistance to farmers and ranchers in complying with federal, state, and tribal environmental laws and encourages environmental enhancement. The purposes of this program are achieved through the implementation of structural, vegetative, and land management practices on eligible land.

Examples: Farmer or rancher may be able to receive technical and financial assistance to develop and implement a long term contract designed to address his natural resource problems, including livestock water, cross fences, water quality concerns, etc.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: The program does not provide emergency drought relief. However, if a practice fails for reasons beyond the

producer's control, payments are offered for reestablishment. Cost-share and incentive payments are limited to \$10,000 per person per year and to \$50,000 per person per year contract.

Contact Name and Phone Number: Robert Molleur (202)720-6521

Summary of Federal Programs

Program Title: Wildlife Habitat Incentives Program (WHIP)

Statute: P.L.104-127 (16 U.S.C. 3836a)

Direct or Indirect Linkage to Drought: Indirect

Functions: Response, Mitigation

Agencies (primary agency listed first): USDA--NRCS; Partners: DOI--FWS, state wildlife agencies

Who's Eligible? Primarily landowners

Eligibility Criteria: Unrelated except for the emergency authority. Funds may be used under short-term agreements to develop wildlife habitat when the potential exists for dramatic declines in one or more wildlife populations.

Funding History (1985 to the present): Obligated \$25 million in each of 2 years, FY 1998 and FY 1999

Type of Assistance / Examples: Technical assistance and financial assistance in the form of cost-share payments to develop wildlife habitat on private land. Agreements generally last from 5 to 10 years. NRCS has the authority to declare a wildlife emergency and offer shorter-term agreements as a result of catastrophic natural or man-made events.

Examples: Farmers and ranchers may be able to receive technical and financial assistance to install practices which improve wildlife habitat.

Integration with State, Tribal, or Local Government: Voluntary assistance for any private landowner, based on state wildlife habitat priorities.

Effectiveness: There is an emergency provision that could be directed to alleviate drought impacts on wildlife.

Program Limitations/ Recommendations: Program offers cost-share assistance only for wildlife habitat development. Current statute contains \$50 million cap which will be expended as of the end of FY99.

Contact Name and Phone Number: Leslie Deavers (202) 720-1067

Summary of Federal Programs

Program Title: Resource Conservation and Development Program (RC&D)

Statute: PL 74-46, PL 75-210 Bankhead-Jones Farm Tenant Act of 1937, PL 87-703, PL-89-796, PL 97-98 Agriculture and Food Act of 1981

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Mitigation, Monitoring and Prediction, Planning, Response

Agencies (primary agency listed first): USDA--NRCS, FS, CSREES

Who's Eligible? Rural communities (designated areas)

Eligibility Criteria: Designation by the Secretary of Agriculture

Funding History (1985 to the present): Annual program appropriations (no funding specifically for drought-related projects): \$35 million (FY 2000), averaging \$30 million annually during the last 15 years

Type of Assistance / Examples: Technical assistance to develop and implement drought mitigation plans and also facilitate groups to rally the community in rapid response to a drought. RC&D designated areas are involved in monitoring weather conditions and streamflows.

Examples: States, Tribes, and towns located in an RC&D area may be able to receive technical assistance for drought planning, etc.

Integration with State, Tribal, or Local Government: Area council members are local leaders, who may include state, tribal, and local government officials and federal agency representatives. Council members are volunteers. Projects require sponsors and/or partnerships for funding and support.

Effectiveness: Issues addressed are determined locally by the Council.

Program Limitations/ Recommendations: No financial assistance funds are available and only about 75 % of the country is covered.

Contact Name and Phone Number: Terry D'Addio (202) 720-0557

Summary of Federal Programs

Program Title: American Indian Initiative

Statute: Section 2501G of the FACT Act of 1990

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--NRCS, FSA, APHIS

Who's Eligible? Individuals on private lands belonging to recognized tribes and tribal governments

Eligibility Criteria: A nationally or regionally declared drought emergency or the intent to prepare drought contingency plans.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Technical assistance to individuals or community units in Indian country. Indian communities as well as Indian farms and ranches should have conservation plans developed and facilitation provided to address the rapid response.

Examples: Native Americans may be able to receive technical assistance to help them address drought problems.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Indian lands are not all included in conservation districts, and field offices are not staffed adequately. Cultural differences may also hinder timely assistance and acceptance of that assistance.

Contact Name and Phone Number: Joan Comanor, Director, Community Assistance and Resource Development Division (202) 720-5297

Summary of Federal Programs

Program Title: Business and Industry (B&I) Guarantee and Direct Loan Programs

Statute: Consolidated Farm and Rural Development Act, as amended, Section 310B, Public Law 92-419, 7 U.S.C. 1932

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--RD

Who's Eligible? Corporations, partnerships, cooperatives, federally recognized tribes, individuals, and other legal entities

Eligibility Criteria: Entity is determined eligible and need for developing or improving water system is established. Program is not specifically oriented toward drought, but need for additional or different source of supply can serve as justification for project.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance to eligible entities for various purposes, including capital expenditures, working capital, equipment, and refinancing. Purposes can include repair of damage to businesses resulting from a natural disaster.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: There is a limit on population: applicants who are located in cities or towns with populations above 50,000 or in adjacent built-up areas are not eligible.

Contact Name and Phone Number: William F. Hagy, III (202) 720-7287

Summary of Federal Programs

Program Title: Emergency Community Water Assistance Grants

Statute: Disaster Assistance Act of 1989, Title 5

Direct or Indirect Linkage to Drought: Indirect

Functions: Response

Agencies (primary agency listed first): USDA--RD

Who's Eligible? Public bodies and private nonprofit corporations serving rural areas

Eligibility Criteria: Decline occurred within two years of the date of the application with RUS. Does not apply to grants for repairs, partial replacement, or significant maintenance on an established water system.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance to the residents of rural areas that have experienced a significant decline in quantity or quality of water to obtain adequate quantities of water that meet the standards set by the SDWA (42 U.S.C. 300 f et seq.). Grants can be made to alleviate a significant decline in quantity or quality of the water available from water supplies in rural areas that occurred within two years of filing an application for assistance.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Grants cannot exceed \$500,000. Grants for repairs, partial replacement, or significant maintenance on an established water system cannot exceed \$75,000.

Contact Name and Phone Number: Gary Morgan (202) 690-2670

Summary of Federal Programs

Program Title: Water and Waste (WW) Loans and Grants

Statute: Consolidated Farm and Rural Development Act; 7 U.S.C. 1929

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation, Response

Agencies (primary agency listed first): USDA--RUS (RD)

Who's Eligible? Public bodies and private nonprofit corporations serving rural areas

Eligibility Criteria: Entity is determined eligible by need for developing or improving water system and population limit of 10,000. Program is not specifically oriented toward drought, but need for an additional or different source of supply can serve as justification for project.

Funding History (1985 to the present): 1999: loans for drinking water, \$454.8 million; grants for drinking water, \$275 million. 1985-98: loans ranged from \$211-\$475 million; grants ranged from \$84.9--\$233 million.

Type of Assistance / Examples: Financial assistance to utilities serving rural areas that demonstrate a need to develop or improve water or wastewater disposal systems.

Integration with State, Tribal, or Local Government: Tribes receive special consideration for program funding.

Effectiveness: In FY 1999, approximately 750,000 people living in rural areas began drinking safe water from water systems financed by WW loans and grants.

Program Limitations/ Recommendations: Assistance can be provided only to cities and towns with population up to 10,000. State-allocated funding could be inadequate to address serious drought impacts in a state or region.

Contact Name and Phone Number: Gary Morgan (202) 690-2670

Summary of Federal Programs

Program Title: Drought Monitor

Statute: Not applicable

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, CPC;
USDA-- National Drought Mitigation Center

Who's Eligible? Primarily public, media, executives

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. Map and text describing location of drought across the country. Drought/dryness areas classified by intensity and primary impact. Forecast trend changes indicated. Available via Internet and NWS dissemination channels.

Example: Continued development of improved drought indices designed to be more realistic.

Integration with State, Tribal, or Local Government: Special e-mail lists enable weekly coordination with state, regional, and national offices. Internet availability. NWS DIFAX maps planned to ensure distribution to NWS offices.

Effectiveness: Product became official in Sept. 1999. Too early to judge effectiveness.

Program Limitations/ Recommendations: While offering a concise summary of drought, may not meet the needs of local and regional interests, where impacts are often dependent on origin of water supplies. Intended as a national summary of drought. Not detailed enough in all cases to serve local interests.

Contact Name and Phone Number: Douglas Le Comte, Climate Prediction Center (301) 763-8000 ext. 7567

Summary of Federal Programs

Program Title: Fire Weather

Statute: Memorandum of Agreement with land management agencies

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NWS

Who's Eligible? Federal and state land management agencies, including USDA's FS and DOI's NPS

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. NWS at the Weather Forecast Office level monitors weather products and keeps interested agencies informed of fire threats.

