

NORTH AMERICAN WEATHER CONSULTANTS OPERATIONAL CLOUD SEEDING PROGRAMS Partial Listing (through February 2014)

Project Area: Gunnison County, Colorado
Sponsor: Gunnison County
Technique: Ground based silver iodide seeding
Time Period: 2003-present
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Little Cottonwood Canyon, Utah
Sponsor: Alta and Snowbird Ski Areas
Technique: Ground based silver iodide seeding
Time Period: 1996 - present
Goal: Enhanced winter snowfall for skiing

Project Area: Abajo Mountains of southeastern Utah
Sponsor: San Juan County Water Conservancy District
Technique: Ground based silver iodide seeding
Time Period: 2012-2013
Goal: Enhanced winter precipitation for water supplies

Project Area: Wellsville and Wasatch Mountains of Northern Utah
Sponsor: Utah Division of Water Resources and Cache County
Technique: Ground based silver iodide seeding
Time Period: 1997 - 2000, 2002-present
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Upper Ogden River and Lost Creek Watersheds, Utah
Sponsor: Weber Basin Water Conservancy District and Utah Division of Water Resources
Technique: Ground based and airborne silver iodide seeding
Time Period: 1991 - 1993
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Upper San Joaquin River Drainage, Southern Sierra Nevada of California
Sponsor: Southern California Edison Company
Technique: Ground based and airborne silver iodide seeding with radar surveillance
Time Period: 1951 - 1987 and 1990 - 1992
Goal: Enhanced winter and summer precipitation for hydroelectric power production

Project Area: Mountain Watersheds in Central and Southern Utah
Sponsor: Utah Water Resources Development Corporation
 Utah Division of Water Resources, 13 Utah Counties
Technique: Airborne and ground based silver iodide seeding
Time Period: 1973 - 1983, 1987, 1988-present
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Bear Lake Drainage, Smith & Thomas Forks, Southwestern Wyoming and Southeastern Idaho
Sponsor: Utah Power and Light Company
Technique: Ground based silver iodide seeding
Time Period: 1954 - 1970; 1979 - 1982, 1989 - 1990
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Santa Barbara County, California
Sponsor: Santa Barbara County Water Agency
Technique: Ground based and airborne silver iodide seeding with radar surveillance; ground-based flare seeding
Time Period: 1950-1953; 1955; 1956-1960; 1978; 1982 – 1997; 2002-2007; 2008 - present
Goal: Enhanced winter precipitation for municipal and agricultural water supplies

Project Area: Grouse Creek, Raft River, Wellsville and Wasatch Mountains of Northern Utah
Sponsor: Utah Water Resources Development Corporation, Utah Division of Water Resources, and Cache and Box Elder Counties
Technique: Ground based silver iodide seeding
Time Period: 1989 - 1997, 2001-present
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Provo and Weber River Drainages in Western Uinta Mountains of Utah
Sponsor: Utah Water Resources Development Corporation, Utah Division of Water Resources, Provo River Water Users Association and Weber Basin Water Conservancy District
Technique: Ground based silver iodide seeding
Time Period: 1989 - 1995, 2000-present
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Wasatch Mountains in Eastern Salt Lake County, Utah
Sponsor: Utah Water Resources Development Corporation; Utah Division of Water Resources; Salt Lake City Water Division; and Alta, Brighton, and Snowbird Ski Areas
Technique: Ground based silver iodide seeding
Time Period: 1989 - 1996
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Upper Kings River Drainage in the Southern Sierra Nevada of California
Sponsor: Kings River Conservation District and Kings River Water Users Association
Technique: Airborne and ground based silver iodide seeding with radar surveillance
Time Period: 1989 – 1993, 2007-present
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Upper Feather River Drainage in the Northern Sierra Nevada of California
Sponsor: California Department of Water Resources
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1989
Goal: Enhanced winter precipitation for municipal and irrigation water supplies

Project Area: Grand Mesa and West Elk Mountains of Western Colorado
Sponsor: Grand Mesa Water Users Association
Technique: Ground based silver iodide seeding
Time Period: 1990 - 1991
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: San Gabriel Mountains, California
Sponsor: Los Angeles County Flood Control District
Technique: Ground based silver iodide seeding
Time Period: 1959 - 1973, 1991 - 1993, 1997-2001
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Bannock, Portneuf and Bear River Mountain Ranges of Southeastern Idaho
Sponsor: Bear River RC&D and Bannock, Bear Lake, Caribou, Franklin, and Oneida Counties
Technique: Ground based silver iodide seeding
Time Period: 1988 - 1989, 1992, 1993
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Uinta Mountains of Northeastern Utah
Sponsor: Uinta County, Duchesne County and Utah Division of Water Resources
Technique: Airborne and ground based silver iodide seeding
Time Period: 1977, 1989, 2003-present
Goal: Increased winter spring, and summer precipitation for irrigation water supplies

