CITY OF LAREDO
CITY COUNCIL MEETING
CITY COUNCIL CHAMBERS
1110 HOUSTON STREET
LAREDO, TEXAS 78040
5:30 P.M.

M99-R-20 **M I N U T E S** **JULY 19, 1999**

I. CALL TO ORDER

With a quorum present Mayor Elizabeth G. Flores called the meeting to order.

II. PLEDGE OF ALLEGIANCE

Mayor Elizabeth G. Flores led in the Pledge of Allegiance.

III. ROLL CALL

IN ATTENDANCE:

Elizabeth G. Flores,	Mayor
Alfredo Agredano,	Councilmember, District I
Louis Bruni	Councilmember, District II
John C. Galo,	Councilmember, District III
Cecilia May Moreno,	Councilmember, District IV
Eliseo Valdez, Jr.	Councilmember, District V
Joe A. Guerra,	Councilmember, District VI
Mario G. Alvarado	Councilmember, District VII
Consuelo "Chelo" Montalvo,	Councilmember, District VIII
Gustavo Guevara, Jr.,	City Secretary
Florencio Pena, III	City Manager
Jaime L. Flores,	City Attorney

IV. INTRODUCTORY ORDINANCE

1. Authorizing the City Manager to execute a lease with the City of Laredo Engineering Department-Construction Division for approximately 743 square feet of office space constituting Suites No. 4 and 6 of Building No. S-1 located at 1718 E. Calton Road.
   1. Lease term is for three (3) years commencing October 1, 1999 and ending September 30, 2002, and may be extended for two (2) terms of one (1) year each ending on September 30, 2003 and September 30, 2004.
   2. Monthly rent shall be $805.00 and will be adjusted annually during the primary and extension teams of this lease according to changes in the Consumer Price Index.

Ordinance Introduction: City Council

2. Authorizing the City Manager to execute a lease and travel agency concession agreement with Manwani' Enterprises, Inc., a Texas Corporation, d/b/a Travel-N-Tours for approximately 400 square feet constituting Suite No. 100 on the first (1st) floor in the central portion of the terminal building located at 5210 Bob Bullock Loop. Monthly rent shall be $508.33.

   Ordinance Introduction: City Council

3. Authorizing the City Manager to execute a lease with Webb County for approximately 4,378 square feet constituting Building No. 1228 and 1229 located at 4704 Naranjo Street. These buildings are occupied by Laredo Webb County Community Action Agency -Floyd Day Care Center.
   1. Lease term is for one (1) year commencing on May 1, 1999 and ending on April 30, 2000, and may be extended for one (1) year ending on April 30, 2001.
   2. Monthly rent shall be $1,250.00. Previous monthly rent was $1,026.02.

   Ordinance Introduction: City Council

4. Street Improvements Project 61-B; declaring the necessity for and ordering the paving and improvements of certain streets in the City of Laredo, Texas; approving the street paving assessment roll and cost estimates as prepared by the City Engineer; and directing the City Secretary to file this Ordinance with the County Clerk as a notice of its enactment and ordering and setting a public hearing on the 7th day of September, 1999.

   Ordinance Introduction: City Council

5. Amending Division 3 (Rates and Charges) of Chapter 31 (Utilities) of the Code of Ordinances, specifically Section 31-138 which provide for water rate charges, by increasing each tier in the residential escalating rate structure by 5.6% increasing the commercial minimum rate from $11.00 to $14.00, and increasing each tier in the commercial escalating rate structure by 3%. Providing for publication and effective date.

   Fernando Roman, Utilities Director, made the presentation and spoke in reference to a rate increase for additional capital.

   Florencio Pena, City Manager, explained that August 4th would be the next available time to post the item for public hearing and action. He added that the proposal is a two phase increase to be effective October 1, 1999 and then the second phase would be October 1, 2000.

Motion setting the date of August 4th for a public hearing.

Moved : Cm. Galo
Second: Cw. Moreno
For: 8 Against: 0 Abstain: 0

V. FINAL READING
Internet Available: http://www.cityoflaredo.com

Motion to waive the final reading of ordinances #99-O-197 #99-O-198, #99-O-199, #99-O-200, #99-O-201, #99-O-202, #99-O-203, #99-O-204, and #99-O-205.

Moved : Cm. Bruni
Second: Cm. Agredano
For: 8 Against: 0 Abstain: 0

6. 99-O-197 Ordinance authorizing the City Manager to execute a lease agreement with Texas/Illinois_Cellular Limited Partnership, by its general partner Southwestern Bell Wireless, Inc. to install, construct, operate, and maintain roof top mounted cellular antennas, appurtenant equipment and appropriate number of equipment buildings the Laredo Transit Center, located at 1301 Farragut, Laredo, Webb County, Texas.
   1. Term of lease shall be fifteen years commencing on June xx, 1999 and ending June xx, 2014, with an option for only one (1) successive renewal term of five (5) years.
   2. The annual base rent shall be $7,700.00 each year during the term of the lease and will be adjusted on each anniversary of the commencement date according to changes in the Consumer Price Index, providing for effective date. (City Council)

   Motion to approve Ordinance #99-O-197.

   Moved : Cm. Bruni
   Second: Cw. Montalvo
   For: 8 Against: 0 Abstain: 0

99-O-198 Ordinance authorizing the City Manager to execute a lease with L.A. Ventures, Inc., Inc.,_for approximately 289 square feet of office space constituting Suite No. 8 of Building No. S-1 located at 1718 E. Calton Road.
   1. Lease term is for one (1) year commencing May 1, 1999, and ending April 30, 2000, and will be extended for one (1) year ending April 30, 2001.

Lease may be terminated by either party upon giving a sixty (60) day written notice.
2. Monthly rent shall be $361.25 and will be adjusted annually during the primary and extension term of this lease according to changes in the Consumer Price Index. Previous monthly rent was $339.99. (City Council)

Motion to approve Ordinance #99-O-198.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-199 Ordinance authorizing the City Manager to execute a lease with Border Maintenance Service, Inc.,_for approximately 2,304 square feet constituting Building #1421 located at 1817 Pappas Street at the Laredo International Airport.
1. Lease term is for one (1) year commencing July 1, 1999, and ending June 30, 2000,
2. Monthly rent shall be $725.00. Previous monthly rent was $650.00.
Leased premises are used for office space and maintenance service workshop. (City Council)

Motion to approve Ordinance #99-O-199.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-200 Ordinance authorizing the City Manager to execute a lease with Jose Mario Flores, Sole Proprietor, for approximately 8,184 square feet constituting Building #2075 located at 1720 Hillside Road at the Laredo International Airport.
1. Lease term is for 15 consecutive years commencing on August 1, 1999 and ending on July 31, 2014 and may be extended for two five year options ending on July 31, 2019 and July 31, 2024.
2. Monthly rent shall be $1,960.00 and will adjusted annually during the primary and extension terms of this lease according to changes in the Consumer Price Index, as well as appraisal on the 10th and 20th anniversary. (City Council)

Motion to approve Ordinance #99-O-200.

Moved : Cm. Bruni

Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-201 Ordinance authorizing the City Manager to execute a Foreign-Trade Zone Operators Agreement with Laredo Duty Free, Inc., to operate an approximately 10,000 square foot facility within Foreign-Trade Zone No. 94-Site 1 located at the Laredo International Airport for a term of ten (10) years. (City Council)

Motion to approve Ordinance #99-O-201.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-202 Ordinance closing as a public easement the west 97 feet of that section of the 100 block of E. Garfield Street between the east right-of-way line of Monterrey Avenue and Sanders Avenue north of the Texas-Mexican Railroad tracks, situated in the Eastern Division, City of Laredo, County of Webb, upon closing of said street, the City will retain the entire property as a utility easement and approve the improvement plan whereby the Texas-Mexican Railroad Company has agreed to provide, install and maintain the improvements for the elimination of any and all indications that said property was previously a street, at no cost to the City, and providing for an effective date. (City Council)

Motion to approve Ordinance #99-O-202.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-203 Ordinance closing as a public easement that section of the 800 block of Pace Street between San Bernardo and Santa Ursula Avenue situated in the Western Division, City of Laredo, County of Webb, Texas and providing for an effective date. **(Mario G. Alvarado)**

Motion to approve Ordinance #99-O-203.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-204 Ordinance setting the maximum speed limits in that

portion of Loop 20 from IH35 to State Highway 359, within the City limits of Laredo, Webb County, Texas, as 45 MPH, 50 MPH, 55 MPH, and 60 MPH. (City Council)

Motion to approve Ordinance #99-O-204.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

99-O-205 Ordinance amending the FY1998-99 budget of the Laredo Municipal Transit Systems Fund Revenues to appropriate funds in the amount of $837,600 from the Texas Department of Transportation Grant Agreement No. TX 03-0204; providing for grant funds to be deposited in the City Transit Department Accounts, and transferring $209,400 from the Transit Sales Tax process budget reserve account to automotive. (City Council)

Motion to approve Ordinance #99-O-205.

Moved : Cm. Bruni
Second: Cw. Montalvo
For: 8 Against: 0 Abstain: 0

VI. RESOLUTIONS

7. 99-R-096 Authorizing the City Manager to accept as a donation from the U.S. Customs Service a trained Belgian Malanois (K-9) to be used by the Laredo Police Department for law enforcement purposes. The K-9 is strictly a donation and will be at no cost to the City.

Motion to approve Resolution #99-R-096

Moved : Cw. Montalvo
Second: Cm. Bruni
For: 8 Against: 0 Abstain: 0

8. 99-R-097 Accepting the donation of a 90-foot strip of land containing 1.702 acres, more or less, from Killam Ranch Properties, Ltd., et al, as right-of-way necessary for the extension of University Boulevard, West of Loop 20, to intersect with Casa Verde Road. Said 90-foot strip of land being situated in Porcion 26, Abstract 282, City of Laredo, Webb County, Texas; being more particularly described by metes and

bounds.

Motion to approve Resolution #99-R-097.

Moved : Cw. Montalvo
Second: Cm. Bruni
For: 8 Against: 0 Abstain: 0

9. 99-R-098 Supporting a request from Compass AirWays, Inc., for the issuance of Industrial Revenue Bonds in the amount of $10.0 million for the purpose of constructing airline offices and aircraft hanger facilities at the Laredo International Airport and for the acquisition of aircraft and authorizing the City Manager to execute any document related to supporting the issuance of said Industrial Revenue Bond. The proposed Industrial Revenue Bonds will be serviced by Compass AirWays, Inc., and the City will not be liable for any debt service.

Jose Luis Flores, Airport Director, made the presentation and asked that the item be tabled. He added that this item is also related to item #18 and asked that it also be tabled.

Motion to table.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

VII. MOTIONS

10. Consideration to award contract number 99-070, to the SOLE BIDDER, Haz Stor, Des Plaines, Illinois, in the amount of $23,980.00, for the purchase of two, free standing storage and containment buildings. These items are being purchased for the household hazardous waste collection facility. One of the buildings will house chemicals and the other will be used for highly flammable and combustible chemicals.

Motion to approve.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

11. Consideration to reject the SOLE BIDDER, submitted by Cantu America Construction Company, Laredo, Texas, in the amount of $1,077,942.00 and to re-bid the project as

recommended by the project consultant Grove and Associates, San Antonio, Texas for the East Hachar Recreation Center located at 3000 Guadalupe Street to include the addition of a Police Substation and a Storage Room. Funding is available in the Community Development East Hachar Recreation Center.

Motion to approve.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

12. Consideration to award a construction contract to the LOWEST BIDDER, Ramos Industries, Inc., Laredo, Texas in the bid amount of $124,568.00 for the Mann Road Drainage Improvements Project, a 50/50 cost sharing project by the City of Laredo and Terra Genesis Housing, Inc. Funding is available in the 1998 CO Issue Laredo Manor and private contributions.

Motion to approve.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

13. Consideration to award contract number FY99-120, to the LOW BIDDER, CSR Hydro Conduit, San Antonio, Texas, in the amount of $43,068.00, for the purchase of concrete box culverts. These box culverts are needed for the Martingale Drainage Improvement Project. Delivery is expected within three weeks.

Motion to approve.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

14. Consideration to award contract number 99-117, to the LOW BIDDER, D.S.I. Consulting, McAllen, Texas in the amount of $19,139.00, for the purchase of a server computer for the M.I.S. Department. This high capacity computer will be used for internet access for all City users and for the City's customer service software database. Delivery is expected within thirty days.

Motion to approve.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

15. Consideration to award contract to the LOW BIDDER, Valu Care Cleaners, Laredo, Texas in the estimated amount of $50,700.00, for providing laundry dry cleaning services for Police Department uniforms. The contract pricing is approximately 10% less than the previous year.

    Motion to approve.

    Moved : Cm. Bruni
    Second: Cm. Galo
    For: 8 Against: 0 Abstain: 0

16. Consideration to award contract number 99-100, to the LOW BIDDERS, Municipal Pipe and Fabricating Co., Mission, Texas in the estimated amount of $396,512.47, and Hughes Supply Inc., Corpus Christi, Texas, in the estimated amount of $83,320.00, for the purchase of PVC pipe. These materials are purchased on an as needed basis by the Utilities Department - Water Operations for construction and repair projects.

    Motion to approve.

    Moved : Cm. Bruni
    Second: Cm. Galo
    For: 8 Against: 0 Abstain: 0

17. Consideration to accept the re-roofing of the Ladrillera Community Center and approval of final payment in the amount of $17,061.10 to Sechrist-Hall Company, Corpus Christi, Texas. Funding is available in the Capital Improvement Projects Roofing-Ladrillera.

    Motion to approve.

    Moved : Cm. Galo
    Second: Cm. Bruni
    For: 8 Against: 0 Abstain: 0

18. Consideration to authorize the City Manager to execute a Letter of Intent with Hugh Seaborn d/b/a Compass AirWays, Inc. to provide scheduled air transportation services to the City of Laredo.

    Motion to table.

    Moved : Cm. Galo
    Second: Cm. Bruni
    For: 8 Against: 0 Abstain: 0

19. Consideration to amend a contract with Texas A&M International University Dance Performance Troupe for Fiscal Year 1998-1999 in the increased amount of $1,000; and authorize the City Manager to implement the contract.

    Motion to approve.

