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United States  
Department of  
Agriculture  
  
**Soil  
Conservation  
Service**

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**National  
Watershed  
Manual**

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**Part 504**

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**Plan Format and  
Content**



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# Part 504

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# Plan Format and Content

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**Subpart 504A General****504.00 Introduction**

This part sets forth format and content requirements for watershed agreements, watershed plan-environmental impact statements (plan-EIS's), and watershed plan-environmental assessments (plan-EA's). Separate, though similar, agreement formats are included for water resource plans (those with structural or non-structural measures) and watershed protection plans (those with land treatment only). Except where it is necessary to distinguish between a plan-EIS and a plan-EA, the term "plan" will be used to refer to both.

**504.01 Responsibilities****(a) Preparation of the plan**

Preparation of the plan is the responsibility of the Sponsoring Local Organizations (SLO). The Soil Conservation Service (SCS) has leadership responsibility for providing technical assistance to the SLO. As part of this responsibility, SCS coordinates input of other agencies and groups in the formulation of the plan. The U.S. Forest Service (FS) has coordination responsibility for the forest land part of the plan.

**(b) Compliance with NEPA**

Compliance with NEPA is the responsibility of SCS. The state conservationist is the responsible Federal official who ensures that the watershed plan-EIS or plan-EA complies with NEPA.

**504.02 Watershed agreement**

A watershed agreement is the legal document that records the responsibilities that the SLO and SCS will bear for installing the plan. The plan is annexed to and becomes part of the watershed agreement. This annexation permits a detailed description of duties and responsibilities of SCS and each local organization sponsoring the watershed project.

The watershed agreement is placed immediately behind the fly sheet of the plan. Because this is a legal document or contract, wording should be copied directly from subpart 504B or 504C.

**504.03 Watershed plan**

The watershed plan is the basic document in which the SLO's decisions are recorded. It provides the basis for project authorization and guides the implementation of the plan. The plan describes the work to be installed, the responsibilities of each participant, cost sharing, arrangements for financing, and provisions for operation and maintenance. It should also show the relationship between beneficial and adverse effects of the proposed project.

**504.04 Environmental impact statement**

An Environmental Impact Statement (EIS) is a decisionmaking document and a record of the planning process. It provides a record of compliance with NEPA and related rules, orders, and laws. It should clearly enumerate and describe the significant problems, needs, opportunities, alternatives, and the direct, indirect, and cumulative effects of the alternatives. The minimum requirements for an EIS are set forth in the Council on Environmental Quality (CEQ) and SCS regulations (40 CFR 1500-1508 and 7 CFR 650). SCS policy is to combine the watershed plan and EIS into a single document, the plan-EIS.

**504.05 Environmental assessment and FONSI**

An environmental assessment (EA) is a document for a project for which a Finding of No Significant Impact (FONSI) is prepared (7 CFR 650.4(l) and 650.12(c)(3)) instead of an EIS. SCS policy is to combine the watershed plan and EA into a single document (plan-EA). It shall include appropriate data needed to provide an understanding of the plan and its economic, environmental, and social impacts. An EA consists of essentially the same type of information that is required of an EIS. The main difference is in the review procedures for the plan.

A sample FONSI is shown in exhibit 505-1

## 504.06 Pre-NEPA plans

Some plans approved before the passage of NEPA may include work that has not yet been installed and for which an EIS or FONSI (or negative declaration) has not been filed. Environmental evaluations will be conducted for all the remaining works of improvement to be installed on such projects. Either an environmental assessment and FONSI or an EIS, as appropriate, will be prepared.

If a pre-NEPA plan is revised, the EIS and revised plan would be one document. Otherwise, the EIS must stand on its own and should be prepared in sufficient detail to clearly describe the alternatives; direct, indirect, and cumulative effects; and public participation activities. Supplements will be kept separate from the EIS and handled according to procedures outlined in part 506 of this manual.

## 504.07 Status

Only two official status designations of watershed plan-EIS's are recognized—draft and final.

### (a) Draft

A **draft** comes into being when the plan-EIS is made available to the general public and is distributed for interagency review. Working copies developed during the planning process for internal use and informal review by others should be clearly labeled as **Preliminary—Subject to revision** and dated for ease in identification. The copy of the plan-EIS that is submitted for NTC concurrence before the draft comes into being is referred to as the Technical Review Plan-EIS.

### (b) Final

A **final** plan-EIS results from the consideration of all comments received on the **draft** during the interagency review.