Integration with State, Tribal, or Local Government: Works closely with federal and state land management agencies in person, via NWS telecom links, and via the Internet.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Improved weather forecasts would benefit the program, especially those tailored toward the fire community and those relating to drought prospects.

Contact Name and Phone Number: Paul Stokols, NOAA/NWS (301) 713-1677 ext. 131

Summary of Federal Programs

Program Title: Weekly Weather and Crop Bulletin

Statute: Publication issued under general authority of the Act of January 12, 1895 (44 U.S.C. 213), 53rd Congress, 3rd Session

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA manages, prints, & sends out bulletin (joint effort with USDA).

Who's Eligible? USDA, NOAA, general public, private industry

Eligibility Criteria: Contents provide information helpful for monitoring drought. On the PDI maps, -2 or greater is considered moderate drought, and on the CMI maps a similar threshold equates to moderate dryness. Levels of -1 can be considered incipient or borderline drought.

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. Publication updates weekly weather in the United States, including narrative summaries, temperature and precipitation maps and tables, PDI maps and CMI maps during the growing season, and pan evaporation maps.

Integration with State, Tribal, or Local Government: Subscribers to the print edition include a diverse range of individuals and offices. Also available on the Internet.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Publication does not directly address drought but covers all significant weather occurrences, especially those related to agriculture. Little reference to nonagricultural droughts such as hydrological drought.

Contact Name and Phone Number: David Miskus, Editor, Weekly Weather and Crop Bulletin (202) 720-7919

Summary of Federal Programs

Program Title: Economic Adjustment Program (Sudden and Severe Economic Dislocation [SSED] Components)

Statute: PL 89-136, Public Works and Economic Development Act of 1965 as amended by the Economic Development Administration Reform Act of 1998 (PL 105-393)

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation, Response

Agencies (primary agency listed first): DOC--EDA

Who's Eligible? Communities which could experience or have experienced sudden major permanent job losses

Eligibility Criteria: Disaster declaration

Funding History (1985 to the present): No significant drought-related funding since about 20 years ago, when a special appropriation was made for drought relief.

Type of Assistance / Examples: Financial assistance. Grants to qualified economically distressed areas, a nonprofit organization, an economic development district, or a state or political subdivision thereof, to prevent serious economic dislocations or to reestablish employment opportunities after a sudden and significant dislocation occurs. Grants can fund public infrastructure business loans or technical assistance.

Integration with State, Tribal, or Local Government: Customers are encouraged to contact local EDA representatives. The Web site also provides a link.

Effectiveness: Performance measures developed would be consistent with other EDA activities.

Program Limitations/ Recommendations: Absent a federal disaster declaration, an affected area would have to meet the agency's criteria for economic distress. Grants usually provide 50% of project cost; supplemental grants depend on level of distress. Need improved ability to plan for drought disasters, as by early warning of objective indicators such as low reservoir levels, etc.

Contact Name and Phone Number: David Whischi, Director, Economic Development Division (202) 482-2659

Summary of Federal Programs

Program Title: Natural Disaster Reduction Initiative

Statute: Not a budget line item; parts of the program are funded.

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation, Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, EDA, NIST, BEA, BXA

Who's Eligible? General public, business

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: This technical assistance is a DOC strategy for natural disaster reduction involving mainly NOAA, NIST, and EDA. Goal is to reduce the cost to society and commerce of natural disasters and to reduce the risk to human life, personal property, infrastructure, and natural resources. Program elements include: hazard identification; application of new technologies to warning and dissemination systems; improved predictions; technology transfer; training, education, and outreach; strengthening state, local, federal, and industry disaster mitigation capabilities; enhancing post-disaster response and recovery; and export of natural disaster reduction technologies.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: Not applicable

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Donald Wernly NOAA (301) 713-0090 ext. 138

Summary of Federal Programs

Program Title: Southeast Regional Climate Center

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NESDIS

Who's Eligible? General public, business

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. Publishes maps and tables on Web site (water.dnr.state.sc.us/water/climate/sercc/drought_info.html) that include drought index and precipitation data. Also has links to other Web sites dealing with drought.

Integration with State, Tribal, or Local Government: Web is primary purveyor of information.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Insufficient resources to monitor and assess drought. NWS data not applicable for drought. Need people (1.5) dedicated to monitoring and assessing drought. Need more useful data, such as that from USDA's SCAN.

Contact Name and Phone Number: Alfred H. Bang Southeastern Regional Climate Center (803) 737-0800

Summary of Federal Programs

Program Title: Western Regional Climate Center

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NESDIS

Who's Eligible? General public, business

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. Produces a section on its Web site (www.wrcc.dri.edu/monitor/quarterly.html) under "WGA/WRCC Quarterly Reports and Information" that includes western climate and water status reports.

Integration with State, Tribal, or Local Government: Web is primary purveyor of information.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Kelly Redmond (702) 677-3139

Summary of Federal Programs

Program Title: National Climatic Data Center

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NESDIS, NCDC

Who's Eligible? General public, business

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. Publishes Climate Variations Bulletin that documents anomalous weather in the U.S. monthly and seasonally, including drought. Also publishes Climatic Extremes and Weather Events on NCDC/NOAA Web site that documents major droughts and other significant events.

Integration with State, Tribal, or Local Government: Much data and information available on Web site (www.ncdc.noaa.gov). Numerous paper publications are sent out. Works closely with regional climate centers.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Tom Ross (704) 271-4994

Summary of Federal Programs

Program Title: NWS Hydrologic Information Center

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NWS Office of Hydrology

Who's Eligible? General public, businesses, media

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Publishes drought statements issued by NWSFO's and water resource statements for affected areas issued by NWS River Forecast Centers.

Integration with State, Tribal, or Local Government: Web-oriented integration

Effectiveness: Not applicable

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Joanna Dionne, Manager, Hydrometeorological Information Center (301) 713-1630

Summary of Federal Programs

Program Title: CEOS Disaster Management Support Project

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NESDIS (primary U.S. NOAA participants). Also NOAA-OGP, OAR, OFCM, NCEP/ CPC

Who's Eligible? Policy makers

Eligibility Criteria: Not applicable

Funding History (1985 to the present): No data

Type of Assistance / Examples: Technical assistance. The Committee on Earth Observation Satellites (CEOS), created in 1984 as a result of the international Economic Summit of Industrialized Nations, serves as the focal point for international coordination of space-related Earth observation activities. The Disaster Management Support Project was initiated in 1997 to foster improved utilization of existing and planned Earth observation satellite data. Toward this goal, the Project has assembled a number of hazard teams tasked with providing recommendations. The drought team has made several recommendations on the use of future satellite systems. In an interim report published in 1998, the drought team concluded that accurate drought prediction as well as early warning of drought onset can reduce drought-related loss of life as well as human suffering.

Integration with State, Tribal, or Local Government: A project information server (www.ceos.noaa.gov) provides satellite-derived information on various disasters, including drought, as well as background information and links to disaster Internet sites. The project holds outreach meetings in various parts of the world.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Helen Wood NESDIS (Chair) (301) 457-5125

Summary of Federal Programs

Program Title: Long-Range Climate Outlooks

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NWS Climate Prediction Center

Who's Eligible? USDA, NOAA, other federal and state government offices, private industry (primarily agriculture- and energy-related), educational and research institutes, military.

Eligibility Criteria: The precipitation outlooks present the odds that long-term precipitation will be above or below normal for all locations across the contiguous 48 states. They are primarily useful in looking at areas already approaching or experiencing drought conditions.

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. A probabilistic ("tilt of the odds") forecast of the likelihood of above- or below-normal average temperature and total precipitation during the following calendar month and all 3-month periods for the ensuing year. The forecasts are issued shortly after the middle of each month and are analyzed across the contiguous 48 states.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: Forecasts display weak skill over climatology during the cold season and especially during El Nino or La Nina events. Otherwise, little skill.

Program Limitations/ Recommendations: Not as useful at forecasting drought prior to the onset of at least minimally dry conditions; no quantitative precipitation forecasts. Use the long-lead forecasts to produce drought forecasts (see Experimental Drought Outlook). Needs: 1) sufficient research and verification data; 2) greater ability to communicate the meanings and limitations of the forecasts to users; 3) flexibility to tailor forecasts to specific user needs, and/or educate users sufficiently so that they can obtain information pertinent to their interests from the forecasts.

Contact Name and Phone Number: Ed O'Lenic Climate Prediction Center
(301) 763-8000 ext. 7528

Summary of Federal Programs

Program Title: Seasonal Drought Outlook

Statute: Not applicable

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NWS Climate Prediction Center

Who's Eligible? As of March 2000, available on the CPC Web site

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. A map depicting areas where drought is expected to persist, weaken, or intensify over the next 1 to 2 seasons. Largely based on the CPC long-range outlooks.