    Moved : Cm. Galo
    Second: Cm. Bruni
    For: 8 Against: 0 Abstain: 0

20. Consideration to award contracts to multiple, qualified book vendors for library materials collection development for books, databases and audio-visual products not to exceed $90,198 in FY1998-1999; not to exceed approved annual budget amount of FY1999-2000. Contracts will expire July 20, 2001 and are subject to appropriation..

    Motion to approve.

    Moved : Cm. Galo
    Second: Cm. Bruni
    For: 8 Against: 0 Abstain: 0

21. Consideration to approve the participation of the City of Laredo as a member in the Border Trade Alliance (BTA) Investorship Program in the amount of $10,000.00 as a Diamond Investor for participation in efforts designed to facilitate trade and trade related activities. Members will receive many benefits including active participation in Congressional and Federal Agency visits in Washington, D.C. and will enable the City to keep abreast of all trade related issues.

    Motion to approve.

    Moved : Cm. Galo
    Second: Cm. Bruni
    For: 8 Against: 0 Abstain: 0

22. To modify the 1996 City of Laredo Medical Plan Booklet, Page 51, Section Entitled: "Termination Date of Coverage - Retired Persons and their Dependents."

    Dan Migura, Administrative Services Director, explained that they have revised the language on the Plan Benefit Booklet to allow the surviving spouse of retirees who are deceased to continue their benefits until age 65 or medicare eligible. He added that at that point, they will be eligible either to our supplemental plan once they qualify for Parts A and B of medicare.

Motion to approve.

Moved : Cm. Galo
Second: Cm. Bruni
For: 8 Against: 0 Abstain: 0

VIII. STAFF REPORTS

23. Report by the Laredo Police Department and the Laredo Fire Department concerning the enforcement of the fireworks ordinance during 4th of July weekend.

Agustin Dovalina, Police Chief, reported that they worked in conjunction with the Fire Department and conducted a joint enforcement effort during the July 4th weekend. They had 10 officers working in a joint effort with the firefighters in responding to fireworks complaints.

He reported that there were no major incidents regarding fireworks, however 132 citations were issued. There were over 87 reports of recoveries that totaled approximately $3,000 to $4,000 worth of confiscated fireworks. It was a relatively safe weekend.

Based on what they saw they more or less know what to expect on the coming New Year's Day Celebration and they need to prepare for that particular week. He said they have a glance at what they will be looking at and are actively preparing a plan of action.

Mayor Flores said that they should be given some help for the New Year Celebration because it will be the end of 1999 and the 20th Century. They are planning in having very large fireworks display for the citizens of Laredo and Nuevo Laredo. They are hoping that everyone instead of buying their own fireworks and having their own celebration will come to a very large celebration and that way, police and fire officers can be used to actually protect the events downtown plus the celebration instead of confiscating and fining people.

24. Status report on the quality of air in Laredo, Texas.

Rogelio Garcia, Assistant Health Director, made the presentation before City Council.

The City of Laredo, Health Protective Services Division, has been operating a CAMS (Continuous Air Monitoring Station) under contract with TNRCC (Texas Natural Resource Conservation Commission) at the LCC grounds since October, 1995. The

station consists of a self-contained modular unit with seven (7) air samplers which monitor air pollutants in the Laredo area. They are set up to monitor:

-Ozone
-Carbon monoxide
-Volatile organic compounds
-Polynuclear aromatic hydrocarbons
-Pesticides
-Solid suspended particulate matter under 10 microns, and under 2.5 microns
-Lead
-Arsenic

Although Health Department personnel maintain/operate this site, data collected is forwarded automatically to the TNRCC Central Computer in Austin where it is analyzed, validated, and catalogued.

Since the beginning operation of the CAMS in 1995, there have been only two (2) instances where EPA standards have been exceeded:

The first on October 31, 1997, when the station showed a reading of 186 micro particulates per cubic meter of air exceeding the EPA standard of 155 particulates per cubic meter of air for less than 8 hours. This was caused by heavy road construction in the area of LCC.

The second incident occurred in December 18, 1998, the ozone level on this date registered at 126 PPB (parts per billion) for one (1) hour; this exceeded the EPA standard which is 125 PPB. During the second incident which exceeded the EPA standard, it was explained by meteorologists that there had been a mass of stagnant air flowing over the Nuevo Laredo area that caused this reading. In order for EPA to issue a warning, there must be three (3) instances of exceeding the EPA standards in a three (3) year period.

Data collected by this station shows that the air quality in the area is up to EPA standard.

He added that Ozone and Carbon Monoxide are measured daily for 8-hour periods. The remaining are measured for 24-hour periods once every six days. The equipment belongs to TNRCC, but the environmental section staff do the maintenance and the information is transmitted to Austin electronically.

Cm. Bruni asked what criteria was used in putting the monitor where it is placed now? He asked if they can see to placing

monitors at our International Bridge and one at our airport where the real problems are?

Mr. Garcia said they have one monitor installed already. In the fall of 1999 they will have another CAMS station adjacent to Bridge II and will be on operation on the fall of 1999. The reason the first monitor was installed where it is now is because TNRCC had an agreement with LCC at that time. They had some instruments located at the LCC campus so it just facilitated the continuation of installing the equipment there so in essence the first site was selected by TNRCC. In reference to the second monitor, TNRCC and EPA communicated on the matter.

Cm. Bruni suggested that for the future, it would be something that would be in order, that they install these monitors in our most polluted areas or where we could get better readings on what is really going on per say, our bridges and our airport.

He also spoke of a letter mailed to TNRCC that was generated out of the Airport Director's Office in reference to jet fuel motors that were being monitored south of the airport. He said he requested (through a letter to the City Manager) that we see if we could get the same test done west of the airport at Los Ebanos area. He said he never received a report on this issue and asked if they can provide him such a report.

Cm. Alvarado said he does not know if it is feasible to have a mobile station that can be moved to different parts of the city to take readings. He added that at the rate we are growing and with the concerns we have, especially Bridge IV which will be geared out on that direction, that if it is feasible, that a mobile unit go out and monitor the air quality levels at different parts of the city not only one part. It is something that should be looked at to see if it is cost effective.

Mayor Flores asked that they bring back a recommendation to City Council as to what the process is, what the criteria is, what would be the best place to install such monitors, that they also include and review the issue of a mobile unit and what the feasibility of that would be.

City Manager Pena said one of the concerns is that EPA has not removed a particular matter from one of the pollutants that they consider somewhat toxic and that some how causes pollution and reduces the air quality standards. He further stated that a city can loose substantial amount of transportation funds in the event to be found to be at that level and of course, Laredo is subject to that.

He explained that in reference to the location, they asked TNRCC to find a more central location within the city because we thought it would be more appropriate in terms of the air quality in Laredo. What they are measuring in the bridge in Nuevo Laredo is not necessary Laredo air. If they find us to be not compliant there, this next year we could be facing some difficult problems in terms of funding and not having much control over the quality of air in Nuevo Laredo. There are other issues that we need to be concerned about, but this is all being funded by the federal government, we just lease the land to them. We did ask them to place it somewhere else, but they said "no". They wanted to measure right there at the border.

Mayor Flores said that due to this Council's comments and our growth that she thinks it is necessary for us to request that more monitoring funding be given to this area just because of the enormous amount of transportation industry itself. This is not to say that they are not doing the right thing, but we have to know what things we have to do.

25. Report regarding the Board of Trustee Election for the Texas Municipal League (TML) Group Benefits Risk Pool Members Region 7 Position, with possible action.

Motion to re-nominate Cw. Moreno to the Board of Trustees Election for the Texas Municipal League Group Benefits Risk Pool Members Region 7 position.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

IX. COMMUNICATIONS

a. Cynthia Conchas, representing L.I.S.D., delivered a handout and spoke on a school children program called "Finger Prints" and explained 10 important key words pointed out by children that came out of a survey conducted at elementary, middle, and high school levels.

b. Jesus Ponce spoke in reference to Municipal Housing issues.

c. Cm. Bruni turned in for the record, the Weekly Weather Modification Report, the web page address, the Monthly Operational Report, the Summer Weather Modification Guide, Cloud Seeding in Perspective and Some thoughts about the business of cloud seeding and asked that it be placed in our web page and on our public access channel.

Cm. Bruni also wants the report to be placed in a link in our web page and to include their web page address also.

SOUTHWEST TEXAS RAIN ENHANCEMENT ASSOCIATION
WEATHER RESOURCES MANAGEMENT PROGRAM
1999 SEASON

MONTHLY OPERATIONAL REPORT #2
TO THE
BOARD OF DIRECTORS
SOUTHWEST TEXAS RAIN ENHANCEMENT ASSOCIATION
CARRIZO SPRINGS, TEXAS
JUNE 1999

ATMOSPHERICS INCORPORATED
5652 EAST DAYTON AVENUE
FRESNO, CALIFORNIA 93727

SOUTHWEST TEXAS RAIN ENHANCEMENT ASSOCIATION

WEATHER MODIFICATION PROGRAM

OPERATIONAL REPORT #2 FOR JUNE 1999

Following a quiet start in the first two weeks of June, the second day came with a vengeance. Ten storm days were noted. A total of 40.5 flight hours were logged during the 18 flights in June. A total of 304 AgI end-burning pyrotechnic flares were used. A total of 3,303 grams (18.3 pounds) of silver iodide were dispensed by end-burner pyrotechnic flares and liquid fuel generators. Seedable conditions were rated Excellent during 8 flights, Good during 8 flights, Fair during 1 flight, and poor during 1 flight. The final seeding flight in June was logged an the 25th.

Strong high pressure at the surface and ridging aloft dominated South Texas weather for the first couple weeks of June. This stable weather pattern prevented any regular cumulus or thunderstorm developments over the project area. The dry weather continued until the early morning hours of 12th when a mesoscale convective system from the Hill Country produced a severe squall line, which moved through the area. This squall line had very strong winds and lighting resulting in the National Weather Service issuing a Severe Thunderstorm Warning. No seeding was conducted due to the Severe Weather Warning (SWW).

A cold front and weak upper level trough moved over South Texas on the 14th Coupled with a very moist tropical air mass, this provided the conditions for the month's first seeding opportunity. This front would later stall and stretch across the region from Houston to Del Rio. For the period of 15th to the 17th, this front in combination

with daytime heating served as mechanism for destabilizing the atmosphere and producing scattered thunderstorms.

The overall synoptic trough pattern, continued over South Texas from the 18th to 21st and, with a developing tropical storm Adrian, in the Pacific and strong easterly fetch of moisture from the Gulf of Mexico, this allowed widespread precipitation across the target area. Rainfall amounts were very impressive during this time with aircraft operations focused on multiple seeding opportunities. As a matter of fact, so much rainfall had fallen in parts of the target area that on the 21st the National Weather Service issued a Flash Flood Warning for southwestern La Salle County. Seeding operations were redirected away from this area due to AI's strict No-Seed policy during Flash Flood Warning events.

On the 22nd and 23rd, weak high pressure nosed into the area allowing for the atmosphere to slightly dry out and inhibiting any thunderstorm development. However, on the 24th operations once again resumed when Sea Breeze convection from the Gulf of Mexico and daytime heating allowed for seedable activity to move into the target area. A tropical wave approached the area from the Gulf of Mexico on the 25th and, coupled with daytime heating, lead to scattered thunderstorms throughout the region. The month ended on a dry note when strong ridging and high pressure invaded into area preventing any regular cumulus or thunderstorm development from the 26th to the 30th.

STORM PERIOD OF 14 JUNE 1999, MONDAY

A cold front stretched from east Texas westward to Del Rio. Upper level charts showed a low centered over the Texas Panhandle with a trough curving southward through northeastern Mexico. Daytime heating, a very moist atmosphere, along with a cold front draped across the region triggered scattered thunderstorm development over the target area.

At 0730 radar surveillance began and at 0750 radar detected weak echoes scattered throughout northwestern Zavala County. A line extended southward towards southwestern Dimmit County with initial cloud tops of 21,000 feet. Activity showed continued strengthening so a seeding flight was launched at 0828 for the activity located in Dimmit and Zavala Counties.

The aircraft soon found good inflow and commenced seeding at 0858 over southwestern Zavala County. Radar showed seeded activity increasing in area coverage and cloud heights increasing to near 30,000 feet. Activity began moving northwestward out o f the target area at 0915, so the aircraft was redirected to southwestern Dimmit County where cloud activity was slowly developing. Initial radar measurements at 0920 showed cloud tops of this activity at 24,000

feet with intensity around 46 dBz.. At 0950 the aircraft continued

seeding the activity in southwestern Dimmit County with radar showing cloud tops near 40,000 feet with an intensity of 45 dBz. Activity continued to show very good results from seeding by increasing the rainfall area coverage and echo heights. At 1038, radar showed activity slowly moving northwestward out of the target area so the aircraft returned to Cotulla at 1045 for fuel and reflare plus a possible second mission.

Seedability: Good

Cloud conditions remained favorable over the area and a second seeding flight was launched at 1140. The aircraft was directed to southeastern Webb County where radar indicated echo heights at 30,000 feet and intensity near 38 dBz. At 1210 the aircraft soon found good inflow and began seeding southeastern Webb County. At 1230 radar showed the activity increasing in area coverage and tops growing to 36,000 feet. From 1230 to 1344, the aircraft continued seeding the cumulus clouds in southeastern Webb County with the airplane reporting a very good inflow of 900 feet per minute. At 1400, the plane had exhausted its supply of flares and returned to Laredo to refuel and reflare.

Seedability: Excellent

At 1415, radar indicated increasing activity in eastern Dimmit County with tops nearing 42,000 feet, so a third flight was launched from Cotulla at 1423. Radar showed a line of activity extending from eastern Dimmit County southward into northern Webb County with the top of one cell west of Cotulla at 42,000 feet and 39 dBz intensity. The pilot reported very good inflow and began seeding at 1428. At 1440, the pilot reported a well-defined shelf cloud with 1000 feet per minute inflow and continued seeding. Radar showed activity spreading in area coverage from eastern Dimmit County eastward into western La Salle County and then southward into northern Webb County. The activity had tops nearing 45,000 feet with 38 dBz intensity. The plane continued seeding this line of activity in western La Salle County from 1440 to 1542. At 1549, the plane returned to Cotulla. By 1550 the radar showed a seeded broad band of activity covering southwestern La Salle County and extending northeastward to northeastern La Salle with tops nearing 46,000 feet and intensity of 46 dBz.

