

SUPPLEMENTAL WATERSHED WORK PLAN AGREEMENT

between the

Hays-Caldwell-Travis Soil and Water Conservation District
(Local Organization)

Plum Creek Conservation District
(Local Organization)

State of Texas
(hereinafter referred to as the Sponsoring Local Organization)

and the

Soil Conservation Service
United States Department of Agriculture
(hereinafter referred to as the Service)

Whereas, the Watershed Work Plan Agreement for the Lower Plum Creek Watershed, State of Texas, executed by the sponsoring local organizations named therein and the Service, became effective on the 29th day of June, 1961; and

Whereas, it has been found necessary to modify the watershed work plan to delete fish and wildlife development as a project purpose; and

Whereas, the City of Lockhart wishes to be relieved of its responsibilities as a sponsor; and

Whereas, a Supplemental Watershed Work Plan, which modifies the watershed work plan dated August 1960 for said watershed, has been developed through the cooperative efforts of the Sponsoring Local Organization and the Service, which plan is annexed to and made a part of this agreement;

Now, therefore, the Sponsoring Local Organization and the Service hereby agree upon the following modifications of the terms, conditions, and stipulations of said Watershed Work Plan Agreement:

1. Paragraph numbered 1 is modified to read as follows:

The Sponsoring Local Organization will acquire without cost to the Federal Government such land, easements, or rights-of-way as will be needed in connection with the works of improvement. (Estimated cost \$400,304.)

2. Paragraph numbered 3 is changed to read as follows:

The percentages of construction costs of structural measures and land treatment measures for flood prevention to be paid by the Sponsoring Local Organization and by the Service are as follows:

<u>Works of Improvement</u>	<u>Sponsoring Local Organization</u> (percent)	<u>Service</u> (percent)	<u>Estimated Construction Cost</u> (dollars)
15 Floodwater Retarding Structures	0	100	1,290,795
24.7 Miles Stream Channel Improvement	0	100	1,313,565

3. Paragraph numbered 4 is modified as follows:

The Service will bear the cost of all installation services applicable to works of improvement for flood prevention. (Estimated cost \$627,816.)

The Sponsoring Local Organization will bear the cost of all installation services applicable to works of improvement for non-agricultural water management. (Estimated cost \$ None .)

4. Tables 1, 2, 3, and 5 referred to in the watershed work plan are modified to conform with tables 1, 2, 3, and 5 attached. Table 9 is deleted.

The program conducted will be in compliance with all requirements respecting non-discrimination as contained in the Civil Rights Act of 1964, and the regulations of the Secretary of Agriculture (7 C.F.R. Sec. 15.1-15.13), which provide that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participating in, be denied the benefits of, or be subjected to discrimination under any activity receiving Federal financial assistance.

All terms, conditions, and stipulations of the Watershed Work Plan Agreement and annexed Watershed Work Plan remain unchanged except as modified by this supplemental work plan agreement and annexed supplemental work plan which is hereby made a part of this agreement.

SUPPLEMENTAL
WORK PLAN
FOR
WATERSHED PROTECTION AND FLOOD PREVENTION

LOWER PLUM CREEK WATERSHED
Hays and Caldwell Counties, Texas

Prepared Under the Authority of the Watershed
Protection and Flood Prevention Act, (Public
Law 566, 83rd Congress; 68 Stat. 666), as
amended.

Prepared by:

Hays-Caldwell-Travis Soil and Water Conservation District
(Co-Sponsor)

Plum Creek Conservation District
(Co-Sponsor)

With Assistance by:

U. S. Department of Agriculture
Soil Conservation Service

January 1966

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SUPPLEMENTAL
WATERSHED WORK PLAN
LOWER PLUM CREEK WATERSHED
Hays and Caldwell Counties, Texas
January 1966

Purpose

This supplemental watershed work plan has been prepared to delete fish and wildlife as a purpose in structure No. 36 and to relieve the City of Lockhart from its responsibilities as a sponsor.

Change in Scope

None.

Change in Major Features

None.

Change in Estimated Costs

Installation cost of structural measures will be reduced from \$3,693,327 to \$3,640,980. The Public Law 566 share of the cost of structural measures will be reduced from \$3,258,349 to \$3,277,726. The local share of the cost of structural measures will be reduced from \$434,978 to \$408,804.