Integration with State, Tribal, or Local Government: None outside of DOC management

Effectiveness: Informal qualitative assessment indicates that the forecasts have been quite accurate in showing seasonal trends in drought.

Program Limitations/ Recommendations: Based on subjective interpretations of seasonal forecasts of precipitation and temperatures as well as model forecasts of soil moisture. An objective scheme is needed, and this is planned for summer 2001, using output from dynamic coupled models.

Contact Name and Phone Number: Douglas Le Comte, Climate Prediction Center (301) 763-8000 ext. 7567

Summary of Federal Programs

Program Title: U.S. Threats Assessment

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NWS Climate Prediction Center

Who's Eligible? U.S. disaster community, including FEMA, Red Cross, etc. Weekly assessment is coordinated with key users via teleconference.

Eligibility Criteria: Uses Drought Category 2 from the Drought Monitor as a general guideline for drought areas.

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Weekly map and text issued on the Internet and through NWS channels, depicting significant weather events next 3 to 10 days, with occasional seasonal forecasts when appropriate. Events include drought, heavy snow, heavy rains, flooding, high surf, extreme temperatures, etc.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: Unknown

Program Limitations/ Recommendations: Forecast skill declines each day and is quite minimal beyond 7 days. Customers have suggested that objective criteria for defining threats be published.

Contact Name and Phone Number: Ed O'Lenic Climate Prediction Center (301) 763-8000 ext. 7528

Summary of Federal Programs

Program Title: Climate Prediction Center, Web site data and products

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, NWS Climate Prediction Center

Who's Eligible? USDA, NOAA, other federal and state government offices, private industry (primarily agriculture- and energy-related), educational and research institutes, military.

Eligibility Criteria: These products all monitor weather anomalies of significant duration, including but not limited to times and locations of droughts.

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. A myriad of climate monitoring data and products, including absolute and anomalous temperature and precipitation analyses for varying time periods across the U.S. and the world; a modified weekly Palmer Drought Index, Crop Moisture Index, and other related climate division indices; La Nina and El Nino monitoring, forecasts, and sensible weather correlations; long-term U.S. seasonal temperature and precipitation trends; diagnostic upper-air and ocean surface analyses; a weekly discussion of ongoing global weather anomalies of significant duration; and frequently experimental products.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: Not applicable

Program Limitations/ Recommendations: Automated and experimental products and data lack intensive quality control. Only a few products are specifically tailored to study individual anomalies with specific spatial extent and duration (including but not limited to drought), though such information can be derived from many of the data and products. Needs: computer space for online archival; adequate public awareness and understanding of website contents;

much more reliable data; more data coverage; receipt of data in standard formats to facilitate automated ingestion into products; more metadata.

Contact Name and Phone Number: Ed O'Lenic Climate Prediction Center
(301) 763-8000 ext. 7528

Summary of Federal Programs

Program Title: Climate Information Project (formerly OGP Rapid Response Project)

Statute: Not applicable

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NOAA, OGP

Who's Eligible? Gov't offices, general public

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Information on drought-related funding not available

Type of Assistance / Examples: Technical assistance. NOAA's Office of Global Programs' initiative, the Climate Information Project, issues frequent updates on weather-climate impacts for the world. All significant weather and climate events are covered, including drought. Information from numerous sources assembled and sent as e-mail to interested individuals. Information also posted on the Web: www.cip.ogp.noaa.gov.

Integration with State, Tribal, or Local Government: Available on the Internet. E-mail notices to meteorological agencies within and outside the USA, including WMO. Also to humanitarian agencies and the interested public.

Effectiveness: Not applicable

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Kelly Spornberg (301) 427-2089 ext. 194

Summary of Federal Programs

Program Title: Western Region NWS Drought Program

Statute: Regional Operations Manual Letter (ROML) W-3-98

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NWS

Who's Eligible? General public. Also, the Water Supply Summaries include drought conditions for the entire state and serve as a primary source of briefing material for state and federal inquiries about the situation.

Eligibility Criteria: Less than 60% of normal precipitation for the season or the current water year (Oct-Sep) and/or water supply less than 60% of normal

Funding History (1985 to the present): None. Drought products are part of the event-driven suite of products issued by all Western Region WFPs.

Type of Assistance / Examples: Issuance of Water Supply Summaries by NWS offices when Drought Program in active status. Each Western Region office implements a Drought Program. The MIC (Meteorologist-in-Charge) of each office is designated as the Drought Information Officer (DIO) for that office's county warning area. The DIO works closely with the River Forecast Centers in monitoring and assessing drought conditions.

Integration with State, Tribal, or Local Government: Products are coordinated with state and local entities involved with drought to ensure that they are compatible with other agency products and press releases.

Effectiveness: Products were very effective in conveying drought-related information to emergency managers, elected officials, the media, and the general public.

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Gregg Rishel, Deputy Chief, Western Region Hydrologic Services Division (801) 524-5137

Summary of Federal Programs

Program Title: Eastern Region NWS Drought/Water Resource Statements

Statute: Regional Operations Manual Letter (ROML) E-10-94

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOC--NWS

Who's Eligible? General public, and hydrologic user agencies

Eligibility Criteria: Precipitation deficiencies of 15% or more over the last 6 months, and local or regional concern or interest

Funding History (1985 to the present): Not applicable

Type of Assistance / Examples: Technical assistance. NWS Forecast Offices (NWSFO) and NWS Offices (NWSO) issue Drought/Water Resources statements via AFOS when conditions warrant. Statements issued the second and fourth Wednesday of each month by each affected NWSFO and NWSO. The River Forecast Centers (RFCs) provide basic statistics such as totals, normals, and departures from normals.

Example: Should issue weekly instead of biweekly when situation warrants. Need to make use of the new hydrological forecast system and need improved weather forecasts.

Integration with State, Tribal, or Local Government: Uses Internet to link to WSOs and RFCs.

Effectiveness: Program appears effective, based on feedback from primary customers (state agencies, emergency management officials, the public).

Program Limitations/ Recommendations: Drought forecast products covering the next 3 to 10 days would be helpful for both external users and forecast offices. They could be issued via Family Services and AWIPS.

Contact Name and Phone Number: Peter Gabrielsen, Deputy Regional Hydrologist (516) 244-0113

Summary of Federal Programs

Program Title: Water Conservation Plan Guidelines

Statute: Safe Drinking Water Act

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication

Agencies (primary agency listed first): EPA

Who's Eligible? States, water systems

Eligibility Criteria: DWSRF loan application

Funding History (1985 to the present): 1997: \$100K; 1998: \$100K; 1999: \$100K

Type of Assistance / Examples: Technical assistance. Voluntary guidelines for use by State DWSRF programs.

Example: Voluntary use by States.

Integration with State, Tribal, or Local Government: Water systems with a water conservation plan may be better able to withstand drought.

Effectiveness: At least half of states do not require water systems to submit a water conservation plan.

Program Limitations/ Recommendations: Seven states have requested a workshop on water conservation planning.

Contact Name and Phone Number: John Flowers (202) 260-7288

Summary of Federal Programs

Program Title: Drinking Water State Revolving Fund (DWSRF) Program

Statute: Safe Drinking Water Act

Direct or Indirect Linkage to Drought: Indirect

Functions: Response

Agencies (primary agency listed first): EPA, States

Who's Eligible? States, water systems

Eligibility Criteria: Infrastructure funding need. Emergency conditions are determined by states and may include drought.

Funding History (1985 to the present): Funding is for entire program; drought-related use is not segregable.
1997: \$1.3 billion; 1998: \$0.7 billion; 1999: \$0.8 billion; 2000: \$0.8 billion

Type of Assistance / Examples: Financial assistance. Capitalizes state loan funds for drinking water infrastructure. Most states can fund projects on an emergency basis.

Example: States must have emergency provisions in Intended Use Plan.

Integration with State, Tribal, or Local Government: Water systems on the priority list may qualify for emergency funding of system improvements in certain states.

Effectiveness: Unknown

Program Limitations/ Recommendations: Unknown

Contact Name and Phone Number: Veronica Blette (202) 260-3980

Summary of Federal Programs

Program Title: Clean Water State Revolving Fund (CWSRF) Program

Statute: Clean Water Act

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation, Response

Agencies (primary agency listed first): EPA, States

Who's Eligible? States, communities, individuals, citizen groups, nonprofit organizations

Eligibility Criteria: Infrastructure funding need. Reclamation/reuse and water conservation mitigate drought effects.

Funding History (1985 to the present): Funding is for entire program; drought-related use is not segregable.