Seedability: Excellent

At 1540, radar indicated increasing activity over southeastern Webb County with tops nearing 30,000 feet. At 1550 a seeding flight was launched on this activity. The plane soon arrived at the cloud area and commenced seeding. At 1608, the pilot reported very good inflow

of 1000 feet per minute. Further radar images showed tops increasing to 36,000 feet with intensity around 40 dBz at 1630. At 1655, radar showed the seeded cells had tops of 50,000 feet with an intensity of 40 dBz and it had increased in area coverage. At 1745, the plane returned to Laredo because the activity was moving northeast out of the target area. Radar surveillance continued into the evening hours but no seedable activity was detected.

Seedability: Excellent

STORM PERIOD OF 15 JUNE 1999, TUESDAY

An upper level trough from Oklahoma extended southward into central Texas with a weak cold front draped from east Texas westward toward Del Rio. Mostly cloudy skies in the morning gradually cleared to partly cloudy skies in the afternoon. With a very moist atmosphere at the surface and precipitable water values above two inches, plus afternoon heating and a cold front draped across the region, scattered convection across the target area was soon a reality.

At 1215, radar showed activity in northern La Salle County with tops nearing 27,000 feet and intensities of 35 dBz.. Another cell in northern Webb County had tops of 25,000 feet and intensities of 37 dBz. Clouds continued to grow with 35,000 feet tops in southeastern Zavala and northwestern La Salle Counties. At 1425 a seeding flight was launched. The aircraft reported moderate inflow at 1426 and began seeding the cell over northwestern La Salle County. By 1430 the radar noted a line of activity from southeastern Dimmit and northwestern La Salle Counties stretching northeastward into central Frio County. All cells were moving to the northeast. From 1428 to 1442, the plane worked this southwest to northeast line. As the seeding evolved, the line produced growing cloud tops and expansion in area coverage.

At 1507, the plane was redirected to an area of growing convection in southwestern La Salle County. At 1515 the radar showed a line with cloud tops to 28,000 feet and 37 dBz intensities extended from Cotulla southwestward into north central Webb County. The plane proceeded to seed this line of activity from 1507 to 1650. The activity increased to 40,000 feet and moved northeastward across central Webb and La Salle Counties. The aircraft returned to base at 1710 to refuel and reflare. Radar surveillance continued into the evening hours but no further seedable activity appeared in the target area.

Seedability: Excellent

STORM PERIOD OF 16 JUNE 1999, WEDNESDAY

The morning surface charts showed a low pressure area located over central Oklahoma with a cold front curving southwestward through the Texas Panhandle and into eastern New Mexico. Very moist and unstable conditions existed at surface with dew points in the low 70's. An upper level trough stretched from Nebraska southward into central Texas. A short-wave moving in the mean trough over central Texas, coupled with daytime heating and moist conditions at the surface, sparked scattered thunderstorms throughout the target area.

Radar showed cloud activity increasing in Webb County with tops nearing 26,000 feet and maximum intensities of 43 dBz. At 1340, clouds continued to grow to 28,000 feet with a line extending from northwestern Duval through southeastern La Salle and then southwestward through southern Webb County. The aircraft was launched at 1340. The pilot soon reported good inflow of 1200 feet per minute in north central Webb County and continued seeding this line. At 1530, radar indicated cloud tops had in creased to 40,000 feet with 42 dBz intensity with general cell movement to the northeast. The previously seeded cell expanded in area coverage and had a uniform distribution of precipitation. At 1600, the plane returned to base to reflare and refuel and be ready for a possible second mission.

Seedability: Excellent

A second flight for the afternoon was launched at 1645 as radar indicated two cells in southwestern La Salle County with tops of 27,000 feet and 36 dBz intensity. Another cloud cell was noted in northern Webb County with tops of 26,000 feet and 36 dBz. intensity. At 1740 the pilot reported experiencing very good inflow of 900 feet per min and had commenced seeding with the wing tip generator. Between the time period of 1720 and 1800, the plane continued seeding the activity in southeastern Dimmit, northern Webb, and southwestern La Salle counties. At 1750 the radar noted all seeded activity had expanded northeastward in coverage towards Cotulla, and had increased in echo tops to 30,000 feet. Cloud developments began to dissipate so the pilot returned to Laredo at 1815 to refuel and reflare. Radar surveillance continued into the early evening hours but no further seedable activity was detected.

Seedability: Good

STORM PERIOD OF 17, JUNE 1999, THURSDAY

The morning surface map showed a weak synoptic scale trough extending from Houston westward toward Del Rio. Upper level charts indicated a trough extending from northeastern Texas southwestward towards Brownsville. With dew points in the lower 70's and afternoon heating, the cool upper level trough caused isolated air mass

thunderstorms to develop across the region.

Radar surveillance began at 1030. At 1305, radar indicated numerous small cells over northern Webb and southern La Salle Counties with tops of 21,000 feet and 41 dBz intensity. At 1400 the aircraft launched for a seeding flight due to increasing cloud activity over northern Webb County. At 1404, the pilot reported good inflow and commenced seeding over central Webb County with the wing tip generator and flares. At 1420 the plane was redirected to a larger cell with 31,000 feet tops and moving into eastern Zavala County from Frio County. The plane proceeded to seed an east-west line of activity in eastern Zavala County with the general direction of movement toward the west. The seeded cell soon increased in area coverage and intensity.

At 1520, the plane was directed to increasing cloud activity in south central La Salle County. At 1536 radar indicated an east-west line had formed in south central La Salle with tops at 33,000 feet and 40 dBz. intensity. The seeded area showed increasing tops and longer duration of activity relative to nearby cells. The plane continued seeding this line until 1605 when the radar indicated the activity was dissipating with tops lowering and intensities decreasing. At 1636, the plane returned to Cotulla to refuel and reflare for a possible second mission.

Seedability: Good

A second seeding flight was launched at 1725 for cloud activity located in southern Webb County. At 1758, radar indicated a cell with tops of 27,000 feet and 37 dBz. intensity in south central Webb County. The plane arrived in the proper area at 1804 and began seeding. At 1830, radar noted the tops had grown to 32,000 feet and an intensity of 39 dBz. The plane continued to seed this activity until 1830 when the cumulus cells drifted westward into Mexico. The pilot returned to Laredo at 1900. Radar showed activity increased in area coverage, intensity, and cloud top heights. Radar surveillance continued into the evening hours but no further seedable activity appeared in the target area.

Seedability: Good

STORM PERIOD OF 18, JUNE 19, FRIDAY

The morning's surface maps plotted an easterly fetch of moisture from the Gulf of Mexico with dew points in the low 70's. Upper level charts indicated a trough from the Texas panhandle extending southward into west Texas. With the combination of moisture convergence at the surface from southeasterly flow from the gulf and an outflow boundary from a storm in north Texas, this caused isolated

thunderstorms to develop over the target area.

Radar surveillance began at 1100 to monitor the building cumulus that were around the target area. At 1630 radar showed activity moving into northeastern Webb County with tops of 30,000 feet and maximum intensity of 43 dBz. The aircraft was launched at 1642. At 1658, the plane began seeding in northeastern Webb and southeastern La Salle Counties with the cloud activity slowly drifting west-southwestward. The seeded cell showed growing cloud tops, more area coverage, and longer duration of activity relative to nearby clouds. The plane continued seeding this cell until 1804 when the activity began to dissipate with lowering cloud tops. At 1830, the plane returned to Laredo to refuel and reflare. Further radar surveillance showed no seedable activity in the target area for the rest of the evening.

Seedability: Good

STORM PERIOD OF 19, JUNE, 1999, SATURDAY

The early morning surface maps noted a low over the Panhandle of Texas with a trough curving southwestward into southern New Mexico. Very moist conditions existed at the surface with dew points in the low 70's. Upper air charts indicated a trough over central Oklahoma extending southward into south Texas. Deep moisture at the surface from the Gulf and southwesterly flow aloft from Tropical Storm Adrian in the Pacific created an environment Ripe for widespread convection and rain. In combination with a deep moisture layer and daytime heating, widespread convection developed across the target area during the afternoon hours.

Radar surveillance began at 1030 to monitor the developing cumulus around the target area. At 1410, radar indicated cells with tops to 23,000 feet and 44 dBz intensities in northeastern Webb County. The pilot launched a seeding flight at 1422. The plane reported very good inflow in northeastern Webb County and began seeding at 1447. At 1505, the seeded activity increased in area coverage with tops exploding to 40,000 feet and 45 dBz. The plane continued to seed Webb County. At 1610, the plane was redirected to a developing line of 33,000 feet cells over south central La Salle County. The plane proceeded to seed this line of activity with radar showing the tops growing to 43,000 feet and expansion in area coverage across most of La Salle County. These seeded clouds lasted longer compared to adjacent non-seeded cells. Ultimately the aircraft exhausted its flares and returned to Cotulla to refuel and reflare at 1714.

Seedability: Excellent

At 1810 a second seeding flight was launched on cloud activity in

central Zavala County. Radar noted cloud tops of 30,000 feet and 39 dBz intensity. At 1835 the plane arrived at the cloud area and commenced seeding. The pilot eventually found very weak inflow and the radar indicated the tops were soon collapsing to 23,000 feet. The plane returned to base at 1919 due to the dissipating cloud activity. Further radar surveillance in the evening showed no seedable activity in the target area.

Seedability: Poor

STORM PERIOD OF 20 JUNE 1999, SUNDAY

The morning surface maps noted a strong moisture surge from the Gulf of Mexico. Upper air charts indicated a trough from central Oklahoma extending southward through central Texas. The morning soundings showed a very deep moisture layer up to 700 mb with satellite imagery showing a moisture tap from Hurricane Adrian in the Pacific. All of these conditions combined to give south Texas a very wet Father's Day. In the morning seeding conditions were poor due to low visibility and very light stratiform precipitation from clouds with tops of 20,000 feet throughout the target area. However in the afternoon partly cloudy skies and light convection in the southern part of the target area evolved from daytime heating.

In early afternoon the radar showed a 27,000 feet cell in Southwestern Dimmit County and a seeding flight was launched at 1340. At 1413, the plane arrived in the designated area and commenced seeding. The Plane continued to seed individual cells in Southwestern Dimmit and northwestern Webb Counties until 1532. Radar indicated that the cloud activity was expanding in area coverage and tops were growing to 33,000 feet. Ultimately, the plane was redirected to a cell in central Webb County that was 24,000 feet in height and had a 36 dBz intensity level. The pilot found very little inflow and soon the cell dissipated. The aircraft returned to the cloud activity in southeastern Dimmit County and seeded until the flares were exhausted.

At 1705, the plane returned to base to refuel and reflare for a possible second mission. Radar surveillance continued but no further seedable activity appeared in the target area.

Seedability: Good

STORM PERIOD OF 21 JUNE 1999, MONDAY

The morning surface map showed moderate southeasterly flow with dew points in the mid 70's. Upper air charts indicated a trough extend from Oklahoma southward into central Texas. The cool air aloft from the trough plus daytime heating, triggered scattered convection across the target area.

At 1400, echo tops neared 33,000 feet with 44 dBz intensity over southern Webb County. A seeding flight was launched at 1412. At 1452, the plane experienced good inflow in southern Webb County and began seeding. However, the radar showed the cell beginning to dissipate. The pilot reported seeing very little precipitation at cloud base so the plane was redirected to new development in central Zavala County with tops of 33,000 feet and 46 dBz intensity. At 1557, the plane arrived at the new cloud area and reported good inflow and began seeding. Radar showed this cell responding well to seeding with tops increasing to 36,000 feet and extended area coverage. The cloud activity began to diminish at 1624, with the plane being redirected to a developing system in northern Webb County. At 1645, radar indicated that the cloud tops in that area were 38,000 feet with an intensity of 38 dBz.. The plane commenced seeding on this Webb County activity at 1657.

At 1720, the seeded cell had grown and expanded across northern Webb and southern La Salle Counties with tops nearing 48,000 feet and intensity of 43 dBz. The plane continued seeding until 1733 when Corpus Christi National Weather Service issued a Flash Flood Warning for Southwestern La Salle County. Due to the flash flood warning, seeding operations were suspended for southwestern La Salle County until 2045 CDT. The plane returned to Cotulla at 1742 to refuel and reflare for a possible second flight elsewhere in the target area.

Seedability: Excellent

Radar continued to show seedable activity in southwestern Webb County so a second seeding flight was launched at 1804. After takeoff the plane soon reported good inflow and began seeding northern La Salle County. Since the cell began moving northward out of the target area, the plane was redirected southwestward to the activity in western Webb County. Radar showed tops around 20,000 feet with an intensity of 39 dBz... At 1915 the plane reported finding good inflow and commenced seeding. The seeded clouds increased in echo top heights and area coverage. The visibility began to deteriorate due to low ceilings so the plane returned to Cotulla at 2014. No further seeding operations were conducted.

Seedability: Excellent

STORM PERIOD 24, JUNE 1999, THURSDAY

The morning surface map noted moderate southeasterly flow with area dew points in the mid 70's. A low was centered over the Panhandle with a trough curving southwestward into west Texas. Upper air charts indicated a weak trough extending southward from northeastern Texas to Houston. During the afternoon, sea breeze convection from

the Gulf of Mexico sparked isolated thunderstorms over the northern parts of the target area.

Radar surveillance began at 1000 to monitor the convection east of the target area. At 1800, radar showed echo tops to 28,000 feet with 41 dBz intensity over northeastern La Salle County. A seeding flight was launched at 1807. At 1820, the pilot reported finding good inflow, activated the generator and commenced seeding. From 1820 to 1834, the plane continued seeding the clouds in northeastern La Salle County. Radar indicated tops growing to 42,000 feet with expansion in area coverage. At 1850, the plane began seeding a cell with tops of 27,000 feet in southeastern La Salle County.

Seeding continued until 1913 when the plane was redirected to eastern Zavala County where there was developing cloud activity. The plane found good inflow in eastern Zavala and continued seeding until 1930. The seeded cell lasted longer then other non-seeded cells in the area. At 1955, the plane was redirected to activity of 27,000 feet tops in western La Salle and eastern Dimmit Counties. The plane continued seeding this activity until 2013 when the overall clouds began to dissipate. At 2032, the plane returned to Cotulla due to decreasing cloud activity in the target area. Radar surveillance continued but no further seedable activity was detected.