### (c) Designations of watershed plan-EA

NEPA rules do not recognize a formal draft EA or FONSI. However SCS will identify draft and final plan-EA's using the same conventions as for plan-EIS's.

## Subpart 504B Agreement format for water resource plans

### 504.10 Water resource plan agreement

The prescribed format for a watershed agreement for a water resource plan is shown in figure 504–1. All paragraphs are included in this example. Explanatory notes are included in boxes following the paragraph.

**Figure 504-1** Watershed agreement for water resources plans

**Watershed agreement**  
**between the**  
**David Creek Soil and Water Conservation District**  
**David Creek Watershed District**  
**list all sponsors as appropriate**  
**(Referred to herein as sponsors)**  
**State of Anystate**  
**and the**  
**Soil Conservation Service**  
**United States Department of Agriculture**  
**(Referred to herein as SCS)**

Whereas, application has heretofore been made to the Secretary of Agriculture by the sponsors for assistance in preparing a plan for works of improvement for the David Creek Watershed, State of Anystate, under the authority of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1001-1008); and

Whereas, the responsibility for administration of the Watershed Protection and Flood Prevention Act, as amended, has been assigned by the Secretary of Agriculture to SCS; and

Whereas, there has been developed through the cooperative efforts of the sponsors and SCS a plan for works of improvement for the David Creek Watershed, State of Anystate, hereinafter referred to as the watershed plan-Environmental Impact Statement, which plan is annexed to and made a part of this agreement;

Now, therefore, in view of the foregoing considerations, the Secretary of Agriculture, through SCS, and the sponsors hereby agree on this plan and that the works of improvement for this project will be installed, operated, and maintained in accordance with the terms, conditions, and stipulations provided for in this watershed plan and including the following:

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**Introductory paragraphs explanatory note:**

Where it would facilitate carrying out the plan, the specific responsibilities of individual sponsors may be described in appropriate numbered paragraphs of the agreement. Where specific responsibilities are divided among several sponsors, the names of each need not be inserted in the agreement if they are defined elsewhere in the plan.

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**Figure 504-1** Watershed agreement for water resources plans—Continued

1. The sponsors will acquire with other than Public Law 83-566 funds, such real property as will be needed in connection with the works of improvement. (Estimated Cost \$\_\_\_\_\_.)

**Real property explanatory notes:**

(1) Modification of this paragraph is necessary when Public Law 83-566 funds are to be used to acquire real property (nonstructural measures or real property associated with recreation and or fish and wildlife). The following paragraph may be used:

“The sponsors will acquire such real property as will be needed in connection with the works of improvement. The percentages of the real property acquisition costs to be borne by the Sponsors and SCS are as follows:

Works of improvement	Sponsors (or name of sponsor) %	SCS %	Estimated real property acquisition costs \$
Multiple-purpose Str. No. _____ Payment to land owners for about 100 acres			
Cost of alterations or improvements			
Wetland acquisition Payment to land owners for about 200 acres			
Nonstructural measures Payment to land owners for about 100 acres			
Real estate appraisal fees			
Legal fees, survey costs, flowage easements			
All other structural measures			

\*Including necessary engineering services, construction, and additional land costs.



**Figure 504-1** Watershed agreement for water resources plans—Continued

(2) When land is acquired or improved with Public Law 83-566 financial or credit assistance, the following paragraph must be included:

The sponsors (or name of sponsor) agree that all land acquired or improved with Public Law 83-566 financial or credit assistance will not be sold or otherwise disposed of for the evaluated life of the project except to a public agency which will continue to maintain and operate the development in accordance with the Operation and Maintenance Agreement.

2. The sponsors (or name of sponsor) hereby agree that they (it) will comply with all of the policies and procedures of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. 4601 et. seq. as implemented by 7 C.F.R. Part 21) when acquiring real property interests for this federally assisted project. If the sponsor is legally unable to comply with the real property acquisition requirements of the Act, it agrees that, before any Federal financial assistance is furnished, it will provide a statement to that effect, supported by an opinion of the chief legal officer of the state containing a full discussion of the facts and law involved. This statement may be accepted as constituting compliance. In any event, the sponsor agrees that it will reimburse owners for necessary expenses as specified in 7 C.F.R. 21.1006(c) and 21.1007.