1989: \$0.9 billion; 1990: \$1.0 billion; 1991: \$2.0 billion; 1992: \$1.9 billion; 1993: \$1.9 billion; 1994: \$1.2 billion; 1995: \$1.2 billion; 1996: \$2.1 billion; 1997: \$0.6 billion; 1998: \$1.4 billion; 1999: \$1.4 billion; 2000: \$1.4 billion

Type of Assistance / Examples: Financial assistance. Capitalizes state loan funds for wastewater infrastructure, including reclamation and reuse, agricultural runoff control, estuary restoration, and limited water conservation measures. In 1991, California initiated an agricultural water conservation program using their SRF allocation. State agricultural districts use SRF loans to purchase irrigation equipment that is then leased to farmers so that they can convert to more water-efficient irrigation methods. California has loaned approximately \$45 million to seven districts thus far.

Example: States set priorities. Water conservation improvement must be publicly owned.

Integration with State, Tribal, or Local Government: Wastewater systems, others can receive loan funding for publicly owned structural water conservation/reuse improvements and some nonstructural measures.

Effectiveness: Unknown

Program Limitations/ Recommendations: Unknown

Contact Name and Phone Number: Sheila Hoover (202) 260-7376

Summary of Federal Programs

Program Title: ARS National Research Program

Statute: Section 2204c of the Disaster Assistance Act of 1988, Public Law 100-387

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction, Mitigation, Risk Management

Agencies (primary agency listed first): USDA--ARS

Who's Eligible? Drought-impacted communities

Eligibility Criteria: Not applicable

Funding History (1985 to the present): 1999, \$18 million; 1990-1998: \$3 million to \$17 million, progressively increasing each year (estimates).

Type of Assistance / Examples: Technical assistance to develop new and improved drought preparedness and mitigation approaches and technologies

Integration with State, Tribal, or Local Government: Collaborative research with several land-grant universities and with federal agencies for use by impacted communities

Effectiveness: Program has been effective in drought mitigation technologies for water conservation in agriculture and reuse of urban wastewater. Limited progress has been made with drought-tolerant and drought-resistant crops.

Program Limitations/ Recommendations: A science-based action plan is needed that will accelerate both the development and adoption of drought preparedness and mitigation approaches that have the potential to reduce the impacts of drought on rural communities. Current program on drought monitoring could be strengthened by taking advantage of recent advances in technology.

Contact Name and Phone Number: David Farrell ARS

Summary of Federal Programs

Program Title: Fire Suppression Assistance Program

Statute: Section 420 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P. L. 93-288 (the Stafford Act)

Direct or Indirect Linkage to Drought: Direct in Section 102 (2) of the Stafford Act; Section 420, however, does not specifically mention drought.

Functions: Response

Agencies (primary agency listed first): FEMA

Who's Eligible? States

Eligibility Criteria: Declaration by the Executive Associate Director of the Response and Recovery Directorate

Funding History (1985 to the present): \$175,138,154* (includes administrative expenses)

Type of Assistance / Examples: Financial assistance in the form of cost-shared grants; technical assistance

Integration with State, Tribal, or Local Government: State enters into an agreement for fire suppression assistance with FEMA. This agreement outlines the conditions for receiving assistance and cost-sharing arrangements.

Effectiveness: Effective in assisting states in combating fires in the wildland/urban interface (a frequent secondary effect of drought).

Program Limitations/ Recommendations: This program is being redesigned, in coordination with state emergency managers and foresters, to better address state needs in combating fires in the wildland/urban interface. The regulatory process will give interested parties the opportunity to comment on the program when the proposed regulations are published.

Contact Name and Phone Number: No data

Summary of Federal Programs

Program Title: Disaster Unemployment Assistance

Statute: Section 410 of the Stafford Act

Direct or Indirect Linkage to Drought: Direct in Section 102 (2) of the Stafford Act; Section 410, however, does not specifically mention drought.

Functions: Response

Agencies (primary agency listed first): FEMA

Who's Eligible? Individual workers unemployed as a result of a Presidentially-declared major disaster

Eligibility Criteria: Presidential Major Disaster Declaration

Funding History (1985 to the present): \$0* for drought \$1,147,650* for fires in the wildland/urban interface (does not include administrative expenses)

Type of Assistance / Examples: Financial assistance in the form of grants (typically in the form of unemployment checks)

Integration with State, Tribal, or Local Government: The Department of Labor administers this program for FEMA. Consequently, all unemployed individuals must register with the State Employment Security Agency before they can receive program benefits.

Effectiveness: Effective for providing assistance to those whose employment has been terminated by drought, such as migrant workers.

Program Limitations/ Recommendations: This program provides federal disaster assistance to those individuals in need of unemployment assistance or reemployment services.

Contact Name and Phone Number: No data

Summary of Federal Programs

Program Title: Public Assistance Program (Emergency Measures)

Statute: Section 403 or 502 of the Stafford Act

Direct or Indirect Linkage to Drought: Direct in Section 102 (2) of Stafford Act (Sections 403 & 502 are indirect)

Functions: Response

Agencies (primary agency listed first): FEMA

Who's Eligible? State and local governments

Eligibility Criteria: Presidential Emergency or Major Disaster Declaration

Funding History (1985 to the present): \$10,519,464* for drought; \$179,894,956* for fires in the wildland/urban interface (includes recovery efforts and administrative expenses)

Type of Assistance / Examples: Financial assistance in the form of cost-shared grants; technical assistance

Integration with State, Tribal, or Local Government: After receiving a Presidential declaration, the state enters into an agreement with FEMA which outlines the conditions for receiving assistance and cost-sharing arrangements. Once signed, local governments and other state organizations may apply through the state for subgrants.

Effectiveness: Effective for addressing short-term emergency shortages of potable water (and sometimes food).

Program Limitations/ Recommendations: In keeping with the agency's mission, this program provides for the general public's emergency needs directly related to drought: the need for food and for potable drinking water.

Contact Name and Phone Number: No data

Summary of Federal Programs

Program Title: Farm Labor Housing Loans and Grants

Statute: Housing Act of 1949, as amended, Section 514 and 516, Public Laws 89-117 and U.S.C. 1484 and 1489

Direct or Indirect Linkage to Drought: Direct

Functions: Response, Mitigation

Agencies (primary agency listed first): USDA--RD

Who's Eligible? Family partnerships, family farm corporations, or an association of farmers

Eligibility Criteria: Grants are available to eligible applicants only when it is doubtful that such facilities can be provided unless grant assistance is available.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance for project grants; guaranteed or direct loans to provide decent, safe and sanitary low-rent housing and related facilities for domestic farm workers

Integration with State, Tribal, or Local Government: No data

Effectiveness: Housing must be of a practical type and must be constructed in an economical manner; loan and grant funds and any funds furnished by the applicant may be placed in a supervised bank account. Loans and grants may be used for construction, repair or purchase all year round for seasonally occupied housing.

Program Limitations/ Recommendations: No data

Contact Name and Phone Number: Tracee Lilly (202) 720-1604

Summary of Federal Programs

Program Title: Home Ownership Loans

Statute: Title IV, Housing Act of 1949

Direct or Indirect Linkage to Drought: Indirect

Functions: Response, Mitigation

Agencies (primary agency listed first): USDA--RD

Who's Eligible? Very low-income to moderate-income individuals in rural areas

Eligibility Criteria: This is an ongoing program and does not require a major disaster declaration by the President or Secretary of Agriculture to provide local assistance. Homes must be modest in size, design and cost and be located on desirable sites with an assured supply of safe drinking water and suitable arrangements for sewage disposal. Loans may be made for up to 100 percent of RD's appraised value of site and home. Loan recipients must personally occupy the property and demonstrate both willingness and ability to repay the loan.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance to buy, build, repair, or rehabilitate rural homes and related facilities, including water and waste disposal systems

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Applicant must be a U.S. citizen or legally admitted for permanent residency.

Contact Name and Phone Number: William M. Toney (202) 720-1474

Summary of Federal Programs

Program Title: Rural Rental Housing Loans

Statute: Housing Act of 1949, Public Law 10415, Section 515, Rural Rental Housing

Direct or Indirect Linkage to Drought: Indirect

Functions: Response, Mitigation

Agencies (primary agency listed first): USDA--RD

Who's Eligible? Loans may be made for housing in communities of up to 10,000 people and under certain conditions, towns and cities between 10,000 and 20,000 people.

Eligibility Criteria: Loans are approved by the RD State Director and do not require a disaster declaration by the President or Secretary of Agriculture. Loan recipients must have good credit, experience, and proven ability to manage, and must demonstrate a need.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance to buy, build, or repair apartments, duplexes and multi-unit rental housing for very low-income to moderate-income families or senior citizens in rural areas. Funds can be used to provide water and waste disposal systems and other uses.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Funds may not be used for nursing, special care, or institutional housing. Housing must be occupied by people of very low to moderate incomes or senior citizens. Communities of 10,000 to 20,000 people have some limitations.