Seedability: Fair

STORM PERIOD 25, JUNE 1999, FRIDAY

The morning surface charts showed a low pressure area over central Oklahoma with a trough curving southwestward to West Texas. Upper level charts indicated a low over central Oklahoma with a weak trough extending southward into northern Texas. Very moist conditions existed at the surface with dew points ranging in the mid 70's. An easterly wave moved into the target area during the afternoon hours. In combination with daytime heating this sparked scattered convection across the region.

Radar surveillance began at 1100 to monitor a towering cumulus development over the target area at 1310, radar indicated a line of clouds from eastern Webb County extending northeastward into southwestern McMullen County. Cloud tops were around 27,000 feet. A seeding flight was launched at 1335. The plane arrived at the target in central Webb County at 1345, found good inflow, and commenced seeding. At 1425, radar showed cloud activity increasing with echo tops to 33,000 feet and greater area coverage across northern Webb and southern La Salle Counties. From 1345 to 1443, the plane seeded this activity until cloud intensity began to diminish. The plane was then redirected to a developing cell in northeastern La Salle County. Radar showed this cell to be 28,000 feet with intensity of 39 dBz. The plane seeded this cell until the flares were exhausted. It then

20	6-24	78H	1807	2032	2.4	47.9	0	14	0	1.5	0	657	Fair
21	6-25	78H	1335	1529	1.9	49.8	0	22	0	0.0	0	550	Good
22	6-25	78H	1600	1748	1.8	51.6	0	18	0	0 0	0	450	Good
		TOTAL FOR MONTH			40.5		0	304	0	3.0	0	8,303	
		TOTAL FOR SEASON				51.6	0	378	0	4.2	0	11,132	

CLOUD SEEDING
Put in Perspective

1) What is cloud seeding?

Where man artificially helps nature in the simple process of nucleating or seeding its own clouds. Clouds that have an abundance of coalescence, seeding will be of no affect because nature has already, produced an efficient cloud. However, in most situations, clouds would rain sooner, longer, and over a broader area if there can be the supplementation of additional nucleating particles added. In other words, clouds are normally deficient in dust, smoke or any tiny particles, which is nature's way of seeding the cloud. For instance, why does it rain more on the coast? Simple, salt particles in abundance seed the clouds naturally. Keep in mind that rain enhancement is just that, enhancement, not creation. We can expect a 15-30% increase in rainfall as the system or storms naturally come. We cannot create clouds, cause floods, or likewise, stop the droughts. All we can do is assist in gaining a good margin of additional rainfall. The only trade off being a proven reduction in hail. As clouds are seeded, hail is suppressed.

2.) How does it work?

As stated earlier, the vast majority of convective clouds are short on nuclei. Therefore, as the moisture rises above the freezing level it becomes super cooled (below freezing) but is still liquid. If one can induce nuclei for the moisture to begin the ice process, this unit will grow much more rapidly than a water droplet of equal size, therefore, getting heavier and raining quicker. Also, if the cloud rains sooner versus later, the chances for hail is eliminated or greatly reduced, both in the amount, size and hardness, due to the cloud not being allowed to reach the height (50 or 60 thousand feet). This is when the cloud reaches cold enough temperatures to freeze super cooled water without nuclei, which produces hail. The ice process also performs another vital function in the life of a cloud, release of heat. As ice forms, the by-product is the release of beat, which continues to force the air upward, which as the air uses, it cools and allows condensation, which provides moisture for rain, or simply put, growth or sustainment. If the cloud is not maintaining or growing, it is declining. A cloud is in a constant struggle between the release of heat for growth and the cooling from

returned to Cotulla, at 1529 to refuel and reflare for a possible second mission.

Seedability: Good

At 1600, a second seeding flight was launched on activity in southern Dimmit and northern Webb Counties. At 1605 radar showed cloud tops around 37,000 feet in southeastern Dimmit County at 1605. The plane arrived at the target at 1610, found good inflow of 800 feet per minute, and began seeding. Cloud activity responded well with tops increasing in height, expanding in area coverage of precipitation, and lasting longer relative to non-seeded cells in adjacent areas beyond the target. The plane continued to seed this activity in northern Webb and southern Dimmit Counties until it began to move westward out of the target area. No further seedable activity was detected on radar. The plane returned to Laredo at 1748.

Seedability: Good
(End of Report - Operational Report#2)

ATMOSPHERICS INCORPORATED
SOUTHWEST TEXAS RAIN ENHANCEMENT ASSOCIATION
WEATHER RESOURCES MANAGEMENT PROGRAM
JUNE 1999

3.0 Seeding Flight Summary

Fit	Date ID	Air Craft	Flight Start	Flight Stop	Time (hrs) Flight	Time (hrs) Cum.	No. of Seeding Devices EB's (HG)	EB's AgI	EJ's (Agl)	Liquid Gen (hrs)	Total Grams of Material HG	AgI	Seedi
5	6-14	78D	828	1045	2.2	13.3	0	18	0	0.0	0	450	Good
6	6-14	78D	1140	1400	2.3	15.6	0	22	0	0.0	0	550	Excl
7	6-14	78H	1423	1549	1.4	17.0	0	22	0	0.0	0	550	Excl
8	6-14	78D	1550	1750	2.0	19.0	0	15	0	0.0	0	375	Excl
9	6-15	78D	1340	1710	3.5	22.5	0	22	0	0.0	0	550	Excl
10	6-16	78D	1340	1600	2.3	24.8	0	23	0	0.0	0	575	Excl
11	6-16	78D	1645	1815	1.5	26.3	0	0	0	1.2	0	273	Good
12	6-17	78D	1400	1636	2.6	28.9	0	19	0	0.3	0	598	Good
13	6-17	78D	1725	1900	1.6	30.5	0	8	0	0.0	0	200	Good
14	6-18	78D	1642	1830	1.8	32.3	0	18	0	0.0	0	450	Good
15	6-19	78D	1422	1714	2.9	35.2	0	24	0	0.0	0	600	Excl
16	6-19	78D	1810	1919	1.2	36.4	0	2	0	0.0	0	50	Poor
17	6-20	78D	1340	1705	3.4	39.8	0	24	0	0.0	0	600	Good
18	6-21	78D	1412	1742	3.5	43.3	0	24	0	0.0	0	600	Excl
19	6-21	78H	1804	2014	2.2	45.5	0	9	0	0.0	0	225	Excl

evaporation which will ultimately cause the death of the cloud.

3.) Why Weather Modification?

Increase rainfall 15% = on Avenge year of 20 inches = 3 inches

Zavala County	849,626 x 3inches	=	212,406 Acre Foot
Dimmit County	879,542 x 3 inches	=	218,135
LaSalle County	962,980 x 3 inches	=	240,745
Webb County	2,211,358 x 3 inches	=	552,839
	4,896,500		1,224,125 Acre foot of extra rainfall

The 1.2 million acre foot of water produced divided by the program cost equates to, 20 cents per acre-foot of water produced and or 18,000 gallons per penny invested. The cost formulation is in the following, with the underlying intent of this presentation, to put things in perspective. As aforementioned, with seeding in general, we can only enhance what nature gives us. We cannot create a cloud system nor can we stop it. Similarly, water conservation, recharge efforts, brush control, etc. are all very necessary and seriously need analyzing and possibly implementation, but again compare the cost. Brush control in our area would run 25 to 50 dollars per acre every 7 to 10 years. Rain enhancement is 5 cents per acre for 10 years would total 50 cents per acre, there is a lot of difference is 50 cents and 50 dollars. Now brush control, in my opinion, is no less important, but it seems logical to me to enhance our water source now at a reasonable rate of 5 cents per acre, per year, that; we can afford.

Texas Tech University estimates that in the High Plains District, a 20% increase in rainfall would equate to $20,000,000 in economic crop values grown per county. In other words, for every dollar invested there is a 7-dollar return in crop values.

4.) Is cloud seeding a proven technique?

Some 50 years of research and actual programs in some 43 countries have demonstrated beyond a shadow of a doubt, that it works. Kansas and the Dakotas have had state operated programs for the last 20 years for hail suppression and rain augmentation. The State of Oklahoma Water Resource Board recently (1/20/99) released a study done on the Kansas Project, Dakotas, and some recent work done in Oklahoma, cited hail reduction amounts from 40-50% and increase rainfall up to 30-40%.

The insurance industry has followed these programs very closely and they are quoting hail reduction of up to 50% and rainfall increase of 17-20%. Think of the economic impact of the billions of dollars saved on crop and dwelling damage from hail not to mention the

increase of productivity from the additional rainfall.

5.) Does seeding take away from "downwind areas"?

No, since only approximately 1% of the moisture in the atmosphere is represented in visible clouds, it becomes easy to see how little to no effect would be seen downstream. Actually the increase in activity in a rain enhancement area will have either no effect, or actually increasing rainfall downstream, as rain seems to cultivate more rain activity.

6.) Chemicals used; are they harmful or detrimental?
No, the amount of AgI (silver iodide) used is so small that the PPM measured in seeded clouds versus non-seeded is non-detectable. In other words, the acceptable level of silver in the atmosphere is higher than the net effect from seeding a general area. The natural amount of silver in the soil is also higher than the levels used in seeding. Therefore, the increase of silver in the soil from seeding with AgI is non-measurable. AgI is used because its chemical makeup is the most similar to ice crystals, which is what we are trying to help the cloud make.

7.) Where do you get quality materials to seed clouds?

The 7 existing associations have gone together and formed a State level organization called the Texas Weather Modification Association for the purpose of an information source and supplier of ejectable flares, burn in place flares, and acetone solution. Ejectable, flares are for "on top seeding", burn in place and the solution are for "base seeding".

The quality and predictability of the flares in the past have been a problem. Therefore, it seemed logical for someone in the United States to manufacture and supply these products. The State Association has found and incorporated the services of retired Dr. Bill Finnigan (free of charge) whom worked with the United States Navy for some 28 years. Dr Finnigan was involved as the pyrotechnic on all flares developed for cloud seeding in the development stages. As one might envision, the government was very interest in the potential possibilities of being able to create rainstorms, fog etc. and other phenomenon in the staging of war. Therefore, the BFI flare now in production uses fewer chemicals and provides more nuclei (more efficient) than the old stand-by flare, TBI. Still better flares are underway, thanks, to Dr. Finnigan. With the advent of the new and improved flare, the need suddenly arose for a production or assembly line manufacturing process of the flares to keep up with the new demand for an improved flare. Therefore, a purchase was made, by the State Association, of certain pieces of a retired munitions plant, which will fully automate the process, and be extremely efficient and safe. These acquisitions of navy scientists to munitions equipment

came to us only as the result of a few dedicated people, Dale Bates, George Bomar. Since Texas Weather Modification Association is a subdivision of the State (public entity), the Government can deal with it, in the sale of equipment and in some instances transfer of knowledge.

Southwest Texas Rain
Enhancement Association
ww-vsta-com/~swtrea/index.htm
Weekly Report 6/28/99 - 7/4/99

Date:	6/28/99
Weather:	Strong ridge will remain over the area keeping the cold front well to the North, bringing mostly sunny skies.
Activity Summary:	No seeding operations
Date:	6/29/99
Weather:	Mostly sunny with Southeasterly winds.
Activity Summary:	No seeding operations.
Date:	6/30/99
Weather:	Clear skies with southeasterly winds.
Activity Summary:	No seeding operations.
Date:	7/1/99
Weather:	Skies will be clear with gusty southeasterly winds.
Activity Summary:	No seeding operations.
Date:	7/2/99
Weather:	Partly cloudy skies with gust southeasterly winds.
Activity Summary:	No seeding operations.
Date:	7/3/99
Weather:	Isolated late afternoon thunderstorms.
Activity Summary:	One seeding flight conducted under excellent conditions, covering all counties, with majority in Webb and Dimmit.
Date:	7/4/99
Weather:	Scattered thunderstorms.
Activity Summary:	Two seeding flights conducted. 1st flight was one large cell in LaSalle and touching Zavala. 2nd flight was a huge cell(s) covering all of LaSalle and 1/2 of Webb and extending into Dimmit. Conditions were excellent plus.

Average Daily Rainfall Report
6/28/99 - 7/4/99

Date	Dimmit	LaSalle	Webb	Zavala
6/28/99	0	0	0	0
6/29/99	0	0	0	0
6/30/99	0	0	0	0
7/01/99	0	0	0	0
7/02/99	0	0	0	0
7/03/99	0	0	0	0
7/04/99	1.68			

*Few reports received as of date.

SOUTHWEST TEXAS RAIN
ENHANCEMENT ASSOCIATION
www.vsta.com/~swtrea/inde.htm
Weekly Report 7/5/99 07/11/99

Date: 7/5/99
Weather: Partly cloudy skies with Isolated thunderstorms and showers developing during late afternoon.
Activity Summary: One seeding flight was conducted under excellent conditions in Webb County.

Date: 7/6/99
Weather: Partly cloudy skies with isolated afternoon showers or thunderstorms developing with easterly winds.
Activity Summary: Three seeding flights were conducted. 1st being 2 cells in Webb, Dimmit, and LaSalle. 2nd flight was one cell in LaSalle and the 3rd flight being 2 small cells in LaSalle County.

Date: 7/7/99
Weather: Skies will be partly cloudy with isolated afternoon showers or thunderstorms developing with southeasterly winds.
Activity Summary: Two seeding flights were conducted. 1st flight was 3 cells in LaSalle and 2 cells in Webb. The 2nd flight was a large cell in Zavala and a small cell in Dimmit.

Date: 7/8/99
Weather: Partly cloudy with isolated showers and thunderstorms developing during late afternoon.
Activity Summary: Two seeding flights were conducted. 1st flight was 3 cells in Webb. 2nd flight was small cell in both Zavala and Dimmit.

Date: 7/9/99
Weather: Partly cloudy with isolated afternoon thunderstorms

and showers developing.
Activity Summary: No seeding activity.

Date: 7/10/99
Weather: Strong easterly flow from Gulf with isolated afternoon thunderstorms,

Activity Summary: Two seeding flights were conducted. 1st flight was a small cell in LaSalle and the 2nd flight was a large cell in Dimmit.

Date: 7/11/99
Weather: Strong easterly flow from Gulf with isolated afternoon thunderstorms.
Activity Summary: Two seeding flights were conducted. 1st flight was a large cell in Zavala. The 2nd flight was two large cells in Zavala and Dimmit.