The cost of relocation payments in connection with the displacements under the Uniform Act will be shared by the sponsors and SCS as follows:

	Sponsors (or name of sponsor) %	SCS %	Estimated relocation payment costs \$
Relocation payments	_____	_____	_____

**Relocation payments and assurances explanatory notes**

(1) Enter the total estimated relocation assistance payment from Table 1. Percentages for cost sharing will be based upon the ratio of Public Law 83-566 and other funds to the "Total Project" line item of Table 1, excluding relocation payment costs. The relocation assistance advisory services cost is to be included when computing the cost-sharing percentages. These percentages are to be used for the life of the project regardless of future changes or supplements.

(2) If the planned project measures will not cause the displacement of any person, business, or farm operation under present conditions, include paragraph No. 2 in the agreement, show cost-sharing percentages, place \$0 1/ in "Estimated Relocation Payment Costs," and footnote the column as follows:

<sup>1/</sup> Investigation of the watershed project area indicates that no displacements will be involved under present conditions. However, in the event that displacement becomes necessary at a later date, the cost of relocation assistance and payments will be cost shared in accordance with the percentages shown.

**Figure 504-1** Watershed agreement for water resources plans—Continued

3. The sponsors (or name of sponsor) will acquire or provide assurance that landowners or water users have acquired such water rights pursuant to State law as may be needed in the installation and operation of the works of improvement.

4. The sponsors will obtain all necessary Federal, State, and local permits required by law, ordinance, or regulation for installation of the works of improvement.

5. The percentages of construction costs to be paid by the sponsors and by SCS are as follows:

Works of improvement	Sponsors (or name of sponsor) %	SCS %	Estimated construction costs \$

#### Construction costs explanatory notes

(1) List each multiple-purpose measure separately. Specific cost items and joint costs of multiple-purpose measures will be shown as separate line item entries. Single-purpose measures may be grouped by kind if the rate of assistance is the same for each measure or group.

(2) Where the costs for land treatment will be shared, explain the cost sharing by adding separate paragraphs similar to those shown in Subpart C for financial and technical assistance costs (504.31 and 504.32) and adjust the numbered items accordingly.

6. The percentages of the engineering services costs to be borne by the sponsors and SCS are as follows:

Works of improvement	Sponsors (or name of sponsor) %	SCS %	Estimated engineering service costs \$

#### Engineering services costs explanatory notes

(1) List each multiple-purpose measure separately. Specific cost items and joint costs of multiple-purpose measures will be shown as separate line item entries. Single-purpose measures may be grouped by kind when the rate of assistance is the same for each measure or group. Engineering costs to be shown here do not include engineering costs for bridge and utility modifications or other real property acquisition items.

(2) Construction inspection costs should be listed as a separate line item without giving any percentages. A footnote should be added to the estimated cost figure to indicate "The sponsors and the SCS will bear the cost of construction inspection that each incurs, estimated to be \$\_\_\_\_\_ and \$\_\_\_\_\_, respectively."

**Figure 504-1** Watershed agreement for water resources plans—Continued

(3) Correct cost sharing of engineering costs for public recreation facilities eligible for Public Law 83-566 assistance may be demonstrated in one of the following ways:

- (i) Where the plan provides for an A&E firm to perform all engineering services, show as a single-line item the percentage rate of sharing for engineering services to be obtained by contract.
- (ii) Where the sponsors are to provide engineering services in addition to those obtained from an A&E firm, use two line items, one showing the percentage rate of sharing the costs of the engineering services contract and the other line item showing that the sponsors will pay 100 percent of all other costs for engineering services.
- (iii) Where SCS is to provide engineering services in addition to those obtained by contract, use a single line item showing the percentage rate of sharing these combined costs.
- (iv) Where all engineering services are to be furnished by the sponsors, they will be listed as a separate line item at 100 percent sponsors' cost.
- (v) Where SCS and the sponsors are to provide all engineering services through their staff employees, show a separate line item for the services each party will provide. Services of the sponsors will be at 100 percent sponsors' cost. The cost of those services provided by SCS will be shared 50-50, except that SCS may bear 100 percent, upon prior approval of the Chief, in those instances where the actual cost cannot conceivably exceed that provided by the sponsors.

7. The percentages of implementation costs (including as appropriate, construction, engineering, administration and overhead) of nonstructural costs to be paid by the sponsors and SCS are as follows:

Nonstructural works of improvement	Sponsors %	SCS %	Estimated costs \$

#### Nonstructural costs explanatory notes

- (1) List each nonstructural work separately by item, i.e., flood proofing, relocation, etc.
- (2) A footnote should be added to the sponsors and SCS column if appropriate. The following wording should be used:

An amount up to the percentage rate specified may be satisfied by the sponsors or by SCS accepting total responsibility for the cost of an element such as engineering, real property acquisition, or construction. The decision to, and arrangements for, such action will be negotiated between the sponsors and SCS and will be included in a project agreement executed immediately before implementation.