Contact Name and Phone Number: Obediah Baker, Jr. (202) 720-1604

Summary of Federal Programs

Program Title: Rural Housing Site Loan

Statute: Housing Act of 1949, as amended, Sec. 523 and 524; Public Law 89-117; Public Law 89-754, 42 U.S.C. 1490c and U.S.C. 140d.

Direct or Indirect Linkage to Drought: Direct

Functions: Response, Mitigation

Agencies (primary agency listed first): USDA--RD

Who's Eligible? Public or private nonprofit organizations or state or local governments interested in providing sites for housing

Eligibility Criteria: No deadline limits for public or private nonprofit organizations that provide the development sites to qualified borrowers on a cost of development basis in own county and towns of 10,000 population or less, or population up to 25,000 under certain conditions.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance for direct loans for the purchase and development of adequate sites, including the necessary equipment which becomes a permanent part of the development; for water and sewer facilities if not available; payment of necessary engineering and legal fees and closing costs.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Loan limitation of \$100,000 without national office approval; loan funds may not be used for refinancing of debts or for payment of any fee or commission to any broker, negotiator or other person for the referral of a prospective applicant or solicitation of a loan; no loan funds will be used to pay operating costs or expenses of administration other than actual cash cost of incidental administrative expenses if funds to pay those expenses are not otherwise available. Repayment of the loan is expected within 2 years.

Contact Name and Phone Number: Lucia McKinney (202) 720-1474

Summary of Federal Programs

Program Title: Business and Industrial Loan Program (B&I)

Statute: Consolidated Farm and Rural Development Act

Direct or Indirect Linkage to Drought: Indirect

Functions: Response, Mitigation

Agencies (primary agency listed first): USDA--RD, Rural Business Cooperative Service

Who's Eligible? Rural businesses

Eligibility Criteria: Subject to the availability of funds, this program is available for drought aid but it is not limited to drought or other emergencies. This program does not require a major disaster declaration by the President or Secretary of Agriculture to be triggered.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial assistance for direct and guaranteed loans for developing or financing business or industry, increasing employment and controlling or abating pollution. Funds may be used for real estate, operation expenses, and purchases of equipment for support of businesses.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Loans must be used to assist businesses in rural areas. Rural areas are generally well outside of cities that have more than 50,000 inhabitants and their immediately adjacent urbanized areas. Priority is given to projects located in communities of 25,000 or fewer. Guaranteed loans to business and industry are limited to \$25 million. Direct loans to business and industry are limited to \$10 million.

Contact Name and Phone Number: Dwight Carmon (202) 690-4100

Summary of Federal Programs

Program Title: Small and Limited-Resource Farmers

Statute: PL 74-46; PL 100-233, Section 622 of the Agricultural Credit Act of 1987

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): USDA--NRCS, FSA, RD, CSREES, NASS

Who's Eligible? Small and limited-resource farmers

Eligibility Criteria: Because of being underserved, many believe they are too small to receive assistance.

Funding History (1985 to the present): No data

Type of Assistance / Examples: Financial and technical assistance for conservation plans and rapid response that should address drought impacts and corrective actions.

Examples: Limited resource farmers may be able to get assistance to address drought concerns.

Integration with State, Tribal, or Local Government: No data

Effectiveness: No data

Program Limitations/ Recommendations: Many needing help are not identified. Pride or distrust may limit the acceptance of help.

Contact Name and Phone Number: Larry S. Holmes (202) 720-1853

Summary of Federal Programs

Program Title: SBA Disaster Assistance Program

Statute: 15 U.S. Code 636

Direct or Indirect Linkage to Drought: Direct

Functions: Response

Agencies (primary agency listed first): SBA

Who's Eligible? Small nonfarm businesses and small agricultural cooperatives which have suffered substantial economic injury as a direct result of a declared agricultural production disaster

Eligibility Criteria: Declaration of agricultural disaster by the Secretary of Agriculture

Funding History (1985 to the present): Funded

Type of Assistance / Examples: SBA offers financial assistance with low-interest working capital loans to small businesses and small agricultural cooperatives which have suffered substantial economic injury as a result of an agricultural production disaster. Agricultural enterprises are NOT eligible.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: Not applicable

Program Limitations/ Recommendations: Loan amount is limited to the amount needed to meet necessary financial obligations which the business could have met under normal conditions, but is unable to meet as a direct result of the disaster. Maximum loan amount is \$1.5 million. Only those businesses determined to be unable to obtain credit elsewhere are eligible.

Contact Name and Phone Number: Bernard Kulik, Associate Administrator for Disaster Assistance, U.S. Small Business Administration, Office of Disaster Assistance (202) 205-6734

Summary of Federal Programs

Program Title: Water Conservation Field Services Program

Statute: Reclamation Reform Act (RRA) of 1982

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response, Planning

Agencies (primary agency listed first): DOI-USBR

Who's Eligible? The WCFSP provides assistance to agriculture, municipalities, states, tribes, water conservation districts, water conservancy districts, irrigation associations, any entity that is using Reclamation Project water, and others.

Eligibility Criteria: The 17 western states are eligible. There doesn't have to be a disaster to provide assistance. There may be a possible water shortage. All Reclamation project water users must submit a water conservation plan to the U.S. Bureau of Reclamation every five years. We currently have one of our Water Conservation Field Services personnel working with a specific area on drought mitigation efforts in California.

Funding History (1985 to the present): In existence since 1996, funding is provided through Water Management and Conservation, Reclamation's Reform Act Water Conservation (RRA), Project Operation and Maintenance (Project O&M), and the Efficiency Incentive Program (EIP).

Type of Assistance / Examples: The WCFSP provides professional technical and financial assistance. We have 5 regional coordinators and 21 field services personnel to assist in water conservation in our area offices. Financial assistance is provided through Water Management and Conservation, Reclamation's Reform Act Water Conservation (RRA), Project Operation and Maintenance (Project O&M) and the Efficiency Incentive Program. The distribution of these funds vary from region to region..

Example: Price River Soil Conservation District, et al: A cooperative agreement was negotiated and executed with the Price River, Green River, and San Rafael Soil Conservation Districts (UT). The districts jointly hired a water conservation specialist to provide planning assistance to water user groups and individuals. The specialist used Reclamation's "Achieving Efficient Water Management: A Guidebook for Preparing Agricultural Water Conservation Plans" as a guide.

Integration with State, Tribal, or Local Government: The program is designed to build partnerships and bring stakeholders to the table to design water conservation plans. A water conservation plan for our water users would include Districts, irrigation districts, special districts, and municipalities. Reclamation strives to make our criteria and standards consistent with state and local criteria by integrating both into the Reclamation water user conservation plan.

Effectiveness: Effectiveness is represented by being a proactive agency in water conservation and drought planning prior to disaster. The entity can evaluate its current water use efficiency measures and determine scenarios of implementation depending on what state the drought is in. Those entities with plans in place have also spent the necessary time bringing their stakeholders into the planning process. Effectiveness is determined by how well the water users manage their water resources during a drought.

Program Limitations/ Recommendations: The program could improve the drought portion of all water conservation plans by increasing drought planning awareness in field personnel.

Contact Name and Phone Number: Program Manager: Christy Bridges, 303-445-2945, cbridges@do.usbr.gov

Summary of Federal Programs

Program Title: Reclamation Wastewater and Groundwater Study Program

Statute: Reclamation Wastewater and Groundwater Study and Facilities Act (Title XVI of Public Law 102-575, as amended)

Direct or Indirect Linkage to Drought: Indirect

Functions: Mitigation

Agencies (primary agency listed first): DOI-USBR

Who's Eligible? Any nonfederal entity is eligible; municipalities are the most common.

Eligibility Criteria: A nonfederal entity must meet certain requirements before money may be released; 1) a feasibility report is required, 2) the nonfederal entity must demonstrate capability to finance its share of the project costs, and 3) a cost-share agreement is required.

Funding History (1985 to the present): 1995 16.8 million 1996 16.1 million 1997 34.4 million 1998 33.7 million 1999 27.9 million

Type of Assistance / Examples: Financial cost shares or grants.

Example: Groundwater Replenishment System - Orange County (CA). The Orange County Water District manages the groundwater basin located in the northwestern part of Orange County, comprising an area of about 350 square miles. About 2 million Orange County residents rely on groundwater for 65-70% of their water needs. District constituents use about 481,000 acre-feet of water annually, and about 194,000 acre-feet or 40% of the total water demand is imported from the Colorado River/SWP.

Integration with State, Tribal, or Local Government: Primarily integrated with municipalities

Effectiveness: Not evaluated

Program Limitations/ Recommendations: Stakeholders may be seeking the authorization of additional projects.