Rainfall Report
7/5/99 - 7/11/99

Reports were few, spotted rainfall occurred over the entire project area. Most reports were light to moderate, with Wig Adams in Webb reporting the most to date of 1.06"

(End of Report - South Texas Rain Enhancement)

SOME THOUGHTS ABOUT THE BUSINESS AND SCIENCE OF CLOUD SEEDING*

Thomas J. Henderson, President
Atmospherics Incorporated

ABSTRACT

The 52 year weather modification in the US. has been long and arduous. Apparent results from commercial programs have been lively topics within the scientific community. Laboratory and field research programs have aided the applied programs and some of these have suffered inconclusive results. Committees and study panels have been numerous at the Federal level and national priorities have been difficult to establish. Various landmarks along this trial are noted and the science and technology relationships are explored.

1. WHERE WE CAME FROM

We came from a single classic serendipitous observation which recognized a very large effect from a very small input.

On 13 July 1998, it will be 52 years since Dr. Vincent Schaefer, serendipitously produced a swarm of ice crystals in a refrigerated chest and, more importantly, actually recognized the classic nature of this dry ice event at the General Electric Research Laboratory in Schenectady, New York. This exciting discovery was quickly followed by Dr. Bernard Vonnegut's work on the ice nucleating properties of silver iodide at the same laboratory. To complete the early work which came from this laboratory, we should also recognize Dr. Irving Langmuir's theoretical contributions and field work on hygroscopic and water droplet seeding applied to tropical warm cloud processes. These early discoveries, as well as the related experiments and applications which followed, launched an odyssey which, in some way, has touched the lives of everyone in this room as well as thousands of other people throughout the world. To a few of us, cloud seeding and the serious possibilities for future weather resources management, became an obsession. This morning I would like to say a few words about what this obsession has included.

*Key note address presented at the Annual Meeting of the Weather Modification Association, 14-15 May 1998, Park City, Utah.

2. HOW WE GOT HERE - A TROUBLED JOURNEY

We started on an Interstate Highway and we got here via country roads and steep dirt trails.

The road to where we are has been absolutely fascinating, but not particularly easy. I do not know of any science and technology which has involved so many disciplines and general areas of interest. A partial list includes:

* Atmospheric science
* Meteorology
* Hydrology
* Physics
* Chemistry
* Mathematics
* Engineering
* Physical sciences
* Statistics
* Models
* Communications
* Special instrumentation
* Human resources
* Writing skills
* Teaching
* Data acquisition
* Environmental sciences
* Aircraft industries
* Legal profession
* Funding sources
* Radar systems
* Condensation and ice nuclei
* Nucleation theory
* Pyrotechnics
* Public relations and awareness
* Business strategies
* Regulatory considerations
* Interfaces with other countries
* Inadvertent modification of precipitation
* Universities
* Involement's with local, State and

* Evaluation procedures
* Economics
  Social science
* The political arena
  Federal agencies
* Laboratory and field research programs

This troubled journey can be divided into four major time segments: 1950-1960, 1960-1980, 1980-1990, 1990-2000.

1950 - 1960:

It was the winding down of the major laboratory and field work in weather modification at the G.E. Research Laboratory. It was the beginning of commercial programs and the suspect claims of success, the involvement of the Federal and State governments and the expansion of scientific scrutiny.

Arguably the most fundamentally important and least known laboratory and field research program ever conducted in weather modification was Project Cirrus. The project was funded by the Signal Corps and General Electric, and remained operational from February 1947 through September 1952. Within this 5-year period, some 40 G.E. Occasional (Technical) Reports were written and 62 scientific papers were published on various aspects of atmospheric science, meteorology and weather modification. Unfortunately the results from the program were immediately buried in the flurry of Federal involvement soon to emerge.

In early 1950, the beginnings of the Weather Modification Association were formed. Dr. Irving P. Krick, (Weather Resources Development Corporation) and Robert D. Elliott (North American Weather Consultants) were the major commercial players of the period. No matter what our personal feelings are in regards Dr. Krick, we must give him credit for bringing attention to the commercial aspects of cloud seeding and the need for scientific investigation. His operations, claims of positive results, and his quarrel with the American Meteorological Society probably had more to do with establishing a closer focus on early weather modification science and technology than any other single entity.

Another historic program of that era was the Bishop Creek Cloud Seeding Program operated by the California Electric Power Company from 1948 through 1959. In 1951 the Department of Commerce sent Ferguson Hall to Bishop where he and I spent three months searching for an acceptable method of identifying the results from dry ice cloud seeding operations during the initial period 1948 through 1950. Herb Thom, a well known statistician of the time, eventually provided the major input to the statistical methodology. Research Paper No. 36 from the Department of Commerce in January 1953 summarized the results.

"From the analysis it is estimated that the average annual flow during

the three-year period was augmented by 9%, with this departure significant at the 5% level."

President Eisenhower's formation of the Advisory Committee on Weather Control soon followed in 1953. Capt. Howard T. Orville (Harry Orville's father) was chairman of the committee. Twenty-seven persons were on the permanent staff and seventy-three consultants provided inputs to its investigations. The consultants represented essentially the entire meteorological community as well as ongoing atmospheric research and operational programs. Langmuir, Schaefer, Vonnuget, Atlas, McCready, Rossby, and Court were among those on the consultant list. Just to give you an example of the range of highest and lowest regions they explored for information, my name was on that list.

The Committee's work included both statistical and physical evaluation programs. Some of these included Project Overseed (Mt. Washington), Project Sailplane (Montana), Project Skyfire (Arizona, Montana), Project Seabreeze (Florida), Nuclei Studies (Pasadena), Santa Barbara Project (California), Field Studies Project (Florida, New Mexico), and the Atlanta Project (Georgia).

The conclusions reached by this Committee were included in their final report submitted on 31 December 1957. In part, the conclusions stated:

For the orographic projects, the evidence indicates that cloud seeding has produced an average increase of 10-15% in the precipitation from seeded storms. The estimated amount of increase in precipitation based on the regression analysis agrees very closely with what has been independently predicted from basic meteorological principals. Statistical calculations on the data result in very heavy odds that the increases found are not attributable to the natural variability in the precipitation.

1960 - 1980:

It was the heyday of weather modification research, new and better designs for operational programs, further State regulations, and enhanced interest by the Federal government. Essentially the entire history of large scale weather modification research occurred in this 20-year period.

This period represented the "explosion" in weather modification interest including both research and applied field programs. Operational projects began to recover after the downtrend in the late 1950's and early 1960's. More importantly, there was a dramatic increase in the funding available for congressional hearings, federal appointed study committee and panels, basic scientific studies and large field research programs. Some of these programs included:

* Project Stormfury (Department of Commerce)
* Project Skywater (Bureau of Reclamation)
* Florida Area Cumulus Experiment (Department of Commerce)
* National Hail Research Experiment (NSF)
* Department of Defense Programs (Vietnam, Philippines)
* Naval Ordnance Test Station (California - Pyrotechnics)
* National Science Foundation (Research Grants)
* Artificial Cloud Nucleation Project (Department of Commerce)
* National and International Meetings (AMS, WMO)

It is difficult to estimate the total amount of money spent on the various facets of weather modification during this 20 year period. If you examine only the Federal expenditures for the 9 categories listed above, the total falls in the range of $400-500 million.

In November 1963 the Committee on Atmospheric Sciences of the National Academy of Sciences appointed a Panel on Weather and Climate Modification "to undertake a deliberate and thoughtful review of the present status and activities in this field, and of its potential and limitations for the future". The panel was chaired by Gordon MacDonald. At that time the NAS was "convinced that recent advances in mathematical modeling of atmospheric processes, computer technology and data communications, and foreseeable improvements in meteorological instrumentation held promise that a rational exploration of weather and climate modification could be one of the important developments in the atmospheric sciences during the present decade".

In November of 1965, the Panel disbanded and their final report was published. It contained the results from many studies related to the specific subjects of modifying clouds and storm systems, inadvertent atmospheric modification, research and development requirements, and potential funding sources. Four commercial operations were examined in detail with project durations ranging from 8 to 14 years. The published results, including those from an independent study of downwind effects, revealed that "The duration weighted average runoff increases of these four projects is about 12 percent, and it is apparent that their combined significance level is such that natural variability is not a likely explanation for these increases produced by silver iodide seeding. Further, in an independent exploratory analysis of 16 operations over 11 areas (62 months), no evidence was found of consistent or regular negative anomalies at distances up to approximately 150 miles beyond the target area."

Then in 1970, the National Academy of Sciences Committee on Atmospheric Sciences appointed yet another Panel on Weather and Climate Modification. The chairman was Tom Malone.

The Panel proposed:

* Completion of research to put precipitation modification on a sound basis by 1980.

* Development during the next decade of the technology required to move toward mitigation of severe storms.

* Establishment of a program that will permit determination by 1980 of the extent of inadvertent modification of local weather and global climate as a result of human activities.

The panel reviewed the past research and operations including statistical techniques, status of present research and commercial operations and their present techniques. Then they focused on "where should we go and how should we get there". The major conclusion as published in 1973 was:

"With due consideration to the missions of several agencies, their capabilities for supporting research in weather and their present activities in the field, we recommend that the National Oceanic and Atmospheric Administration be assigned principal administrative responsibility for a national program in weather modification."

In this same period one more Federal weather modification study group was formed. The National Weather Modification Policy Act of 1976 (P.L. 94-490) directed the Secretary Of Commerce to conduct a comprehensive study of the status of weather modification science and technology and to submit to the President and to the congress a report on the findings, conclusions and recommendations of the study.

In January 1977, the Secretary of Commerce establish a Weather Modification Advisory Board. In April 1977, seventeen people were appointed to the board which was then chaired by Mr. Harlan Cleveland. This Board retained the services of twenty consultants and six contractors to prepare study papers on issues and problems associated with weather modification. The Board met twelve times in seven States and District of Columbia between May 1977 and June 1978. More than one hundred individuals and groups testified before this Board. The Board's Report was issued in July 1978. It began with a very thought provoking Statement, '"Weather is important!". Four other Statements were somewhat more illuminating.

* The guesses of twenty years ago that certain kinds of precipitation could be increased have been generally supported by experience.

* Snowpack, and thus spring runoff, can be increased by seeding wintertime clouds rising over some mountain barriers.

* There is no evidence that increases in rain or snow in one area decreases them in nearby areas.

* The most widespread "weather modification arises from man's unintentional impacts on the atmospheric environment.

The Board suggested a 20-year program of action which recommended that (1) the Federal authority take direct responsibility for most all weather modification interest including a Federal license, and (2) the Federal authority would inherently have the right to go ahead with Federal supported field programs even over a State objection.

The Board listed three kinds of Federal action needed to organize the tasks listed in their final report. These were:

* A Congressional Statement of national policy.

* A Federal R&D strategy with a clear focus on learning more about how to modify weather.

* Bring together in an integrated program the scattered elements of the ineffective existing efforts.

The final suggestion from the Department of Commerce's appointed Board was particularly revealing since the Department of Interior's Program Skywater (USBR) had been operating for the previous seventeen years.

The WMAB report further recommended that a new National Weather Resource Management Board bring into its purview all the Federal Goverment's existing weather modification activities. This new consolidated agency would have a "life of it's own" within an existing Federal Agency. Finally, the WMAB recommended that the existing agency would be the National Oceanic and Atmospheric Administration in the Department of Commerce.

This was the beginning of the end of serious consideration for any major federal weather modification research or policy at the federal level. After all this work by so many talented people, essentially none of these major thoughts or recommendations were ever implemented.

1980 - 1990:

The death of basic research. It was a period which marked the continuing downward trend of weather modification research and the slow steady gain in operational cloud seeding programs.

In early 1980 Dr. Arnett Dennis had completed his homework and published his book, Weather Modification by Cloud Seeding. We anxiously await a 20-year update on the subject, but without

substantial nationwide interest, the wait may be extensive. A few states continued their license, and permit requirements but one state, California, the first state which produced a weather modification act, sunsetted their law, leaving only a minor reporting function.

By mid-1980, the notion of a National Weather Modification Policy was no longer a fashionable concept. Even the subject of acid rain was losing ground. New buzz words such as Global Warning, Climate Change, Save the Environment, and Models Can Explain Anything, were showing their strength as research funding sponges. Before the decade ended, Project Skywater, the USBR's weather modification icon, had been terminated and most of their experienced personnel in this field had disbanded. Only the Department of Commerce was able to maintain a small funding position for research programs piggybacked on existing State/County supported operational programs.

1990 - 2000:

The Final nail was driven in the weather modification research coffin. There remained a continuing expansion of operational cloud seeding programs at the National and International levels.

During the early 1990's applied cloud seeding programs improved their equipment and operational skills. The number of programs continued a slow increase and some specific knowledge gained from the previous years of research was becoming a part of these operations.

Unfortunately, by 1997 the Department of Commerce, Piggyback Research Program had been terminated, leaving the U.S. without a single major federally supported weather modification research program or any National Policy. Only the weather modification reporting function remains at the Federal level. A few scattered research efforts continued but these have been funded by the private sector companies. It is likely this bleak situation will continue into the 21st Century.

3. EVALUATIONS

Evaluations of any scientific research and applied technology subjects are often controversial and inconclusive. Weather modification is no exception and the evaluation road has been arduous.

The singular most difficult, exasperating, and expensive chore in weather modification is organizing a completely satisfactory method to evaluate the results. This applies to both research and operational projects. Why is this so difficult? The primary reasons are really quite simple. In the pursuit of a basic weather modification field research program, the mechanisms you are attempting to explore are changing so rapidly that measurements at one moment do not necessarily

apply to the next moment. In the case of an operational program, we cannot make clouds, except in small, experimental ways (like Yellowstone Park) so we depend on Nature to provide the very stuff we intend to modify. While we are attempting to modify these clouds and precipitation mechanisms, Nature is simultaneously doing essentially the same thing at the same time by manipulating essentially the same mechanisms. It is actually an invisible technology! It would be much easier to evaluate a program if (1) we were doing something much different than a natural phenomenon, or (2) the effects from our applications were so large that identification would be obvious. The single exception to this latter thought is the case of clearing supercooled fog and stratus.