Deleting fish and wildlife development as a purpose will have no effect on the benefit cost ratio because neither cost nor benefits for fish and wildlife development were included in the evaluation of the project.

Change in Sponsoring Local Organizations

The City of Lockhart is no longer a sponsor of the project.

SECTION 1

SUPPLEMENTAL WATERSHED WORK PLAN

LOWER PLUM CREEK WATERSHED
Hays and Caldwell Counties, Texas
January 1966

GENERAL SUMMARY

The first paragraph is modified to read: "The work plan for watershed protection and flood prevention for the Lower Plum Creek watershed, Texas, was prepared by the Hays-Caldwell-Travis Soil and Water Conservation District and the Plum Creek Conservation District as the local co-sponsoring organizations. Technical assistance was provided by the United States Department of Agriculture."

The sixth paragraph is modified to read: "The Plum Creek Conservation District is a legal subdivision of the State of Texas with the powers of taxation and eminent domain. The Plum Creek Conservation District will contract for the construction of all the structural measures and be responsible for the operation and maintenance of the 15 floodwater retarding structures and 24.7 miles of channel improvement. The Plum Creek Conservation District will raise its share of the project costs by a district-wide ad valorem tax. The project will be installed during a 5-year period."

The seventh paragraph is modified to read: "The Federal share of installation of structural measures will be \$3,232,176. Local cost of easements, rights-of-way, and administration will be \$408,804, of which about \$224,000 is anticipated out-of-pocket cost to the local organization. The sponsors do not plan to apply for an FHA loan."

DESCRIPTION OF WATERSHEDPhysical Data

The second paragraph is modified to read: "This work plan, for watershed protection and flood prevention, comprises that portion of the Plum Creek drainage area below State Highway 20 (figure 1)."

WORKS OF IMPROVEMENT TO BE INSTALLEDStructural Measures

The first paragraph is modified to read: "A system of 15 floodwater retarding structures and 24.7 miles of channel improvement will be installed

to provide needed protection for flood plain land that cannot be attained by the land treatment measures described above."

The fourth paragraph is modified to read: "The total estimated cost of installing the structural works of improvement is \$3,640,980. The estimated annual equivalent cost of installation, \$131,585, with an estimated annual operation and maintenance cost of \$12,699, makes a total annual cost of \$144,284."

ACCOMPLISHING THE PLAN

Structural Measures

In the first paragraph, change "14 floodwater retarding structures" to "15 floodwater retarding structures."

Delete the second and third paragraphs.

In the tabulation showing the estimated schedule of obligations for the 5-year installation period, change the 5th year and total to read:

Fiscal Year :	Measures	Public Law : 566 Funds (dollars)	Other : Funds (dollars)	Total (dollars)
5th	Sites 35, 36, Tenneys Creek Channel Improve- ment and Land Treat- ment	584,215	255,710	839,925
TOTAL		3,277,726	1,142,194	4,419,920

On page 21, delete items 5 and 6.

Delete "and fish and wildlife development" from the last sentence of the paragraph following item 8.

PROVISIONS FOR OPERATION AND MAINTENANCE

Structural Measures

The first two paragraphs are changed to read:

"The estimated annual operation and maintenance cost is \$12,699 (table 6) based on long-term price levels. The Plum Creek Conservation District will be responsible for operation and maintenance of the 15 floodwater retarding

structures and 24.7 miles of channel improvement. The necessary maintenance work will be accomplished through the use of contributed labor and equipment, by contract, by force account, or a combination of these methods. The Plum Creek Conservation District will establish a permanent reserve fund for this purpose in the following manner and amounts: As floodwater retarding structures and channel improvement are completed, \$200 per year per structure and \$200 per mile of channel improvement will be placed in a reserve fund for operation and maintenance until the sum of \$25,000, for both Plum Creek and Lower Plum Creek watersheds, is established. The permanent reserve fund will be maintained at this level by replacing used funds at the rate of \$200 per structure and \$200 per mile of channel per year.