**Figure 504-1** Watershed agreement for water resources plans—Continued

8. The sponsors and SCS will each bear the costs of project administration that each incurs, estimated to be \$ \_\_\_\_\_ and \$ \_\_\_\_\_, respectively.

9. The sponsors will obtain agreements from owners of not less than 50 percent of the land above each multiple-purpose and floodwater-retarding structure. These agreements state that the owners will carry out conservation farm or ranch plans on their land. The sponsors will ensure that 50 percent of the land upstream of any retention reservoir site is adequately protected before construction of the dam.

10. The sponsors will provide assistance to landowners and operators to ensure the installation of the land treatment measures shown in the watershed plan.

11. The sponsors will encourage land owners and operators to operate and maintain the land treatment measures for the protection and improvement of the watershed.

12. The sponsors agree to participate in and comply with applicable Federal flood plain management and flood insurance programs before construction starts. (for flood prevention projects only)

13. The sponsors will be responsible for the operation, maintenance, and any needed replacement of the works of improvement by actually performing the work or arranging for such work, in accordance with agreements to be entered into before issuing invitations to bid for construction work.

14. The costs shown in this plan are preliminary estimates. Final costs to be borne by the parties hereto, will be the actual costs incurred in the installation of works of improvement.

15. This agreement is not a fund-obligating document. Financial and other assistance to be furnished by SCS in carrying out the plan is contingent upon the fulfillment of applicable laws and regulations and the availability of appropriations for this purpose.

16. A separate agreement will be entered into between SCS and sponsors before either party initiates work involving funds of the other party. Such agreements will set forth in detail the financial and working arrangements and other conditions that are applicable to the specific works of improvement.

17. This plan may be amended or revised only by mutual agreement of the parties hereto, except that SCS may deauthorize or terminate funding at any time it determines that the sponsor has failed to comply with the conditions of this agreement. In this case, SCS shall promptly notify the sponsor in writing of the determination and the reasons for the deauthorization of project funding, together with the effective date. Payments made to the sponsor or recoveries by SCS shall be in accord with the legal rights and liabilities of the parties when project funding has been deauthorized. An amendment to incorporate changes affecting a specific measure may be made by mutual agreement between SCS and the sponsor(s) having specific responsibilities for the measure involved.

18. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this plan, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

**Figure 504-1** Watershed agreement for water resources plans—Continued

19. The program conducted will be in compliance with the nondiscrimination provisions as contained in Titles VI and VII of the Civil Rights Act of 1964, as amended, the Civil Rights Restoration Act of 1987 (Public Law 100-259) and other nondiscrimination statutes, namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and in accordance with regulations of the Secretary of Agriculture (7 C.F.R. 15, Subparts A & B), which provide that no person in the United States shall, on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Department of Agriculture or any agency thereof.

**20. Certification Regarding Drug-Free Workplace Requirements (7 CFR 3017, Subpart F).**

By signing this watershed agreement, the sponsors are providing the certification set out below. If it is later determined that the sponsors knowingly rendered a false certification, or otherwise violated the requirements of the Drug-Free Workplace Act, the SCS, in addition to any other remedies available to the Federal Government, may take action authorized under the Drug-Free Workplace Act.

*Controlled substance* means a controlled substance in Schedules I through V of the Controlled Substances Act (21 U.S.C. 812) and as further defined by regulation (21 CFR 1308.11 through 1308.15);

*Conviction* means a finding of (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes;

*Criminal drug statute* means a Federal or non-Federal criminal statute involving the manufacturing, distribution, dispensing, use, or possession of any controlled substance;

*Employee* means the employee of a grantee directly engaged in the performance of work under a grant, including: (i) all direct charge employees; (ii) all indirect charge employees unless their impact or involvement is insignificant to the performance of the grant; and, (iii) temporary personnel and consultants who are directly engaged in the performance of work under the grant and who are on the grantee's payroll. This definition does not include workers not on the payroll of the grantee (e.g., volunteers, even if used to meet a matching requirement; consultants or independent contractors not on the grantees' payroll; or employees of subrecipients or subcontractors in covered workplaces).