When designing an evaluation scheme, the same question always arises....who are you trying to convince and what level of proof do you need to convince them? A good example is the hail cannon. They have come to California. A farmer west of Fresno recently fired a mobile cannon at a threatening thunderstorm and, in a few minutes, soft hail and slush fell from the cloud. He was ecstatic, saying, "If we hadn't fired the cannon, the hail from that storm would have wiped us out. This is the most important technological advance in the history of modern agriculture."

Another example. We have a whole new multi-billion radar network in the U.S., largely sold on the basis of how many lives will be saved by providing better tornado forecasts. Unfortunately 35 lives were lost in a recent tornado outbreak. And what did we hear, "Yes, but just think how many lives would have been lost if we didn't have this new equipment in place". This actually sounds surprisingly like the hail suppression rationale. However, both these examples are really at the heart of our evaluation quest. What would have happened in the absence of treatment. So here we are back to the same questions. What level of proof do we need to convince someone.

A more middle-of-the-road requirement is associated with agricultural interests, metropolitan water districts, and hydroelectric power companies. These groups have spent their entire lives in a world of uncertainties. Will it rain tomorrow? How much oil and gas must we commit to for future power generation? Is the ground water level going down? How much summer runoff will we have? Will we fill the water supply reservoirs this year? These groups are constantly looking for answers but they do not expect absolute information. They would like to have high certainty answers but they accept lower levels of probability. In some cases they accept any probability above 50%, but in most cases the acceptable level of certainty is tied to the value of the water.

Of course, the scientific community rightly demands a much higher level of certainty. Some researchers are bound to a 99.9% level, but some

statisticians in the past few years have argued that a 95% probability is acceptable provided you keep an eye on the standard deviations. Because they have played a large role in the historic evaluations of weather modification programs, I would be remiss if I did not mention the names of a few major statistical players. They are Jerzy Neyman, John Tukey, Herb Thom, Arnold Court, Paul Mielke, John Flueck and Ruben Gabriel.

To repeat, who are we trying to convince? Herein remains one of the primary reasons for the historic gap between science and technology which, to a degree, still remains with us after more than 50 years of research and operations.

4. SCIENTIFIC RESEARCH VS. APPLIED TECHNOLOGY

It's an age old subject. One of the penetrating questions has always been; How long must you wait for evolving scientific research results before you can develop a useful operational technology?

As in the case of many scientific discoveries, an applied weather modification technology preceded most of the active research programs. Early claims of positive results from operational programs were numerous and the scientific community maintained an understandably strong cautious position. Some resolution has evolved but the gap between basic research and applied weather modification programs may never be completely closed. However, except in a few "holdout" cases, most scientists worldwide now agree it has been demonstrated that cold fog can be easily dissipated and cloud seeding technology properly applied to some clouds at the right time and place will produce additional rainfall and snow. The remaining questions now deal with a better understanding of clouds and precipitation mechanisms, how to improve models for operational programs, how to fine-tune the application of nucleating materials, and a continuing search for some inspired evaluation schemes.

Have the scientists and their research endeavors been useful to the field of operational weather modification. Of course. The commercial operators have been strongly influenced, and their field programs improved, by the results from basic research programs dealing with clouds and precipitation mechanisms, nucleation theory, application of statistics, development of pyrotechnic seeding devices, the appearance of cloud chambers and laboratory test facilities, improved instrumentation including satellites, and certainly the environmental questions.

Nonetheless, in some ways the research side has provided a somewhat disappointing record. This opinion is probably because the operational groups expected too much from the scientists and mathematicians. For many years the operators have been waiting and waiting and waiting for

an enormous light bulb to suddenly illuminate the playing field. Instead it has been a case of many small pieces of information added to a slowly growing stack of ideas. Major breakthroughs have not occurred. It is frustrating to note that in the 52 year period from 1946 to 1998, a half dozen or so large scale research programs have produced far less progress toward an applied technology than the ideas which evolved from the operations side.

Many of the research programs have simply been focused on validation of these commercial sector ideas. Some of them included the presence of supercooled liquid water, the location and extent of updraft areas, application and distribution of seeding materials, locations of first precipitation within clouds, cloud behavior characteristics, and the actual cloud seeding devices.

"Technology transfer" was a fashionable term and frequently used for research fund raising purposes. Many times we heard, "Federal funding is necessary so the results from our research can enhance the design and operations of the applied programs. Now we have federal and state employed researchers charging individuals and groups for personal "intellectual properties" that have been developed and enhanced at the expense of the taxpayers. I find that strange.

However, the overall picture of benefits from scientific research vs. applied technology has actually been heavily weighted in favor of research. Those of us who are primarily in the applied sector have been richly rewarded, not so much by the actual results from the large programs, but rather by inputs from individuals in the research community. Our future operations will suffer from the present downturn in weather modification research activities.

5. THE ROAD AHEAD

It is filled with humps and bumps but the excitement and challenges indicate the trip can produce benefits beyond our imagination.

A look up the road ahead first reveals a single major question, "Why haven't we made more progress?" Three of the answers to this are fairly simple.

* The atmospheric processes are incredibly dynamic and far more complex than we originally dreamed.

* We have not been able to devise a totally acceptable system of evaluating operational programs.

* Weather modification has never been formally given a National priority status at the Federal level.

I don't see this research picture changing much in the next decade. Certainly the atmospheric processes are not becoming less complex. Models may eventually help with evaluations but their necessary validation in the field contains some tough challenges. Finally, attitude changes in Congress do occur .... frequently. We must remember that most final decisions at the federal level are based on politics, not science. Working within that system is mandatory.

In the meantime, what can we do at the applied technology level? Actually, quite a lot! Research doesn't take multi-million dollar field programs or incredibly expensive instruments. Vince Schaefer told me once during one of those Yellowstone Expeditions, "Tom, all you really need for a lot of meaningful research is a good pair of eyes connected to a functioning brain."

So, there are plenty of explorations waiting for all of us up that road ahead, and in the end I really have only one piece of advice. **Let's get at it!**

(End of Report - Cloud Seeding)

SUMMER CLOUD MODIFICATION

Weatherguide

Supercooled Water

When the top of a growing cumulus cloud cools to less than 32 Degrees Fahrenheit, cloud droplets do not immediately freeze, but instead become **supercooled.** In spring and summer clouds over the northern High Plains, ice often does not form until cloud tops cool to temperatures of 5 Degrees Fahrenheit or colder. Then, tiny windblown dust and soil particles called **ice nuclei** serve as crystalline skeletons upon which droplets freeze and snowflakes form. If ice does not develop in the short-lived summertime clouds, the cloud droplets soon mix with the drier air outside the cloud and evaporate.

When the high, supercooled, cumulus cloud tops do not speedily spawn ice, raindrops can only form through the collision of the minuscule cloud droplets. This process, called **coalescence,** takes a long time to get started because the cloud droplets are so small (diameter about .0005 inch) that they swirl about in the air currents, and do not readily collide. It takes nearly a million cloud droplets to form a single average-sized raindrop!

A Nudge In The Right Direction

When nature is reluctant to produce ice in supercooled clouds, it is

possible to lend a hand by providing the ice nuclei that nature is lacking. This is commonly known as **cloud seeding.** Clouds can be "seeded" with a variety of ice-inducing agents. The most common are silver iodide and dry ice. When silver iodide is used, small amounts (an ounce or two) are burned in flares or solution in the cloud top or in the updrafts at the cloud base. If dry ice is used, marble-sized pellets are dropped into the growing cloud from above. Rapid development of large numbers of small ice crystals soon follows.

Once ice particles form, they continue to grow by **deposition, riming,** and **aggregation.** Deposition is the process that generates delicate snowflakes, and is the result of water vapor in the air being "deposited" directly on existing ice particles. Riming occurs when ice particles bump into supercooled droplets, which freeze instantly to the ice. Aggregation occurs when ice crystals get tangled with each other. Each of these processes quickly builds larger ice particles, and all three may be working in the same cloud at the same time.

Natural Vigor

Heat is released whenever condensation, freezing (riming), or deposition takes place. This energy warms the cloud, strengthening the updraft. The updraft in turn pulls in more moist air from below, helping the cloud grow taller and last longer. In the course of a typical thunderstorm's lifetime, energy equivalent to that of an atomic bomb is normally released, so it is not surprising that violent weather often results.

Clouds growing on the flank of a thunderstorm, called **feeder clouds,** often develop large amounts of supercooled water. These supercooled droplets may be swept into the vigorous hail-producing updraft of the main storm as the feeder cloud grows and merges with it. Once in the mature updraft, the supercooled liquid water feeds hailstone growth. Because freezing releases heat, energy is thus added to the updraft, helping sustain the very powerful upward air currents which hold growing hail aloft.

The Impacts of Seeding

Timely seeding of the feeder clouds can lessen the storm's severity, while increasing overall rainfall. This is accomplished in a variety of ways, effectively spreading the energy released by the storm over a slightly larger area.

> **1. Energy transfer.** If the feeder cloud is seeded, slightly more energy (heat) is released when ice forms earlier, in the feeder cloud instead of in the main updraft. This makes a gentle updraft a bit stronger, rather than feeding the hail-producing updraft of the main storm.

2. Trajectory lowering. The seeding of growing feeder clouds will cause cloud particles to grow large enough to fall from the gentle updrafts of the feeder cloud and melt into rain, before the cloud merges with the mature up-draft and they get carried far aloft where most hail develops.

3. Beneficial competition. If large numbers of the small ice particles resulting from seeding enter the updraft, they compete with each other for the, available supercooled liquid water that would grow hailstones, rapidly using it up. When they do fall out, they are significantly smaller, and have a much better chance of melting before reaching the ground.

4. Updraft loading. When development of precipitation particles is accelerated as described in 2. above, particles remaining in the feeder cloud when cloud merger occurs are often larger and more numerous than would naturally be the case. The updraft is thus burdened and slowed by the additional weight it must support, and is less capable of growing large hail.

5. Reduction in fuel supply. The "fuel" that drives thunder-storms is water vapor, commonly known as humidity. The energy released as the vapor condenses and then freezes warms the air within the updraft, which gains strength, pulling in even more moist air "fuel". It is not possible to "turn off" the moisture supply, but the earlier rain development that results from seeding feeder clouds will produce a precipitation shaft in an area previously rain-free. The rainshaft partially restricts the main updraft's access to the moist air that generally lies to the south and east of the main updraft.

Which Clouds Are Suitable?

Before a cloud is seeded, it must pass three tests. The cloud top must be colder than about 23 Degrees Fahrenheit, as warmer clouds won't develop much ice, even though they may be slightly supercooled. The cloud must have a steady updraft, to provide a continuing supply of the moist air that allows the ice particles to keep growing. Finally, the cloud must not have much natural ice. If the cloud has already developed ice, it need not be seeded, as nature is already being efficient. Thus, the cloud must be **cold, ice-free,** and have an **updraft.**

What Can Be Expected?

A well-run, adequately funded seeding operation employing aircraft for a seeding and weather radar for guidance can result in significantly less hail damage (30 to 60 percent reduction), and limited but very valuable increases in precipitation (on the order of 10 to 15 percent).

A series of independent evaluations of the North Dakota Cloud Modification Project (NDCMP) have all shown positive impacts. The most recent, published in the "American Meteorological Society's Journal of Applied Meteorology" in May 1997, shows a 45 percent reduction in crop-hail damage. The program costs on the order of ten cents per acre.

Weather modification by cloud seeding is increasingly used as a water management and hazard mitigation tool in the U.S. and abroad. More than half of the states in the western U.S. now regularly apply the technology.

Information about current American operations can be obtained from the National Oceanic and Atmospheric Administration, 1325 East-West Highway, Silver Spring, MD 20910.

When Should Cloud Seeding Be Considered?

Any part of the northern High Plains suffering significant hail damage on a regular basis would likely benefit significantly from hail suppression operations. In addition to the direct savings realized, long-term programs which establish lower hail risks in target areas will also enjoy lower hail insurance premiums.

Additional growing-season rainfall will prove very beneficial to any locale short of moisture, especially semi-arid regions suffering chronic shortages.

Longer-term applications of cloud seeding technology may lessen the impact of droughts by creating greater soil moisture reserves prior to the onset of drought conditions, and may accelerate recovery by increasing the rainfall when weather patterns return to normal.

Because cloud seeding simply enhances the natural efficiency of clouds, it may be of limited use during extended periods of drought, when suitable clouds are in short supply.

Additional Reading

Hail: A Review of Hail Science and Hail Suppression, edited by G.B. Foote and C.A. Knight. Meteorological Monographs, Volume 16,

American Meteorological Society, Boston, 1977.

Weather Modification by Cloud Seeding, by A.S. Dennis. Academic Press, New York, NY, 1980. International Geophysics Series, Vol. 24.

Meeting of Experts to Review the Present Status of Hail Suppression, R. List, Editor, World Meteorological Organization, Geneva, Switzerland, 1996. WMO/TD 764.

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(End of Report - Summer Modification Weather guide)

X. CITY COUNClL PRESENTATION AND DISCUSSION

26. Requests by Mayor and City Council members for presentation and discussion.

A. Request by Mayor Elizabeth G. Flores

1. Presentation and status report by Mr. John H. Keck, Chairman of the Historic District Landmark Board.

   Mr. John Keck, Chairman of the Historic Landmark Board, reported that there have been great changes in Laredo in economics, benefits, challenges, and opportunities. At the same time that has been going on, we all have seen but not as visible in terms of everyday life, we have seen the preservation of our cultural and heritage as it relates to our buildings and historic areas to be continued to be protected, maintained, and guarded.

He commended city staff under Mrs. Nina Mendez for their work and support in working with the board.

As a recap on history, he showed a video presentation of what has happened over the last 25 years in historic preservation programs, illustrated some of the impacts on the Laredo and Texas economy, HDLB involvement in downtown revitalization projects, historic recent planning projects, historic buildings currently unprotected, and future preservation planning activities.

2. Presentation of City of Laredo Flag to Tejano Music Star, Javier Molina.

   Mr. Javier Molina was not present to receive the City of Laredo Flag.