Contact Name and Phone Number: Program Manager: Rick Martin 202-208-3965 or 909-695-5310, ramartin@usbr.gov

Summary of Federal Programs

Program Title: N/A

Statute: National Park Service Organic Act (16 U.S.C. 1)

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response, Planning

Agencies (primary agency listed first): DOI--NPS

Who's Eligible? Not applicable

Eligibility Criteria: Not applicable

Funding History (1985 to the present): No specific funding information is available regarding the National Park Service's activities related to drought response.

Type of Assistance / Examples: Not applicable

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: NPS is currently evaluating its need relative to (1) the development and implementation of park water conservation and alternative water supply plans, and (2) the evaluation and determination of the extent to which droughts are anthropogenically caused (versus the result of natural process).

Program Limitations/ Recommendations: See notes on effectiveness

Contact Name and Phone Number: Study Contact: Dan Kimball, Chief, Water Resources Division, NPS 970-225-3501, dan_kimball@nps.gov

Summary of Federal Programs

Program Title: Fire Management

Statute: Federal Land Policy and Management Act of 1976 (43 U.S.C. 1764)

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response

Agencies (primary agency listed first): DOI--BLM

Who's Eligible? States, counties and tribes

Eligibility Criteria: Agency may determine that assistance is necessary to assist governmental entities with fire-fighting activities.

Funding History (1985 to the present): The federal fire-fighting budget has increased gradually over the past 15 years. Congress usually appropriates money after the fact to cover the cost of fire-fighting activities for the previous fiscal year.

Type of Assistance / Examples: Technical assistance to governments and sharing of federal fire-fighting resources with other governmental entities.

Example: Before a drought occurs, the federal government can work cooperatively with other governmental entities to bring additional resources (fire trucks, crews, aircraft, supplies, etc.) into a drought stricken region to ensure that fire occurrences are maintained within public lands.

Integration with State, Tribal, or Local Government: No data

Effectiveness: A variety of program evaluations have occurred, but not specifically related to droughts.

Program Limitations/ Recommendations: No data

Contact Name and Phone Number: No data

Summary of Federal Programs

Program Title: Public Land Livestock Grazing Program

Statute: Sections 1 and 2 of the Taylor Grazing Act of 1934 as amended by the Act of August 28, 1937, sections 102, 401 and 402 of the Federal Land Policy and Management Act (FLPMA) of 1976 (PL 94-579) and sections 2, 3, 4 of the Public Rangelands Improvement Act of 1978 (PL 95-514)

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response, P

Agencies (primary agency listed first): DOI--BLM

Who's Eligible? Not applicable

Eligibility Criteria: Not applicable

Funding History (1985 to the present): The program has not received any supplemental appropriations to deal with drought related issues. All funds expended to deal with drought issues has come from normal appropriations. Funding spent to support drought related issues is not tracked individually so estimates of funds spent are not available.

Type of Assistance / Examples: *Example:* During droughts, the BLM will work with the grazing or agricultural community to the extent possible, but will close areas to grazing when resource conditions dictate.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: Not evaluated, however when planning rangeland improvements and their management, such as water developments, droughts are considered.

Program Limitations/ Recommendations: Not applicable

Contact Name and Phone Number: Tom Roberts 202-208-3965

Summary of Federal Programs

Program Title: Pre-positioning, Fire Suppression and Rehabilitation

Statute: The Reciprocal Fire Protection Agreement Act of 1955 (42 U.S.C. 1856), the Alaska Native Claims Settlement Act of 1971, as amended by the Alaska National Interest Lands Conservation Act of 1980, the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1748, PL 94-579) and Section 102 of the General Provision of the Annual Appropriations Act for the Department of Interior and Related Agencies.

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response,P

Agencies (primary agency listed first): DOI--BLM

Who's Eligible? Not applicable

Eligibility Criteria: Not available

Funding History (1985 to the present): Not applicable

Type of Assistance / Examples: *Example:* During droughts, the BLM may increase the pre-positioning of resources where drought is locally troublesome, and may occasionally need to retreat from areas where the Emergency Fire Rehabilitation has failed because of drought.

Integration with State, Tribal, or Local Government: Yes, because the effects of drought crosscut agency ownerships, and state and local land management agencies are also impacted by the increased costs of fire suppression and rehabilitation during droughts, and we are in cooperative agreements with many of them.

Effectiveness: No, specifically, but the impacts of droughts are discussed during the year-end fire meetings. We are pursuing and building improved management and working relationships with local governments and citizens through the Fire Management Plan process.

Program Limitations/ Recommendations: Stakeholders have asked to be involved. There is a concerted effort at the local level to involve them. From a program management perspective, we are pursuing and building improved management and working relationships with local governments and citizens.

Contact Name and Phone Number: Tom Roberts, 202-208-3965

Summary of Federal Programs

Program Title: Wild Horse and Burro Management Program

Statute: Wild Free Roaming Horse and Burro Act (PL 92-195), as amended by section 9 of the Federal Land Policy and Management Act of 1976 (PL 94-579) and sections 2 and 3 of the Public Rangelands Improvement Act of 1978 (PL 95-514)

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response,P

Agencies (primary agency listed first): DOI--BLM

Who's Eligible? Not applicable

Eligibility Criteria: Not applicable

Funding History (1985 to the present): The program has not received any supplemental appropriations to deal with drought related issues. All funds expended to deal with drought issues has come from normal appropriations. Funding spent to support drought related issues is not tracked individually so estimates of funds spent are not available.

Type of Assistance / Examples: *Example:* During droughts, the BLM may haul water to wild horse and burro populations, reduce, relocate or remove wild horses or burros to reduce the impacts on soil, water, vegetation, etc. In addition, domestic livestock grazing in wild horse/burro areas may be reduced or eliminated during droughts to provide forage for wildlife and wild horse/burro populations.

Integration with State, Tribal, or Local Government: Not applicable

Effectiveness: A specific evaluation of the program effectiveness, as it relates to droughts has not occurred.

Program Limitations/ Recommendations: None

Contact Name and Phone Number: Bud Cribley, 202-452-5073

Summary of Federal Programs

Program Title: Fish and Wildlife Service Actions

Statute: Section 7 of the Endangered Species Act when listed species and/or their critical habitat may be affected. Guidance on emergency consultations is provided in Chapter 8 of the Endangered Species Consultation Manual.

Direct or Indirect Linkage to Drought: Indirect

Functions: Communication, Monitoring and Prediction, Mitigation, Response, P

Agencies (primary agency listed first): DOI--FWS

Who's Eligible? Not applicable

Eligibility Criteria: Not applicable

Funding History (1985 to the present): No data

Type of Assistance / Examples: Not applicable. (Note: FWS informs other agencies during drought emergencies of critical wildlife habitat needs, and requirements that trust resource populations will require in a drought emergency. Preparation and coordination of contingency plans with Federal, local, and state agencies.)

Integration with State, Tribal, or Local Government: The Service will work with other agencies to ensure that existing policies, restrictions and assistance to landowners are made in ways that ensure survival of trust resources.

Effectiveness: No data

Program Limitations/ Recommendations: Most federal agencies are not promoting a "watershed approach" in assessing environmental conditions and conducting habitat restoration. Healthy watersheds and/or ecosystems are more able to withstand drought conditions or are less severely impacted by drought conditions.

Contact Name and Phone Number: No data

Summary of Federal Programs

Program Title: Reclamation States Emergency Drought Relief Act of 1991, Title I

Statute: PL 102-250 as amended

Direct or Indirect Linkage to Drought: Direct

Functions: Response, Mitigation

Agencies (primary agency listed first): DOI--USBR

Who's Eligible? Any state or tribal entity within the States identified in section 1 of the Reclamation Act (Act of June 17, 1902, 32 Stat. 388).

Eligibility Criteria: The programs and authorities under Title I, Section 104, shall become operative in any Reclamation state only after the Governor or Governors of the affected State or States, or on a reservation when the governing body of the affected tribe has made a request for temporary drought assistance.

Funding History (1985 to the present): FY 1992 \$25,000,000 Emergency Supplemental; FY 1993 \$30,000,000 Emergency Supplemental; FY 1994 \$14,000,000 Recission; FY 1995 \$0; FY 1996 \$0; FY 1997 \$2,000,000 Emergency Supplemental; FY 1998 \$0; FY 1999 \$1,500,000 Emergency Supplemental earmarked by Congress for San Carlos Reservoir; FY 2000 \$3,000,000 Regular Appropriations earmarked by Congress primarily for water leasing. Total funding under PL 102-250 is \$47,500,000.

Type of Assistance / Examples: Under Section 101, nonfinancial assistance to willing buyers in their purchase of available water supplies from willing sellers. Participation in water banks established by states, under Section 102, the Secretary may permit the use of Federal Reclamation projects for the storage or conveyance of project or nonproject water for use both within and outside an authorized project service area.