**Figure 504-1** Watershed agreement for water resources plans—Continued**Certification:**

A. The sponsors certify that they will or will continue to provide a drug-free workplace by:

(1) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(2) Establishing an ongoing drug-free awareness program to inform employees about -

(a) The danger of drug abuse in the workplace;

(b) The grantee's policy of maintaining a drug-free workplace;

(c) Any available drug counseling, rehabilitation, and employee assistance programs; and

(d) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (1);

(4) Notifying the employee in the statement required by paragraph (1) that, as a condition of employment under the grant, the employee will —

(a) Abide by the terms of the statement; and

(b) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(5) Notifying the SCS in writing, within ten calendar days after receiving notice under paragraph (4) (b) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

(6) Taking one of the following actions, within 30 calendar days of receiving notice under paragraph (4) (b), with respect to any employee who is so convicted—

(a) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(b) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

**Figure 504-1** Watershed agreement for water resources plans—Continued

(7) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (1), (2), (3), (4), (5), and (6)

B. The sponsors may provide a list of the site(s) for the performance of work done in connection with a specific project or other agreement.

C. Agencies shall keep the original of all disclosure reports in the official files of the agency.

**21. Certification Regarding Lobbying (7 CFR 3018) (applicable if this agreement exceeds \$100,000).**

(1) The sponsors certify to the best of their knowledge and belief, that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the sponsors, to any person for influencing or attempting to influence an officer or employee of an agency, Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(c) The sponsors shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

(2) This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

**Figure 504-1** Watershed agreement for water resources plans—Continued**22. Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions (7 CFR 3017).**

(1) The sponsors certify to the best of their knowledge and belief, that they and their principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

(2) Where the primary sponsors are unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this agreement.

\_\_\_\_\_ (Name of Sponsor) By \_\_\_\_\_  
(Type name below signature)  
Title \_\_\_\_\_  
Address \_\_\_\_\_ Zip Code \_\_\_\_\_ Date \_\_\_\_\_

The signing of this plan was authorized by a resolution of the (Name of sponsor) governing body of the adopted at a meeting held on \_\_\_\_\_ .

\_\_\_\_\_ (Type name below signature  
Secretary (or other title) Address \_\_\_\_\_ Zip Code \_\_\_\_\_  
Date \_\_\_\_\_

(Add additional signature blocks as necessary.)




**Figure 504-1** Watershed agreement for water resources plans—Continued

Soil Conservation Service  
United States Department of Agriculture

Approved by:

\_\_\_\_\_  
(Type name below signature.)  
State Conservationist

Date: \_\_\_\_\_



## Subpart 504C Agreement format for watershed protection plans

### 504.20 Watershed protection plan agreement

The prescribed format for a watershed protection plan is shown in figure 504-2. All paragraphs are included in this example. Explanatory notes are included in boxes following the paragraph.

**Figure 504-2** Watershed agreement for watershed protection plans

**Watershed agreement**  
**between the**  
**David Creek Soil and Water Conservation District**  
**David Creek Watershed District**  
**list all sponsors as appropriate**  
**(referred to herein as sponsors)**  
**State of Anystate**  
**and the**  
**Soil Conservation Service**  
**United States Department of Agriculture**  
**(Referred to herein as SCS)**

Whereas, application has heretofore been made to the Secretary of Agriculture by the sponsors for assistance in preparing a plan for works of improvement for the David Creek Watershed, State of Anystate, under the authority of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1001-1008); and

Whereas, the responsibility for administration of the Watershed Protection and Flood Prevention Act, as amended, has been assigned by the Secretary of Agriculture to SCS; and

Whereas, there has been developed through the cooperative efforts of the sponsors and SCS a plan for works of improvement for the David Creek Watershed, State of Anystate, hereinafter referred to as the watershed plan-Environmental Impact Statement, which plan is annexed to and made a part of this agreement;

Now, therefore, in view of the foregoing considerations, the Secretary of Agriculture, through SCS, and the sponsors hereby agree on this plan and that the works of improvement for this project will be installed, operated, and maintained in accordance with the terms, conditions, and stipulations provided for in this watershed plan and including the following:

1. Cost-sharing rate for the establishment of enduring land treatment practices is \_\_\_ percent of the average cost of installing the enduring practices in the selected plan for the evaluation unit. The estimated total financial assistance cost for enduring practices is \$\_\_\_\_\_.

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**Financial Assistance Costs Explanatory Note**

The cost-share rate in this item should be that rate that has been agreed to by SCS and the sponsors. If the rate varies by practice, each practice should be listed and the rate for each stated.