3. Recognition of the sponsors and coordinators of the Avery Johnson Basketball Camp.

   Mayor Flores recognized Judge Raul Vasquez, Justice of the Peace Danny Valdez, Mr. Jorge Haynes, Mr. Hector Noyola and the following sponsors and coordinators:

   Platinum Sponsors:
   1) Lamar Bruni-Vergara Trust
   2) International Bank of Commerce
   3) Guapo's Sports Cafe

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   1) Southwestern Bell
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   1) Monarch Paint Co.
   2) Mowit Lawn Service

3) Coastal Maverick Markets
4) City of Laredo Parks and Recreation
5) City of Laredo Code Enforcement

B. Request by Council member Louis H. Bruni

1. Status report on the drainage problem at the 3100 Block of Guadalupe, with possible action.

Rogelio Rivera, City Engineer, reported that they did follow-up and met with the Gomez Family. What was told by them was that they had dug ditches in the event they had some rain and that nothing has been done on that site. He said they have contacted Tex-Mex and had not received a respond from them until today. Today, they received a call from Mr. Stewart who gave verbal permission to go to the site to do surveying and come back with a plan. He did, however, say that whatever needed to be done there would be at the city's expense and that they will not pay for whatever we decide to do in the way of grading or taking down the concrete structures that are obstructing the flow.

They have talked to the Gomez Family and discussed the alternative of constructing an 8" or 10" footing on the existing fence and they were receptive to that idea, however they did say that they did not have the means to do it and that it would probably had to be done at the city's cost.

Mr. Rivera reiterated that there is a verbal agreement from them to do the survey, however, he believes that they will come back and give something in writing. He does not have a cost estimate at this time on what it would cost to solve the problem. Staff needs to go out there and survey to see how much they need to cut in the way of grading. In reference to the removal of the structures, he needs to get a cost estimate from Public Works also.

Cm. Bruni suggested that staff do a study and come back to Council with the cost estimate, but that in order to band-aid and solution the problem in the meantime and while they talk to Tex-Mex on the issue that they find the necessary monies to band-aid the problem, but that it be no more than $1,500 to build an 8" footing. He asked that they also make a study and come back with the cost estimate to eliminate the problem completely. Footing will not be done on private property.

Motion to instruct the City Manager to find the necessary money (from $700 but not more than $1,500) to build an 8" footing and that we instruct staff to do the drainage project study and come back with a cost to eliminate the problem completely.

Moved : Cm. Bruni
Second: Cm. Guerra
For: 8 Against: 0 Abstain: 0

C. Request by Council member John C. Galo

1. Discussion and possible action on the selling of the Municipal Housing Corporation to the Laredo Housing Authority or any other related organization with possible action.

   Cm. Galo commented in reference to what Mr. Ponce said under communications. He said that if we review the record back then, he was referring to remarks made by the Airport Director who indicated that the property will be very valuable and might be used for offices. He does not believe he stated that he wanted to use it for offices.

   His consideration right now is, "what is the city's mission statement? Are we trying to provide low and housing or low cost housing or rents for the citizens of Laredo? And believes that is our intent."

   This issue was addressed last year at budget time, and it was indicated they had a negative budget. They had about $650,000 in income, but were spending $675,000 and these apartments had no debt service. It was in his opinion that they were not being operated properly. What he wants to do before we come to budget again, is ask if someone else with the same mission statement who wants to provide low cost rents to the citizens which he believes the Laredo Housing Authority does or some other entity that might be interested in the same type of situation, if we could sell this to them. He asked for a legal opinion to see if in fact these can be sold because he does no know if in fact these can be sold. He would not want to sell these units to anybody unless they had the same mission statement and they were going in there and run these apartments similar to way the city is. He just didn't see that we needed a duplication of services if Laredo Housing Authority or some other entity is providing these types of services. This is his intent on this issue. He wants to see if the Housing Authority staff have any comments in this regard, the opinion of

staff and legal counsel if we can sell these at all.

Mr. Mario Maldonado reported that the purpose of Laredo Municipal Housing Corporation is to provide affordable and below fair market rental rates to the citizens. Basically their purpose is to provide a housing service to the families. The corporation never has received direction for the corporation to be profit driven. In addition they also provide assistance to those families that are relocated due to city projects. The corporation has the power to create additional housing for example is the lease/purchase program.

He further explained the current market of the corporation, section 8, participation of participants, low income programs, requirements, expenses and fund balances of the corporation, estimated ending balance projected for 1998/99 is $770,000. He said they are properly managing their expenses and in additional their estimated balance for 1999/2000 is $839,000. The homes at the base are close to 35 years old. The apartments in West Laredo at Lafayette were built in 1986. He went over rental fees for the two projects. He reiterated that the purpose of the corporation is basically to provide assistance to the family by offering them below fair market rates.

Abraham Rodriguez, Housing Authority Director, said he was not prepared to give City Council a breakdown of all the incomes and regulations that they operate under, however he was before council expressing support for the Municipal Housing Corporation. They have a long track record of working together. They have Section 8 families living there and have worked in relocating where there has been necessity to do that. They are in the best position to keep that relationship. He said that if there is an interest, maybe there might be other possibilities where they can think, out of the box, and see at partnerships, initiatives, where they can work together, look at different options, different approaches in terms of management, and so many more possibilities out there. His message was that they are in the best disposition to work with the Municipal Housing Corporation with them as the Board of Directors and with the City Manager to do what it takes to make and create additional housing for our community.

Cm. Galo stated he does not want another negative budget.

Motion to instruct staff to get together to talk to the

Municipal Housing Corporation and with Mr. Rodriguez of the Laredo Housing Authority and other entities who wish to discuss this issue to see if there are any ideas that they can come up with to save some monies for the Municipal Housing Corporation. He asked that the issue be discussed, also discuss the possibility of having the Housing Authority manage these units if there is a cost savings and that the issue be brought before the budget.

Moved : Cm. Galo
Second: Cm. Bruni
For: 8 Against: 0 Abstain: 0

2. Status report on the demolition of red tagged abandoned structures in District III with possible action.

Benny Salinas, Building Code Director, reported that they have demolished 10 houses in District III. Right now they are in the process of setting up a meeting for August 5th. The following 21 houses are going before the board. He said that one of their problems they have are trying to find the owners of the properties. He said that after trying to track these people and after sending proper notification letters and having no response, what they will be doing is go through the board and get the board's approval and then they can go and get them demolished.

1) 418 Reynolds
2) 2817 San Salvador
3) 2817 1/2 San Salvador
4) 3420 S. Louisiana
5) 2918 Corpus Christi
6) 3519 San Dario
7) 806 Iturbide
8) 3301 Santa Maria
9) 3303 Santa Maria
10) 2716 San Francisco
11) 303 Zaragoza
12) 1520 Willow
13) 401 Shea
14) 3606 Santa Maria
15) 2719 San Salvador
16) 2705 San Salvador
17) 3502 San Agustin
18) 2501 Market
19) 3301 Juarez
20) 2417 Guatemozin
21) 616 Garcia

Cm. Galo asked what about the homes that have been tagged already and that should have been demolished years ago such as the one in Malinche and two in Chacon?

Mr. Salinas said that he has assigned one person in his office just to take care of that but because of all the new construction they have had there has been some delays. He will reshuffle some of his staff and assign one person to take care of substandard houses.

Cm. Galo wants to know what is the criteria used after red tagged?

Mr. Salinas said the procedure is set up by ordinance, they send a certified registered letter; they have to give them 120 days to respond; after responding they send them a second letter telling them they have to appear before the board; they have to appear before the board within 30 days after the second letter; the board can give them additional time either to be repaired or demolished.

Mr. Pena explained previous practice he said that what was done was that they would give the demolition permit and that would give them six months to start the process of demolishing, and after six month they wouldn't demolish it. He said what they will be doing now is that the will be taking them automatically to the Building Standards Board and they will order the demolish after that then they will have only 30 days to either get a building permit to either do it themselves or we will do it for them. Hopefully that will speed up the process.

Cm. Galo suggested that they be given 30 days to commence and "x" number of days to finish.

Cm. Bruni requested a list of red tagged buildings in the District II.

3. Discussion with possible action concerning violations by mobile home owners' including,
   a. Illegal mobile home parks,
   b. Compliance with skirting code, and
   c. Moving of mobile homes without permits

Cm. Galo stated that on two streets in his district there are over 30 mobile home that did not have any skirting. There is a mobile home park at the area of Blessed Sacrament Church which was supposed to move out already and those mobile homes are still there and have not complied.

He said that on the end of Milmo there are many mobile homes that have been moved there without permits on a land that has no services.

Cm. Alvarado suggested that they get a list of the areas of concern and that they get addressed by staff.

Mayor Flores said that they need to do a whole

manufactured home review again.

Cm. Galo concluded by stating that this is enforcement issue again, and thinks that we need to hire more enforcement people and enforce these rules.

D. Request by Council member Cecilia May Moreno

1. Request for traffic study relating to accidents on Stone and Clark.

   Cw. Moreno said that residents of the area have called her about several accidents there and they want to know if there is particular reason for these accidents.

   Robert Murillo, Traffic Engineer, reported that they did a preliminary study and obtained some of the accidents data on that location. They got police reports and the records show that there have been only four accidents in the past three and a half years and two last year. They went to the area and surveyed if there is any obstruction with the view and could not find any problems there.

   Cw. Moreno will give names and phone numbers of the people who had the concerns so Mr. Murillo can contact them because she has had more than one call from the same people.

2. Discussion and possible action regarding improvements needed for Dr. Al King Little League Field.

   Mr. Jerry Perez was before City Council and delineated improvements done to the park by his organization and was requesting help from the City. He said it still needs minor improvements such as sidewalks on two sides and a field house for tools and machinery storage.

   Motion that staff works with the Parks Director in a joint effort for that field house and maybe with the Tree Board in case they need additional trees in the park. In addition, see if the two sidewalks needed can be done as part of our appropriations under CDBG.

   Moved : Cw. Moreno
   Second: Cm. Galo
   For: 8 Against: 0 Abstain: 0

E. Request by Council member Eliseo Valdez

1. Status report of activities by the COPS program in

District V with detailed information relating to communications with residents and a request for a monthly status report to City Council with possible action.

Police Chief Agustin Dovalina reported that they will be holding a workshop for council to be briefed on community oriented policing services philosophy. He reported that they are compiling reports that they will sending out in a couple of weeks to every Councilmember regarding the activities in their area.

He highlighted some of the ongoing activities that they have done in the area are such as the Volunteer Explorer Program at Mall Del Norte. They have also organized three bike patrol details in the Retama area. There was also a town hall meeting held in the Alma Pierce area where 50 flyers were delivered and seven residents showed up. At the meeting there were concerns raised regarding traffic congestions around the Alma Pierce area.

He went over other activities done by the Police Department during the months of May and June.

They had a total of 184 misdemeanor arrests for the month of June in the four precincts, 72 felony arrests. Over 924 case reports have been filed, 254 accident reports, 64 vehicles stolen, 1049 citations issued, 52 red tagged violations, 101 parking citations, they have directed traffic for 369 hours, 82 curfew citations, 114 civil disputes, 35 truck route citations which encompasses all the activities in the four areas. They participated in beefing up the cruiser situation at San Bernardo, Malinche and Bartlett. During the month of June, in precinct 4 they conducted summer safety presentations to Sanchez Elementary and San Luis Rey children. Precinct 8 worked on a Mexican card counterfeiting ring operating in our area through arrest of four individuals and the recovery of over $20,000 in merchandise.

Also identified a number of drug dispensing areas and drug houses in precinct 8 and 9. They also made presentations to Benavides Elementary School, KVTV and KLDO before school ended, conducted a red tag for city ordinance violations and junked vehicles of which 11 vehicles were tagged for removal. Precinct 8 and 9 are also making preparations to hold the National Night Out event coming in the next couple of weeks. A total of 240 patrol visits in all the city's parks have been conducted. They had a large of number of man hours in contact hours with the residents. They are working hard

to enhance the mandate that Council has given to promote and continue to enhance the community oriented philosophy.

2. Status report and discussion on the enforcement of the City's Sign Ordinance as a result of the many non-compliance signs, and the placement of commercial signs on right-of-ways.

   Benny Salinas, Building Inspector, reported that his three zoning enforcement officers are the ones enforcing the sign ordinance. In reference to garage signs, announcements signs such as weight loss signs, special concerts, etc. staff has been taking them of.

   Cm. Valdez stated that this is not a matter of city staff pulling of those signs, it is a matter of tracking the source of these signs, citing them, and doing something about it.

3. Status report on the Raquel Gonzalez property.

   Erasmo Villarreal, Community Development Director, reported that they have been meeting with representatives of Mrs. Gonzalez to acquire the site. They did contract an engineering firm of applied science to conduct some testing on this property. The only thing the firm had asked from staff was that the site be cleaned, they related the message to the property owner and as of last Friday the property has now been cleaned and the engineering firm will proceed with the testing. He explained that there is a section of that land that was an old landfill. Before acquiring that site they will test the site to insure that everything is in compliance. He met with Mr. O'Connor the engineer for applied Earth Science and he assured him that the testing will start this week and that hopefully they will get the results by the end of the month to proceed with the project.

4. Status report on the Chaparral Drainage Project and the Erosion Control of the Northern Zacate Creek with possible action.

   Rogelio Rivera, City Engineer, reported that in reference to the Chaparral Drainage Project the contract has been awarded to Pete Gallegos Paving. They have started on the demolition today and it is a six month contract. They have asked the contractor to be sure to advise all the property owners that they will be working on the area plus they have also told them to fence all the area that

will be under construction.

In reference to the upper Zacate Creek erosion, they received bids on the 21st of this month and it's a four month project.

Cm. Valdez asked about the channelization on the small creek areas north of Calle Del Norte which is part of the same system?

Mr. Rivera answered that they have an engineering contract on this area and should be receiving plans on the first phase in a couple of months.

F. Request by Council member Joe A. Guerra

1. Presentation by Richard Kahn and Octavio Benavides Jr. to discuss the irregularities in the bidding as well as insurance practices as they apply to independent contractors doing work for the City, with possible action.

   Mr. Richard Kahn and Mr. Octavio Benavidez, Jr. appeared before the council and reported that in the past he has been bidding with different government agencies in town and found that there has been a lack of enforcement on the insurance requirement and that non-insured contractors are being allowed to bid. Either the insurance certificates are not being asked for or if they are being provided they are not being checked to see if they are valid or not.

   He said he was a bidder in a project and he was not the low bidder. After lengthy explanation and detail as to what had transpired regarding the process taken by city in the bidding process and a bid insurance certificate he called the underwriter to verify the validity and they are not valid. He spoke to the Assistant City Manager in reference to this issue, and the contractor is still working today. His question is why are these contractors being allowed to work when they don't have insurance even when the City Risk Management Department recommends to have the contractor removed from the project? Why is he being allowed to work?