Project Area: Boise River Drainage, Idaho
Sponsor: Boise Project Board of Control
Technique: Ground based silver iodide seeding
Time Period: 1992 - 1996, 2002-2005, 2007-2009; 2010-2011; 2013-present
Goal: Enhanced winter precipitation for irrigation water supplies and hydroelectric power production

Project Area: Willow Creek Drainage, Colorado
Sponsor: Northern Colorado Water Conservancy District
Technique: Ground based silver iodide seeding
Time Period: 1992 - 1995
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Higher Elevation Watersheds of Nine Eastern Idaho Counties and One Western Wyoming County
Sponsor: High Country RC&D
Technique: Ground based silver iodide seeding
Time Period: 1993, 1995
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Santa Clara County, California
Sponsor: Santa Clara Valley Water District
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1992
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Mornos River Drainage, Greece
Sponsor: Greater Athens Water Authority
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1992, 1993
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Chixoy River Drainage, Guatemala, C. A.
Sponsor: Empresa Electrica and Instituto Nacional de Electrificacion
Technique: Airborne and ground based silver iodide seeding with radar surveillance
Time Period: 1991, 1992, 1994
Goal: Enhanced summer precipitation for hydroelectric power production

Project Area: El Cajon Drainage Basins, Honduras, C. A.
Sponsor: Empresa Nacional De Energia Electrica
Technique: Airborne and ground based silver iodide seeding with radar surveillance
Time Period: 1993, 1994, 1995, 1997
Goal: Enhanced summer precipitation for hydroelectric power production

Project Area: Tsengwen Dam Drainage, Taiwan
Sponsor: Taiwan Central Weather Bureau
Technique: Ground based silver iodide seeding
Time Period: 1992, 1994
Goal: Enhanced summer precipitation for irrigation water supplies

Project Area: West Central Texas Near San Angelo
Sponsor: City of San Angelo, Texas
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1985, 1986, 1987, 1988
Goal: Enhanced summer precipitation for municipal water supplies

Project Area: Edwards Plateau Northwest of San Antonio
Sponsor: Edwards Underground Water District, San Antonio, Texas
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1985, 1986
Goal: Enhanced summer precipitation for municipal water supplies

Project Area: South Central Texas North of Corpus Christi
Sponsor: City of Corpus Christi, Texas
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1985
Goal: Enhanced summer precipitation for municipal water supplies

Project Area: Pine Valley Mountains in Southwestern Utah
Sponsor: Washington County Water Conservancy District and Utah Division of Water Resources
Technique: Ground based silver iodide seeding
Time Period: 1985-1987
Goal: Enhanced winter precipitation for municipal and irrigation water supplies

Project Area: Southern Delaware
Sponsor: Delaware Department of Agriculture
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1985
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Abu Dhabi, United Arab Emirates
Sponsor: Abu Dhabi Municipality
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1982
Goal: Enhanced winter precipitation for agricultural water Supplies

Project Area: Catalina Island, California
Sponsor: Southern California Edison, Co.
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1977 - 1978
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Bulloch County, Eastern Georgia
Sponsor: Drought Relief Fund
Technique: Airborne silver iodide seeding with radar Surveillance
Time Period: 1977
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Southern Georgia
Sponsor: Southern Georgia Rain Gain
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1977
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Burke County, Eastern Georgia
Sponsor: Burke County
Technique: Airborne silver iodide seeding with radar surveillance
Time Period: 1977
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Polk County, Oregon
Sponsor: Polk County
Technique: Airborne dry ice seeding
Time Period: 1977
Goal: Enhanced winter precipitation for agricultural water supplies

Project Area: Deschutes River Drainage, Central Oregon
Sponsor: Portland General Electric Company
Technique: Ground based silver iodide seeding
Time Period: 1964-1965; 1974-1976
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Chelan Lake Drainage, Central Washington
Sponsor: Chelan Public Utility District
Technique: Airborne dry ice seeding
Time Period: 1976 - 1977
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Baker River Drainage, Northern Washington
Sponsor: Puget Power Company
Technique: Airborne dry ice seeding
Time Period: 1976 -1977
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Skagit River Drainage, Northern Washington
Sponsor: Seattle City Light Company
Technique: Airborne dry ice seeding
Time Period: 1976 - 1977
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Lake Spalding Drainage, in the Northern Sierra Nevada of California
Sponsor: Pacific Gas and Electric Company
Technique: Airborne silver iodide seeding
Time Period: 1976 - 1977
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Heritage and Mona Reservoir Areas, Central Jamaica
Sponsor: Kingston Water Commission
Technique: Airborne silver iodide seeding
Time Period: 1976
Goal: Enhanced summer precipitation for municipal water supplies