Example: Emergency assistance has been provided to allow for emergency well drilling or water acquisitions to mitigate for fish and wildlife impacts during drought.

Integration with State, Tribal, or Local Government: Section 104 states that programs and authorities shall become operative only after the Governor(s) of the affected state(s) or, on a reservation, when the governing body of the

affected tribe has made a request for temporary drought assistance to implement locally suggested actions.

Effectiveness: Requests for assistance normally exceed the available budget. Until recently, funds have been provided through emergency supplemental appropriations. Public testimony and public comments indicated customer satisfaction.

Program Limitations/ Recommendations: Stakeholders who qualify under Title II of PL 102-250 have suggested that the law be amended to allow emergency assistance, under Title I, to be provided to all 50 states and U.S. territories. Customers have also suggested that loans should be provided at a low-interest rate rather than requiring interest rates based on Treasury rates.

Contact Name and Phone Number: Program Manager; Roseann Gonzales, 303-445-2787, rgonzales@do.usbr.gov

Summary of Federal Programs

Program Title: Reclamation States Emergency Drought Relief Act of 1991, Title II

Statute: PL 102-250 as amended

Direct or Indirect Linkage to Drought: Direct

Functions: Communication, Response, Planning

Agencies (primary agency listed first): DOI--USBR

Who's Eligible? Any of the 50 states and U.S. territories, including tribal, county, public, and private entities

Eligibility Criteria: Willingness expressed by a state, tribe, county, public or private entity in developing a comprehensive drought contingency plan; activities are primarily limited by funding.

Funding History (1985 to the present): 0

Type of Assistance / Examples: Under Title II, the Secretary is authorized to conduct studies to identify opportunities to conserve, augment, and make more efficient use of water supplies available to Federal Reclamation projects and Indian water resource developments in order to prepare for and better respond to drought conditions. The Secretary is authorized to provide technical assistance to states, local and tribal government entities to assist in the development, construction and operation of water desalinization projects.

Example: Drought preparedness plans have been developed in cooperation with states, tribes and local entities. Drought planning workshops have been conducted throughout the U.S., including Albuquerque, NM; Salt Lake City, UT; Fort Mitchell, KY; Columbia, SC; Hilo, HI, and El Paso, TX.

Integration with State, Tribal, or Local Government: Drought plans are developed through a cooperative process in order to incorporate local perspectives.

Effectiveness: Requests for assistance normally exceed the available budget. Funds, until recently, have been provided through emergency supplemental appropriations. FY 2000 funding was \$3,000,000 in response to an agency request for \$500,000; this funding is primarily for water leasing as mandated by Congress. Drought planning workshops have been held throughout the US and

have been very well attended. Public comment and public testimony from customers provided positive support for program activities.

Program Limitations/ Recommendations: Expand authority to allow financial incentives to be provided to stakeholders. Customers have also expressed concern that a specific fund is not available to fund drought contingency plan implementation.

Contact Name and Phone Number: Program Manager: Roseann Gonzales, 303-445-2787, rgonzales@do.usbr.gov

Summary of Federal Programs

Program Title: Agricultural Water Resources Decision Support and ET Toolbox

Statute:

Direct or Indirect Linkage to Drought: Indirect

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOI--USBR; FWS, USGS, COE

Who's Eligible? Federal, state, and local government agencies; irrigation districts; farmers; anyone interested in precipitation estimates and agricultural and riparian water demands

Eligibility Criteria: Not applicable

Funding History (1985 to the present): \$150,000 to \$200,000 per year since 1998 from research, water conservation, and operations

Type of Assistance / Examples: Technical assistance as a means of monitoring estimates of precipitation and crop water use in Western states. The information assists water managers and users with a tool for estimating near real-time precipitation over watersheds. Estimates of water depletions for irrigation districts and reservoir-river systems.

Integration with State, Tribal, or Local Government: Information is provided on an Internet Web site for all state, county, tribal, and local government entities to use.

Effectiveness: Both near real-time and archived precipitation and water use estimates are readily available to monitor drought.

Program Limitations/ Recommendations: Visit web site at:
<http://www.usbr.gov/rsmg/nexrad>

Contact Name and Phone Number: Al Brower, 303-445-2507,
abrower@do.usbr.gov, Curt Hartzell, 303-445-2482, chartzell@do.usbr.gov

Summary of Federal Programs

Program Title: National Streamgauging Program

Statute: The Organic Act of March 3, 1879, the Sundry Civil Bill of 1888, the appropriation Acts of 1894 and 1896, and the Joint Resolution of May 16, 1902 (Pub. Res. 13, 54th Congress)

Direct or Indirect Linkage to Drought: Direct

Functions: Monitoring and Prediction

Agencies (primary agency listed first): DOI--USGS

Who's Eligible? Cooperators (partners) in the NSP, NWS, emergency managers, planning agencies, reservoir operators, media representatives and the public

Eligibility Criteria: Not applicable

Funding History (1985 to the present): Funded

Type of Assistance / Examples: Technical assistance to monitor streamflow, groundwater levels, and reservoir contents. Comparison with previous droughts, drought studies, and service on drought-emergency committees. Information and advice concerning hydrologic conditions.

Integration with State, Tribal, or Local Government: Streamflow information is available from district offices in nearly every state.

Effectiveness: Realtime and historic streamflow data are available on the Web for 3,000 gauging stations. The USGS operates a national network of 7,000 stream gauges that continuously measure the state and flow at key points on streams and rivers. The agency also monitors groundwater levels, reservoir contents and water quality. Flow data from about 4,600 stream gauges are available via satellite telemetry in near real time. The data available from USGS are used in responding to drought emergencies, characterizing a drought, finding alternative supplies of water, and allocating water resources.

Program Limitations/ Recommendations: No data

Contact Name and Phone Number: No data

Summary of Federal Programs

Program Title: Emergency Well Construction and Water Transport

Statute: Public Law 84-99, as amended by Public Law 95-51

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation

Agencies (primary agency listed first): Army--COE

Who's Eligible? Local and state governments, individual farmers and ranchers

Eligibility Criteria: A written request for assistance may be made by any farmer, rancher or political subdivision within a distressed area.

Funding History (1985 to the present): Estimated to be much less than \$100,000. The cost of transporting water is provided by the Corps, but the cost of purchasing and storing water is the nonfederal sponsor's responsibility. Federal costs associated with well construction must be repaid.

Type of Assistance / Examples: Secretary of the Army can authorize the construction of wells or the transport of water to farmers, ranchers, and political subdivisions of those areas determined to be drought distressed.

Example: September, 1988. The Corps installed temporary pipes to distribute water from an unused well in Pompienau, IL after 56 of the 70 wells serving the town had gone dry. September 1998, at the request of the Governor, the Corps installed a temporary water supply system using Red River water for the town of Pembine, ND.

Integration with State, Tribal, or Local Government: No formal integration process, but states, tribes or local governments may be the requestor. In any event, the appropriate governments would be contacted when the Corps reviews the application.

Effectiveness:

Program Limitations/ Recommendations: This is a program of last resort. The law requires that all other reasonable means must be exhausted before the Corps has authority to help. Corps assistance is supplemental to state and local efforts. Long-term solutions to water supply problems are the responsibility of state and local interests. The authorities are not to be used to provide drought emergency water assistance in cases where an owner of livestock has other

options, including raising funds from private sources through a loan, selling all or part of the herd, or relocation of the animals to an area where water is available. Federally owned equipment must be used to the maximum extent possible. Assistance can be made available to transport water for consumption. The cost of transporting water is provided by the Corps; however, cost of purchasing and storing water is the nonfederal sponsor's responsibility. Assistance can also be provided to construct wells. Federal costs associated with well construction must be repaid.

Contact Name and Phone Number: Local Corps district, or Bill Werick, COE
(703) 428-9055

Summary of Federal Programs

Program Title: Drought Contingency Water

Statute: Section 6 of the 1944 Flood Control Act, Section 322 of the Water Resources Development Act of 1990

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation

Agencies (primary agency listed first): Army--COE

Who's Eligible? State or local government

Eligibility Criteria: May be used only for water supply vulnerability revealed by droughts. Water can be provided only if surplus water is available in a Corps reservoir. Where the governor of a state has declared a state of emergency due to drought, Corps project managers may approve withdrawals from 50 acre-feet of storage or less. This water can be made available for domestic and industrial uses but not for crop irrigation. If the Corps reservoir has an approved Drought Contingency Plan, the District Commander can approve emergency demands that require less than 100 acre-feet of storage, and the Division Commander can approve demands that require from 100 to 499 acre-feet. The term of the agreement will not exceed one year. Requests for larger amounts and agreements that do not follow the standard should be submitted to HQUSACE (CECW-A).