**Figure 504-2** Watershed agreement for watershed protection plans—Continued

2. The SCS will assist the sponsors in providing technical assistance to landowners or operators to plan and install land treatment practices shown in the plan. Percentages of technical assistance costs to be borne by the sponsors and SCS are as follows:

Works of improvement	Sponsors (%)	SCS (%)	Estimated technical assistance costs (\$)
Land treatment practices	0	100	
Other (list)			

#### Technical assistance explanatory note

Because technical assistance for practices normally is all paid by SCS, it can be lumped together. Should the plan call for the State or other agency to provide technical assistance, in addition to SCS's share, enter the correct percentages for each. If water quality monitoring or other such assistance is involved, list these items separately.

3. The sponsors will obtain applications from owners of not less than \_\_\_ percent of the land in the problem area, indicating that they will carry out the planned land treatment measures. These applications will be obtained before the first long-term land treatment contract is executed.

#### Initial participation requirements explanatory note

The state conservationist will set an initial level of participation considered necessary as an indication that enough work will be installed to justify project action. No long-term land treatment contracts will be signed until the applications received reach this initial level of participation.

4. The sponsors will obtain agreements with landowners or operators to operate and maintain the land treatment practices for the protection and improvement of the watershed.

5. The sponsors and SCS will each bear the cost of project administration that each incurs, estimated to be \$ \_\_\_ and \$ \_\_\_, respectively.

6. The sponsors will acquire, or will ensure that land users or operators have acquired, with other than Public Law 83-566 funds, such real property as will be needed in connection with the works of improvement. (Estimated Cost \$\_\_\_.)

**Figure 504-2** Watershed agreement for watershed protection plans—Continued

Real property acquisition explanatory note

Included only when appropriate.

7. The sponsors (or name of sponsor) hereby agree that they (it) will comply with all of the policies and procedures of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C.. 4601 et. seq.. as implemented by 7 CFR Part 21) when acquiring real property interests for this federally assisted project. If the sponsor is legally unable to comply with the real property acquisition requirements of the Act, it agrees that, before any Federal financial assistance is furnished, it will provide a statement to that effect, supported by an opinion of the chief legal officer of the state containing a full discussion of the facts and law involved. This statement may be accepted as constituting compliance. In any event, the sponsor agrees that it will reimburse owners for necessary expenses as specified in 7 CFR 21.1006(c) and 21.1007.

The cost of relocation payments in connection with the displacements under the Uniform Act will be shared by the sponsors and SCS as follows:

	Sponsor or name of sponsor %	SCS %	Estimated relocation payment costs \$
Relocation payments	_____	_____	_____

**Relocation payments and assurances explanatory notes**

(1) Included only when appropriate.

(2) Enter the total estimated relocation assistance payment from Table 1. Percentages for cost sharing will be based upon the ratio of Public Law 83-566 and other funds to the “Total Project” line item of Table 1, excluding relocation payment costs. The relocation assistance advisory services cost is to be included when computing the cost-sharing percentages. These percentages are to be used for the life of the project regardless of future changes or supplements.

(3) If the planned project measures will not cause the displacement of any person, business, or farm operation under present conditions, include paragraph no. 2 in the agreement, show cost-sharing percentages, place \$0<sup>1/</sup> in “Estimated Relocation Payment Costs,” and footnote the column as follows:

<sup>1/</sup> Investigation of the watershed project area indicates that no displacements will be involved under present conditions. However, in the event that displacement becomes necessary at a later date, the cost of relocation assistance and payments will be cost shared in accordance with the percentages shown.

**Figure 504-2** Watershed agreement for watershed protection plans—Continued

8. The sponsors (or name of sponsor) will acquire, or ensure that the landowners or water users have acquired, such water rights pursuant to State law as may be needed for the installation and operation of the works of improvement.

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Water rights explanatory note

This information should be included when appropriate.

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9. The costs shown in this plan are preliminary estimates. Final costs to be borne by the parties hereto, will be the average costs incurred in the installation of works of improvement or an approved variation.

10. This agreement is not a fund-obligating document. Financial and other assistance to be furnished by SCS in carrying out the plan is contingent upon the fulfillment of applicable laws and regulations and the availability of appropriations for this purpose.

11. A separate agreement will be entered into between SCS and sponsors before either party initiates work involving funds of the other party. Such agreements will set forth in detail the financial and working arrangements and other conditions that are applicable to the specific works of improvement.