   1) They would like to recommended that insurance certificates be turned in at the time of the bid instead of when the bid is awarded. Some of these project are two or three days long so by the time they checked into it they have already finished the project and nothing can

be done.

2) Insurance certificates should be checked with the agent and if they are suspicious they should be checked with the underwriter. He said that with the state all bids over $25,000 should have a bid bond and here there is no bid bond even is they are project are over $100,000 so anyone off the street can bid these projects even if they are not capable of doing the work.

3) Any contractor that defaults from a bid project is terminated from the project due to lack of performance and is found to be fraudulent in his bidding and should be banned from future bidding for a period of at least five years.

4) Licenses should be check because there are many contractors that are not licensed.

Larry Dovalina, Assistant City Manager, reported that they did have a meeting with Mr. Kahn and all the items listed as irregularities in the bidding process are being addressed.

Francisco Meza, Purchasing Agent, reported that on this particular contract it is difficult to check some of the items because of the time elements and the project needed to be completed prior to a certain time line due to grant requirements for the Father MacNaboe Park. When they got the request for these items, they went out on a formal bid, formal seal bids were received at the City Secretary's, there was a public bid attended by two staff members and a bidder plus Mr. Guevara was present to open the bid. Bids were opened and Mr. Guevara announced the bid results and copies were submitted to the Parks and Recreation Department. Parks and Recreation Department made a recommendation to Purchasing to award the contract to the low bidder. There were two options: one bid for the delivery or requested trees and another bid for the delivery of the trees and the planting of the trees. The recommendation was to go ahead and plant the trees so that kicks another requirement for the city, the insurance requirements. Prior to bid award our requirements are that you do not have to submit any kind of insurance documents prior to submission of the bid. This is consistent with the policy for engineering contracts and has been city policy. Basically, after the review process and insurance binder was provided to us by the apparent low bidder. Based on that a recommendation was forwarded to City Council for approval. After

approval they were provided a copy of the Certificate of Insurance and based on that a purchase order was issued. After that certain questions were raised and Risk Management went into further detail trying to make a determination whether this was indeed something that we need to stop. Management was advised, they met with legal and the determination was made that based on the information we had they could not make a determination that those in fact were not valid and the project did continue. Subsequent to that they were provided with other documents and insurance certificates. It is not a normal occurrence, it is not something that they normally get, with a time frame of two weeks, however, a determination was made to go ahead and let the project finish out with the planting of the trees.

In reference to the bid bond checking and licensing, that is something that probably can be done. He does not know how much time that would take, but that can be done.

Mr. Meza stated that Mr. Kahn was correct, the local government code requires bid bonds and performance bonds on any construction project over $25,000. He said that we can be more restrictive, the only problem with that is that we are going to limit our number of vendors that can qualify to submit bids.

The insurance to be turned in with the bid documents also will limit the number of vendors that will do business with the city. Some vendors do have the insurance, many will like to do it on a project by project basis.

Mayor Flores said this is an important issue and asked that perhaps Mr. Meza can get together with Mr. Kahn and Mr. Benavidez and review these recommendations.

Motion to instruct staff to set up a meeting with interested contractors, insurance agents or insurance companies, interested parties and whoever else might want to come to the table to bring their thoughts, ideas, and concerns in this regard. Also, that once staff has reviewed the information that they discuss this among staff and take it to legal and bring whatever recommendations they have within a reasonable time and hopefully by next year they can have this policy in place.

Moved : Cm. Guerra
Second: Cm. Alvarado
For: 8 Against: 0 Abstain: 0

2. Presentation by disabled police officer, Jorge P. Gamez to discuss several employment options, with possible action.

Mr. Jorge Gamez stated that he has been a police officer since February 26, 1985. On April 1985 he sustained an injury on the job that resulted in the fracture of his left ankle. After having surgery, he kept experiencing problems with his ankle. On March 18, 1989 the doctor permanently disabled him from his foot and left ankle and since then he has been working doing light duty with restrictions. In July 14th he was informed by the personnel office that his injury leave would expire.

He was before council requesting an extension of his injury leave with pay so he can continue with doctor follow-ups and job accommodations. He added he is not under workman's compensation at this time.

City Manager Pena stated that an issue that Council needs to be aware of is that under Civil Service Statutes Section 143, there is a provision that allows City Council to extend injury leave to Police and Firefighters for a period not to exceed one year in the event of work related injuries. In this case Officer Gamez has gotten his two years which is permitted by workman's compensation and has been under workmen's compensation those two years as an officer and as a member of the civil service unlike the rest of our city employees. He does have a right to come before City Council to ask for such extension. He added that extensions such as this have been granted to another officer, Officer Viera, about a two years ago.

Dan Migura, Administrative Services Director, explained that Mr. Gamez did sustain an injury while on duty, he is provided certain benefits which include worker's comp, he has reached the final settlement on worker's comp and so there is no more compensation he will be receiving. He does have one year on medical that is still open on this injury and that will be provided to him. Last year in March the city implemented a Return to Work Program and Mr. Gamez fell in that program category. He has been progressing through the stages and steps on that Return to work program.

Under the civil service guidelines we can extend his injury with pay status for one year which he has already exhausted. There is another provision that says that

"you can extend it for a period of time or you can reduce it, can reduce the pay extended or there is a number of ways you can do that", but he "can" come to council and ask for that provision.

Under the return to work program if he had been a city employee upon the expiration of 260 lost work days, at that point the city's policy is to terminate the employee due to business necessity and move forth. Another provision of the return to work program was to review the possibility of any kind of accommodation according to ADA. As they have researched this in the arena of ADA, a police officer or firefighter needs to be able to come to work in a full duty capacity, there is no provision for any kind for any reasonable accommodation according to case law. He added that Mr. Gamez has been notified of his status and they have explained all the details. Under the Return to Work Program he has exhausted that, however if the doctor is able to release him in some capacity, Mr. Gamez could look at employment at other areas of the city outside the police department. If he qualifies and the doctor says he can do that, then he can be placed in such position, however he would have to resign as a police officer. Currently, the only way he can return to work in the Police Department would be if he can return in full capacity.

Mr. Gamez said he will continue with the doctor's follow-ups, and that the doctor has told him that maybe with time he can come back to regular duty, so an extension would be of benefit to him.

Mr. Migura explained that if given the option to extend, it can be done at whatever salary percentage council wishes. He added that he is now currently receiving 75% and was receiving 75% under worker's compensation.

Motion to extend worker's injury leave for (1) one year with the understanding that staff continue monitoring his medical condition to see if in that period of time he can make a full and complete recovery and return to work on active duty and that the one year extension be with 75% of the salary.

Moved : Cm. Guerra
Second: Cm. Valdez
For: 8 Against: 0 Abstain: 0

3. Video presentation by the BEST Organization concerning the Y2K Crisis.

Motion to table for next meeting.

Moved : Cm. Guerra
Second: Cm. Valdez
For: 8 Against: 0 Abstain: 0

XI. PUBLIC HEARINGS

27. Public hearing amending the City of Laredo FY1998-1999 Annual Budget in the amount of $3,000 for a grant from the Library of Congress-Center for the Book - Viburnum Family Literacy Project and providing for an effective date.

INTRODUCTION OF AN ORDINANCE

Ordinance amending the City of Laredo FY1998-1999 Annual Budget in the amount of $3,000 for a grant from the Library of Congress-Center for the Book - Viburnum Family Literacy Project and providing for an effective date.

Motion to open the public hearing.

Moved : Cw. Montalvo
Second: Cw. Moreno
For: 8 Against: 0 Abstain: 0

There was no public input.

Motion to close the public hearing and introduce.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

Ordinance Introduction: City Council

28. Public hearing allowing interested persons to comment on the 1999 Consolidated Plan which identifies the projects proposed to be funded by the U.S. Department of Housing and Urban Development through the 25th Action Year Community Development Block Grant (CDBG), the 1999 HOME Investment Partnerships Program (HOME), and the 1999 Emergency Shelter Grant (ESG). The projects are as follows:

25th AY Community Development Block Grant

Community Development Administration $697,472
Housing Rehabilitation Administration $161,476
Housing Rehabilitation Loan Program. $400,000
(an additional $260,000 in program income will be utilized)

Code Enforcement	$259,316
Hamilton Hotel - Section 108 Loan Repayment	$148,000
Graffiti Removal Program	$ 27,034
Zacate Creek Linear Park (Phase III, IV, & V)	$448,496
Sidewalk Approaches	$500,000
Demolition	$ 50,000
Centro Iturbide ADA Sidewalks	$150,000
Dryden/Optimist Park Improvements	$150,000
Ladrillera Elderly Recreational Facility	$ 60,000
Ladrillera Elderly Recreational Facility Coordinator	$ 40,000
Santa Rita Park - Phase I	$200,000
Metro-La Hacienda Apartments/Street Improvements	$100,000
Chacon Creek Improvements - Phase 2 (an additional $39,900 in Program Income will be utilized)	$ 82,206
San Francisco/Eistetter Park	$200,000
Cruz Field Lighting/Fencing Project	$ 75,000
Farias Neighborhood Police Substation	$100,000
San Francisco Xavier Road Improvements	$450,000

1999 HOME GRANT

Down Payment Assistance	$600,000
Substantial Rehabilitation	$425,024
15% Community Housing Dev. Organization Set Aside	$203,550
Administration	$128,426

1999 Emergency Shelter Grant

Homeless Prevention Program	$ 45,900
Homeless Shelter Program (Operations/Rehab)	$102,510
Administration	$ 4,590

Motion to open the public hearing.

Moved : Cm. Bruni
Second: Cw. Moreno
For: 8 Against: 0 Abstain: 0

Cm. Galo asked in reference to the Zacate Creek Linear Park, is this on both sides? On the Chacon Creek, is this part of the project that is currently underway?

Erasmo Villarreal, Community Development Director, answered "yes" in reference Cm. Galo's question and in reference to the Zacate Creek. He said their intention is to cover both sides of the creek.

In reference to Chacon Creek, they had originally identified

Phase II to be from Highway 359(north) however they had a ruling from HUD on whether they could use a combination program where we can get some donations of creek property?

Their response was that since this was an identified project and if we were to do a project it all had to be acquisition. He was asking City Council that rather than going north of 359 that he would like to put the money back into the first phase that was identified this program year so that they can get further along hopefully past Highway 83 and maybe even up to 359.

After lengthy discussion in reference to sidewalk monies, Mayor Flores asked that staff see in reference to the sidewalk total amounts and maybe they can talk to whoever got the most money to move some money to Cw. Moreno's district.

Mr. Jesus Ponce spoke on the Homeless Shelter Program and said we don't have a tremendous amount of veterans, but we do need monies for our homeless veterans. He said they do need assistance and asked City Council emphasize in Veterans.

Motion to accept the recommendation on the Chacon Creek Improvement as identified by Mr. Erasmo Villarreal.

Moved : Cm. Agredano
Second: Cm. Valdez
For: 8 Against: 0 Abstain: 0

Motion to close the public hearing.

Moved : Cm. Bruni
Second: Cm. Galo
For: 8 Against: 0 Abstain: 0

29. Public hearing for the amendment to the "Environmental Impact Document" for the 60 MGD Intake Structure at Jefferson Water Treatment plant to include the High Service Pump Station.

Motion to open the public hearing.

Moved : Cm. Alvarado
Second: Cm. Bruni
For: 8 Against: 0 Abstain: 0

There was no public input.

Motion to close the public hearing.

Moved : Cm. Bruni

Second: Cm. Alvarado
For: 8 Against: 0 Abstain: 0

SUPPLEMENTAL AGENDA

IV. INTRODUCTORY ORDINANCE

Authorizing the City Manager to execute all necessary documents to effectively convey a 492.00 sq. ft. tract of land, being 12-feet long, as a Utility Easement to Central Power and Light Company, to provide electrical services to a power booster station. This booster station will provide better water utilities services to the surrounding areas in Northwest Laredo. Said 492.00 sq. ft. tract of land being out of and a part of a 0.9138 of an acre tract of land, the North Laredo Water Storage Tank Plat, City of Laredo, Webb County, Texas; being generally described below, and more particularly described by metes and bounds and providing for an effective date.

Motion to table.

Moved : Cm. Bruni
Second: Cm. Agredano
For: 8 Against: 0 Abstain: 0

X. CITY COUNCIL PRESENTATION AND DISCUSSION

26. Requests by Mayor and City Council members for presentation and discussion.

G. Requests by Council member Mario G. Alvarado

1. Discussion on the National Night Out Project sponsored by the Police Department and Central Power and Light Company (CPL) with possible action.

   Mrs. Marga Lopez Baker said they want to show their commitment towards this project and announced they have been partners for three years and with that sponsorship comes monetary donation of $2,500 plus other in-kind services and block parties to get the community and families out.

   Cm. Alvarado said thy are working with nine different locations this year. He was advising the City Council so that they can participate in the areas that are in their districts or neighboring their districts in the particular project. It will be held on August 3rd, it is a national project held nationwide to address crime prevention efforts on behalf of all law enforcement communities. He added that all law enforcement communities have been invited to participate in

the event. It's an event designated to inspire community involvement and get the neighborhoods to come out and meet with the law enforcement personnel and discuss ways as to how they can also participate and be the "eyes and ears" of the law enforcement community in their own neighborhood. The sites where the project will be held on August 3rd are:

1) Main Boys Club - 500 Moctezuma
2) United Intermediate - 700 Del Mar
3) Cigarroa Recreation Center - 2201 Zacatecas
4) K. Tarver Recreation Center -2902 Tilden
5) McPherson Recreation Center - 300 Wyoming
6) Farias Recreation Center - 600 Farias
7) Block Parties at Plantation at the McPherson Entrance
8) At Winfield.
9) Hillside and Nebraska

XII. ADJOURNMENT

Motion to adjourn. Adjournment time: 9:40 p.m.

Moved : Cm. Bruni
Second: Cm. Alvarado
For: 8 Against: 0 Abstain: 0

I hereby certify that the above minutes contained in pages 01 to 65 are true, complete, and correct proceedings of the City Council Meeting held on the 19th day of July, 1999. A certified copy is on file at the City Secretary's Office.

Gustavo Guevara, Jr.
City Secretary

Minutes approved: September 7, 1999