Funding History (1985 to the present): No federal expenditure; all costs are paid by the purchaser of storage.

Type of Assistance / Examples: When available, the Secretary of the Army can sell storage in Corps reservoirs to provide surplus water to a state or political subdivision which agrees to act as wholesaler for all of the water requirements of individual users. Water stored for purposes no longer considered necessary can be considered "surplus." Water may also be considered "surplus" if it could be more beneficially used for M&I purposes and its use would not significantly affect the authorized purpose. The local government determines who is entitled to shares of this surplus water based on assessments of local needs. The price for drought contingency water supply will be determined in the same manner as for surplus water, but it will never be less than \$50 per acre-foot per year. Section 322 of the Water Resources Development Act of 1990 gives the Assistant Secretary of the Army limited discretion to authorize a lower price for low-income

communities. All revenues from drought contingency agreements will be deposited in the Treasury of the United States as miscellaneous receipts.

Example: Tarrant County Water Control and Improvement District No. 1 (Texas) purchased 48,792 acre-feet of interim storage in Benbrook Lake, Texas on June 21, 1991. Cost was \$2,086,000.

Integration with State, Tribal, or Local Government: Assistance contingent on the governor having declared a state of emergency due to drought.

Effectiveness: Good emergency program when the appropriate planning has not been done. The Corps prefers to do a permanent reallocation of storage prior to the drought with the appropriate environmental and hydrologic studies.

Program Limitations/ Recommendations: The Corps can do the same thing in advance of the drought, so that the water supply is in place and the emergency never develops.

Contact Name and Phone Number: Local Corps district, or Bill Werick, COE (703) 428-9055

Summary of Federal Programs

Program Title: Planning Assistance to States

Statute: Public Law 92-251, Section 22, as amended.

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Planning

Agencies (primary agency listed first): Army--COE

Who's Eligible? States

Eligibility Criteria: This program can be used to develop state drought contingency plans, or local and regional plans that support state water plans.

Funding History (1985 to the present): No records of how much was spent on drought planning. Total federal allotments are limited to \$10,000,000 annually, but typically are less. Funding since 1985 may total \$50 mil. Drought planning funds since 1985--less than \$1 million.

Type of Assistance / Examples: States may obtain Corps water resources planning expertise in 50-50 cost-shared studies to develop plans related to the overall state water plan.

Example: In 1994, Tarrant County, Texas and the Corps Fort Worth district used the Section 22 program to develop a computer simulation of the Tarrant County water system that was later used in a Virtual Drought exercise conducted by the County.

Integration with State, Tribal, or Local Government: Corps signs agreement with state or tribe.

Effectiveness: Very popular program, but customers' priorities are generally for water resources other than drought.

Program Limitations/ Recommendations: Half the study costs are paid by the Corps, half are paid by the state. Nationwide, annual funds cannot exceed \$10 million; actual funding has been somewhat less. Not more than \$500,000 per state can be spent in any year. This is a popular program used to provide Corps planning expertise to support state water plans for all things, not just drought.

Contact Name and Phone Number: Local Corps district, or Bill Werick, COE (703) 428-9055

Summary of Federal Programs

Program Title: Drought Contingency Plans for Corps Reservoirs

Statute: Not required by law; part of the operation of Corps reservoirs

Direct or Indirect Linkage to Drought: Direct; program covers all water management issues including drought

Functions: Mitigation, Planning

Agencies (primary agency listed first): Army--COE

Who's Eligible? All persons & entities affected by releases from Corps reservoirs

Eligibility Criteria: For each Corps reservoir, there is a drought contingency plan which contains information that may be useful to those relying on water in or releases from Corps reservoirs during droughts.

Funding History (1985 to the present): No records exist of how much was spent on this program, since the plans were developed as part of the overall operation of the reservoirs.

Type of Assistance / Examples: Plans for the release of water from Corps reservoirs during a drought.

Example: The Corps developed an engineering regulation (available over the Internet) on how to do these plans. Corps districts were required to develop the plans, and all have done so. Plans are generally good at hydrologic analysis, but weak in public involvement due both to the expense of conducting workshops and the disinterest among those who would need to attend.

Integration with State, Tribal, or Local Government: Varies from reservoir to reservoir. Corps reservoir operators generally have working relationships with the people who use water on and from Corps reservoirs, but (as with all drought programs) collaboration on drought is a low priority until a drought occurs.

Effectiveness: Generally inexpensive plans done by the Corps alone. When serious conflicts over water allocation arise during a drought, these plans do not take the place of plans that involve all decision makers and stakeholders.

Program Limitations/ Recommendations: Good program that can be a source of information for people depending on a Corps reservoir during drought.

Contact Name and Phone Number: Local Corps district, or Bill Werick, COE
(703) 428-9055

Summary of Federal Programs

Program Title: Interim Use of M&I Water Supply Storage for Irrigation

Statute: Public Law 99-662 (WRDA 1986), Section 931

Direct or Indirect Linkage to Drought: Direct

Functions: Mitigation, Planning

Agencies (primary agency listed first): Army--COE

Who's Eligible? Farmers

Eligibility Criteria: This authority allows temporary use of Corps reservoir space to store water for irrigation, and so may help farmers obtain irrigation water during droughts.

Funding History (1985 to the present): Separate accounting for drought planning not done. Estimated costs may be at \$2 mil.

Type of Assistance / Examples: The Secretary of the Army may, for an interim period, reallocate for irrigation storage intended for municipal and industrial water supply if that storage is not under a repayment agreement.

Example: The Kaw tribe purchased 6 acre-feet of water from the Kaw Lake (Oklahoma, Arkansas River) for \$200 in July 1993.

Integration with State, Tribal, or Local Government: On a case by case basis

Effectiveness: Effective

Program Limitations/ Recommendations: The cost to the nonfederal sponsor under Section 931 agreements will be 35 percent of the original project investment cost (including any accrued interest after the 10-year interest-free period) allocated to M&I water supply (for the block of storage to be used for irrigation as determined by the Use of Facilities cost allocation method). The nonfederal sponsor will also be responsible for 100 percent of the operation and maintenance, repair, replacement, rehabilitation, and reconstruction costs allocated to the storage space being placed under the repayment agreement. The term of the agreement for this interim use will not exceed 5 years. An option for incremental 5-year extensions is allowed but only if recalculations of the annual costs are performed at the end of each 5-year increment.

Contact Name and Phone Number: Local Corps district, or Bill Werick, COE
(703) 428-9055

Summary of Federal Programs

Program Title: Reallocation of Storage in Corps Reservoirs to M&I Water Supply Use

Statute: Public Law 85-500, the Water Supply Act of 1958

Direct or Indirect Linkage to Drought: Indirect. This is a water supply authority. Drought vulnerability depends on long-term water supply decisions.

Functions: Mitigation, Planning

Agencies (primary agency listed first): Army--COE

Who's Eligible? Public, especially M&I users

Eligibility Criteria: Best done in advance of a drought, as part of water supply plan. Generally used to provide more M&I water supply, which can reduce drought impacts. In the present climate where it is becoming difficult to formulate and construct multipurpose reservoirs, reallocation of reservoir storage to M&I water supply is becoming an increasingly viable option for providing water supply.

Funding History (1985 to the present): The Corps has conducted 37 reallocation studies since 1985. No records have been kept of the total costs, but typical costs are around \$1 million each since reallocation inherently involves the transfer of benefits from one group to another and often requires an environmental impact statement (EIS).

Type of Assistance / Examples: Reassignment of water storage space in an existing Corps reservoir will be to a higher and better use.

Example: Blue Mountain Lake, on the Petit Jean River in Yell County, Arkansas. The city of Dansville purchased 1,550 acre-feet for \$417,200 in 1994. The space was reallocated from flood control storage.

Integration with State, Tribal, or Local Government: Formal integration required because there must be a nonfederal sponsor who pays for the storage, and appropriate NEPA studies must be done.

Effectiveness: Effective. Reallocation can be the most cost-effective way to provide additional water supply, but studies must determine if reallocation is a good alternative, and any controversies regarding the additional supply will have to be considered. Since 1965, more than 400,000 acre-feet of storage has been reassigned to water supply.

Program Limitations/ Recommendations: Reallocation must be evaluated, justified and approved. The sponsor must pay for the reallocated space, including the appropriate share of operation and maintenance of the project. Approvals of reallocations may be made by Congress, the Chief of Engineers, or by division or district commanders, depending on the size of the reallocation and the impact on other project purposes. Reallocations or addition of storage that would seriously affect the purposes for which the project was authorized, surveyed, planned, or constructed, or which would involve major structural or operational changes, will be made only upon the approval of Congress.

Contact Name and Phone Number: Local Corps district, or Bill Werick, COE (703) 428-9055