"The floodwater retarding structures and the channel improvement will be inspected by the Plum Creek Conservation District after each heavy streamflow or at least annually. A Soil Conservation Service representative will participate in these inspections at least annually. For the floodwater retarding structures, items of inspection will include, but will not be limited to, the condition of the principal spillway and its appurtenances, the earth fill, the emergency spillway, the vegetative cover of the earth fill and the emergency spillway, and fences and gates installed as a part of the structure. For the improved channel items of inspection will include, but will not be limited to, the need for removal or control of woody vegetation, removal of sediment bars, control of meander, and corrective measures to prevent gully erosion or head cutting in side drains."

Delete the fifth paragraph.

The last paragraph in this section is changed to read: "The soil conservation district and the Plum Creek Conservation District fully understand their obligations for operation and maintenance and will execute specific operation and maintenance agreements prior to the issuance of invitation to bid on construction of the structural measures."

COST-SHARING

The first paragraph remains the same. The remainder of this section is changed to read:

"The installation cost of the 15 floodwater retarding structures and 24.7 miles of channel improvement, \$3,640,980, will be shared \$3,232,176 (construction, \$2,604,360, and installation services, \$627,816) by Public Law 566 funds and \$408,804 (easements, changes in utilities, roads, and improvements and legal fees, \$400,304, and administration of contracts, \$8,500) by other than Public Law 566 funds.

"The estimated out-of-pocket cost to the local sponsors for installation of structural measures is \$224,000.

"The total cost of structural measures, \$3,640,980, will be shared 88.8 percent, \$3,232,176, by Public Law 566 funds and 11.2 percent, \$408,804, by other than Public Law 566 funds.

"The total project cost of \$4,419,920 will be shared 74.2 percent, \$3,277,726, by Public Law 566 funds and 25.8 percent, \$1,142,194, by other than Public Law 566 funds. In addition, the cost of operation and maintenance, \$12,699 annually, will be borne by local interests."

CONFORMANCE OF PLAN TO FEDERAL LAWS AND REGULATIONS

The first paragraph is changed to read: "The installation of the watershed protection and flood prevention project on the Lower Plum Creek watershed will make a definite contribution to the objectives of the overall Guadalupe-Blanco River Authority Development program."

SECTION 2

STATISTICAL SUMMARY, INVESTIGATIONS, ANALYSES,
AND SUPPORTING TABLESSTATISTICAL SUMMARYStructural Measures

Change the number of floodwater retarding structures from 14 to 15, change floodwater detention capacity from 23,222 acre-feet to 27,445 acre-feet, and the sediment storage capacity from 3,914 acre-feet to 4,767 acre-feet. Delete everything pertaining to multiple-purpose structures.

Cost of Project

The tabulation in this section is modified as follows:

Measures	: Public Law : 566 Funds (dollars)	: Other : Funds (dollars)	: Total (dollars)
Land Treatment	45,550	733,390	778,940
Structural	3,232,176	408,804	3,640,980
Total	3,277,726	1,142,194	4,419,920

Damages and Benefits

Change total average annual cost of structural measures from \$141,073 to \$144,284.

Change annual equivalent cost of project installation from \$128,374 to \$131,585.

TABLE 1 - ESTIMATED PROJECT INSTALLATION COST ^{1/}
 Lower Plum Creek Watershed, Texas
 Price Base: 1959

Installation Cost Item	:	:	Number:	Estimated Cost	:	:	Total
	:	:	to Be	Public Law:	Other	:	:
	:	Unit	Applied:	566 Funds	:	Funds	(dollars)
	:			(dollars)	:	(dollars)	(dollars)
TOTAL LAND TREATMENT				45,500		733,390	778,940
STRUCTURAL MEASURES							
Soil Conservation Service							
Floodwater Retarding							
Structures		No.	15	1,290,795		-	1,290,795
Channel Improvement		Mile	24.7	1,313,565		-	1,313,565
Subtotal				2,604,360		-	2,604,360
Subtotal - Construction				2,604,360		-	2,604,360
Installation Services							
Soil Conservation Service							
Engineering Service				389,517		-	389,517
Other				238,299		-	238,299
Subtotal				627,816		-	627,816
Subtotal - Installation Service				627,816		-	627,816
Other Costs							
Land, Easements & R/W				-		400,304	400,304
Administration of Contracts						8,500	8,500
Subtotal - Other				-		408,804	408,804
TOTAL STRUCTURAL MEASURES				3,232,176		408,804	3,640,980
TOTAL PROJECT				3,277,726		1,142,194	4,419,920
SUMMARY							
Subtotal SCS				3,277,726		1,142,194	4,419,920
TOTAL PROJECT				3,277,726		1,142,194	4,419,920

^{1/} No Federal lands involved.