12. This plan may be amended or revised only by mutual agreement of the parties hereto, except that SCS may deauthorize or terminate funding at any time it determines that the sponsor has failed to comply with the conditions of this agreement. In this case, SCS shall promptly notify the sponsor in writing of the determination and the reasons for the deauthorization of project funding, together with the effective date. Payments made to the sponsor or recoveries by SCS shall be in accord with the legal rights and liabilities of the parties when project funding has been deauthorized. An amendment to incorporate changes affecting a specific measure may be made by mutual agreement between SCS and the sponsor(s) having specific responsibilities for the measure involved.

13. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this plan, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

14. The program conducted will be in compliance with the nondiscrimination provisions as contained in Titles VI and VII of the Civil Rights Act of 1964, as amended, the Civil Rights Restoration Act of 1987 (Public Law 100-259) and other nondiscrimination statutes, namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and in accordance with regulations of the Secretary of Agriculture (7 CFR. 15, Subparts A & B), which provide that no person in the United States shall, on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Department of Agriculture or any agency thereof.

**Figure 504-2** Watershed agreement for watershed protection plans—Continued**15. Certification Regarding Drug-Free Workplace Requirements (7 CFR 3017. Subpart F.**

By signing this watershed agreement, the sponsors are providing the certification set out below. If it is later determined that the sponsors knowingly rendered a false certification, or otherwise violated the requirements of the Drug-Free Workplace Act, the SCS, in addition to any other remedies available to the Federal Government, may take action authorized under the Drug-Free Workplace Act.

*Controlled substance* means a controlled substance in Schedules I through V of the Controlled Substances Act (21 U.S.C. 812) and as further defined by regulation (21 CFR 1308.11 through 1308.15);

*Conviction* means a finding of (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes;

*Criminal drug statute* means a Federal or non-Federal criminal statute involving the manufacturing, distribution, dispensing, use, or possession of any controlled substance;

*Employee* means the employee of a grantee directly engaged in the performance of work under a grant, including: (i) all direct charge employees; (ii) all indirect charge employees unless their impact or involvement is insignificant to the performance of the grant; and, (iii) temporary personnel and consultants who are directly engaged in the performance of work under the grant and who are on the grantee's payroll. This definition does not include workers not on the payroll of the grantee (e.g., volunteers, even if used to meet a matching requirement; consultants or independent contractors not on the grantees' payroll; or employees of subrecipients or subcontractors in covered workplaces).

**Certification:**

A. The sponsors certify that they will or will continue to provide a drug-free workplace by:

(1) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(2) Establishing an ongoing drug-free awareness program to inform employees about —  
(a) The danger of drug abuse in the workplace;  
(b) The grantee's policy of maintaining a drug-free workplace;  
(c) Any available drug counseling, rehabilitation, and employee assistance programs; and  
(d) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace

(3) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (1);

(4) Notifying the employee in the statement required by paragraph (1) that, as a condition of employment under the grant, the employee will —  
(a) Abide by the terms of the statement; and

**Figure 504-2** Watershed agreement for watershed protection plans—Continued

(b) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(5) Notifying the SCS in writing, within ten calendar days after receiving notice under paragraph (4) (b) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

(6) Taking one of the following actions, within 30 calendar days of receiving notice under paragraph (4) (b), with respect to any employee who is so convicted—

(a) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(b) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

(7) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (1), (2), (3), (4), (5), and (6)

B. The sponsors may provide a list of the site(s) for the performance of work done in connection with a specific project or other agreement.

C. Agencies shall keep the original of all disclosure reports in the official files of the agency.

**16. Certification Regarding Lobbying (7 CFR 3018) (applicable if this agreement exceeds \$100,000).**

(1) The sponsors certify to the best of their knowledge and belief, that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the sponsors, to any person for influencing or attempting to influence an officer or employee of an agency, Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(c) The sponsors shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.



**Figure 504-2** Watershed agreement for watershed protection plans—Continued

(2) This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

**17. Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions (7 CFR 3017).**

(1) The sponsors certify to the best of their knowledge and belief, that they and their principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (l) (b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

(2) Where the primary sponsors are unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this agreement.

\_\_\_\_\_  
(Name of Sponsor) By \_\_\_\_\_  
(Type name below signature)  
Title \_\_\_\_\_  
Date \_\_\_\_\_  
Address \_\_\_\_\_ Zip Code \_\_\_\_\_

The signing of this plan was authorized by a resolution of the governing body of the (name of sponsor) adopted at a meeting held on \_\_\_\_\_.

\_\_\_\_\_  
(Type name below signature) Address \_\_\_\_\_ Zip Code \_\_\_\_\_  
Secretary (or other title)  
Date:

(Add additional signature blocks as necessary.)