Project Area: Port of Ensenada, Mexico
Sponsor: Insisa
Technique: Ground based silver iodide seeding
Time Period: 1970 - 1976
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Northwestern South Dakota
Sponsor: South Dakota Weather Control Commission
Technique: Airborne silver iodide seeding
Time Period: 1975
Goal: Enhanced summer precipitation and hail suppression for agricultural crops

Project Area: Coeur D'Alene Lake Watershed, Northern Idaho
Sponsor: Washington Water and Power Company
Technique: Ground based silver iodide seeding
Time Period: 1950-1951; 1952-1960; 1966-1971; 1973-1974
Goal: Enhanced fall - early winter precipitation for hydroelectric power production

Project Area: Hungry Horse Reservoir Area, Northwestern Montana
Sponsor: Bonneville Power and Light Company
Technique: Ground based silver iodide seeding
Time Period: 1966 - 1971
Goal: Enhanced winter precipitation for hydroelectric power generation

Project Area: San Benito County, California
Sponsor: San Benito County
Technique: Ground based silver iodide seeding
Time Period: 1964 - 1966
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Owyhee Reservoir, Southwestern Idaho
Sponsor: Board of Control - Owyhee Project
Technique: Ground based silver iodide seeding
Time Period: 1954-1956; 1959-1962
Goal: Enhanced winter precipitation for irrigation water supplies

Project Area: Ventura County, California
Sponsor: Ventura County
Technique: Ground based silver iodide seeding
Time Period: 1957 - 1960
Goal: Enhanced winter precipitation for irrigation and municipal water supplies

Project Area: Santa Ana River Basin, California
Sponsor: Santa Ana River Weather Corporation
Technique: Ground based silver iodide seeding
Time Period: 1956 - 1960
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Lake Almanor Drainage, in the Northern Sierra Nevada of California
Sponsor: Pacific Gas and Electric Company
Technique: Ground based silver iodide seeding
Time Period: 1952 - 1960
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Mokelumne & Stanislaus Rivers, in the Central Sierra Nevada of California
Sponsor: Pacific Gas and Electric Company
Technique: Ground based silver iodide seeding
Time Period: 1952 - 1960
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Campbell River Drainage, British Columbia
Sponsor: British Columbia Hydro Company
Technique: Ground based silver iodide seeding
Time Period: 1954 - 1960
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Southern Cascades, Oregon
Sponsor: California-Oregon Power Company
Technique: Ground based silver iodide seeding
Time Period: 1951 - 1960
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Crane Valley in the Central Sierra Nevada of California
Sponsor: Pacific Gas and Electric Company
Technique: Ground based silver iodide seeding
Time Period: 1954 - 1959
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: San Diego County, California
Sponsor: San Diego County Weather Corporation
Technique: Ground based silver iodide seeding
Time Period: 1950-1951; 1956-1957
Goal: Enhanced winter precipitation for municipal water supplies

Project Area: Ocean Falls, British Columbia
Sponsor: Crown-Zellerbach Paper Company
Technique: Ground based silver iodide seeding
Time Period: 1955 - 1957
Goal: Enhanced winter precipitation for hydroelectric power production

Project Area: Decatur and Clarke Counties, Iowa
Sponsor: The Decatur County Weather Modification Association
Technique: Ground based silver iodide seeding
Time Period: 1957
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Greene, Boone and Story Counties, Iowa
Sponsor: Central Iowa Modification Association
Technique: Ground based silver iodide seeding
Time Period: 1957
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Dallas County, Iowa
Sponsor: Dallas County Weather Modification Group
Technique: Ground based silver iodide seeding
Time Period: 1957
Goal: Enhanced summer precipitation for agricultural water supplies

Project Area: Southeastern Idaho
Sponsor: Salmon River Canal Company, Oakley Canal Company, Cedar Mesa Reservoir and Canal Company
Technique: Ground based silver iodide seeding
Time Period: 1953 - 1955
Goal: Enhanced winter precipitation for irrigation water supplies