Modifies table 1 dated August 1960 in the original work plan.

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TABLE 2 - ESTIMATED STRUCTURE COST DISTRIBUTION

Lower Plum Creek Watershed, Texas

Price Base: 1959

Structure Site Number or Name	Installation Cost - Public Law 566 Funds			Installation Cost-Other Funds:					
	Construction	Installation Services	Total	Adm.	Easements	Total			
	Engineer's Estimate	Continuing Agencies	Engineer's Estimate	of Public Law 566	and R/W	Installation Cost			
	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)			
Sites 23 thru 35 and 37, and Channel Improvement	2,248,950	224,895	363,414	226,357	3,063,616	8,000	353,207	361,207	3,424,823
Site 36	118,650	11,865	26,103	11,942	168,560	500	47,097	47,597	216,157
GRAND TOTAL	2,367,600	236,760	389,517	238,299	3,232,176	8,500	400,304	408,804	3,640,980

Modifies table 2 dated August 1960 in the original work plan.

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TABLE 3 - STRUCTURE DATA - FLOODWATER RETARDING STRUCTURES

Lower Plum Creek Watershed, Texas

Item	:	: Structure No.:	
		: Unit	: 36 : Total
Drainage Area		Sq. Mi.	14.53 93.18
Storage Capacity			
Sediment pool (200 acres or less)		Ac. Ft.	194 2,278
Sediment reserve below riser		Ac. Ft.	504 1,797
Sediment in detention pool		Ac. Ft.	155 692
Floodwater		Ac. Ft.	4,223 27,445
Total		Ac. Ft.	5,076 32,212
Surface Area			
Sediment pool <u>2/</u>		Acre	134 912
Floodwater pool		Acre	475 3,513
Volume of Fill		Cu. Yd.	235,100 2,474,500
Elevation Top of Dam		Foot	471.3 xxx
Maximum Height of Dam		Foot	37 xxx
Emergency Spillway			
Crest elevation		Foot	465.5 xxx
Bottom width		Foot	300 xxx
Type		-	Veg. xxx
Percent chance of use <u>3/</u>		-	3.10 xxx
Average Curve No. Condition II		-	79 xxx
Emergency Spillway Hydrograph			
Storm rainfall (6-hour) <u>4/</u>		Inch	6.56 xxx
Storm runoff		Inch	4.19 xxx
Velocity of flow (V _C) <u>5/</u>		Ft./Sec.	0 xxx
Discharge rate <u>6/</u>		C.F.S.	0 xxx
Maximum water surface elevation <u>6/</u>		Foot	- xxx
Freeboard Hydrograph			
Storm rainfall (6-hour) <u>7/</u>		Inch	16.06 xxx
Storm runoff		Inch	13.26 xxx
Velocity of flow (V _C) <u>8/</u>		Ft./Sec.	9.5 xxx
Discharge rate <u>6/</u>		C.F.S.	8,162 xxx
Maximum water surface elevation <u>6/</u>		Foot	471.3 xxx
Principal Spillway Capacity (Maximum)		C.F.S.	128 xxx
Capacity Equivalents			
Sediment volume (200 acres or less)		Inch	0.25 xxx
Sediment reserve volume below riser		Inch	0.65 xxx
Sediment in detention pool		Inch	0.20 xxx
Detention volume		Inch	5.45 xxx
Spillway storage		Inch	4.75 xxx
Class of Structure		-	A xxx

Modifies table 3 dated August 1960 in the original work plan.

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TABLE 5 - SUMMARY OF PLAN DATA
Lower Plum Creek Watershed, Texas

This table should be modified by making the following changes: Under Structural Measures, change the number of floodwater retarding structures from 14 to 15 and delete multiple-purpose structures. Under Area Inundated by Structures, delete 90 acres of flood plain inundated by the fish and wildlife pool and 74 acres of upland inundated by the fish and wildlife pool.

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