**Figure 504-2** Watershed agreement for watershed protection plans—Continued

Soil Conservation Service  
United States Department of Agriculture

Approved by:

\_\_\_\_\_  
(Type name below signature)  
State Conservationist

Date: \_\_\_\_\_

## Subpart 504D Format and content of plan-EIS or plan-EA

### 504.30 General

The format for the watershed plan-EIS (and plan-EA) is outlined in this subpart. This format shall be followed in all cases. Guidance on content is provided, although detailed checklists are avoided. References are included to call attention to the Council on Environmental Quality (CEQ) and SCS regulations, P&G, and other requirements for a plan, but the details of other documents are not reproduced here.

The format combines the plan and EIS or EA into a single document. The EIS (or EA) portion of the document contains the information needed to comply with NEPA, and treats all alternatives (including no action and the recommended plan) in substantially similar detail. An additional section on the recommended plan contains the information needed to design and install the plan, including the responsibilities of the various parties for installation, financing, and operation and maintenance. Appendixes contain additional details that are not needed for all alternatives.

Watershed plans do not fall under the categories outlined in USDA's Visual Management Manual, volume I, graphic design. However, those States wishing to use the manual may do so if they so desire.

The documents should be brief, concise, and written in nontechnical language. Unusual terms should be defined or explained as needed to give the reader a clear understanding of their meaning.

Numbers of various units (acres, dollars, farms) in a plan should be rounded to the nearest 10, 100, or 1,000 depending on the amount of precision used in developing the data. Certain figures in Table 3 (fig. 504-12), however, may be an exception. The NTC staff can provide guidance in this matter.

Appropriate drawings, tables, and maps should be included to provide a clear understanding of the measures and how they will function. Information in tables, maps, and other graphics should be referenced

and not repeated in the narrative. However, the highlights of a table should be in the narrative.

Maps other than those required in 504.43 may be included if appropriate. Some examples are a flood plain strip map, general soils map, general geologic map, general land use map, gross erosion map, sediment yield map (for specific locations), water supply distribution map, condensed profiles, wetlands map, and wildlife mitigation map.

Graphics could include drawings for a typical reservoir showing plan view, area-capacity-discharge curves, typical zoned fill section, section through outlet works, centerline profile of dam, and emergency spillway profile; typical channel cross sections showing spoil disposal, special environmental considerations, and other features; and perspective drawing(s) illustrating the appearance of project measures from one or more significant views.

The recommended plan should be described in sufficient detail to

- provide a basis for authorization,
- guide the implementation and operation and maintenance, and
- convey to the reader the relationship of the plan to the problems, the opportunities, and the effects.

Each element should be clearly described to enable the reader to gain a clear picture of what is to be constructed. Noncritical features of individual measures should be described in a manner that will permit alternative solutions during final design, providing that neither the overall performance of the measures nor environmental impacts are affected.

Normally, methodologies used in the plan formulation will be described in the Inventory and Analysis section. Sources of data shall be referenced in the document.

### 504.31 Price base and discount rate

When a draft plan is distributed for interagency review, the date shown in the plan (including all tables) should be no more than a few months old, the price base should not be more than 1 year old, and the

discount rate should be current for the date shown in the tables. Also, the price base should be for the same year as that shown in the tables if possible. When a final plan is approved (signed by the state conservationist), it must reflect the current discount rate and a current price base. If an update is necessary, it may be made as follows:

**(a) Administratively approved**

For a plan that is to be approved administratively, the update may be made by a 1-page addendum.

**(b) Congress approved**

For a plan that is to be submitted to Congress, the update may also be made by a 1-page addendum if the price base and discount rate are no more than 18 months old when the final plan is submitted to the National Office. If this time requirement is not met, the addendum should include updated Tables 1, 2, 2a, 4, 5, and 6 (figs. 504-8, 504-9, 504-10, 504-15, 504-16, 504-18), plus additional details. The state conservationist should contact the NTC director for specific requirements of this expanded addendum.

## 504.32 Opening pages

**(a) Cover**

A suitable heavyweight material should be used for the front and back covers to provide protection and enhance the appearance of the final plan. A photographic background or art design may be used. No specific format is required; however, at a minimum, the front cover should identify the document as shown.

Watershed Plan-Environmental Impact Statement  
for  
David Creek Watershed  
Middlestate  
Month and Year  
(may be stamped)

Draft copies of the plan should be identified as DRAFT. This may be done by using a stamp to avoid a subsequent reproduction. Working copies developed during the planning process for internal use and informal review by others should be appropriately labeled as **Preliminary—Subject to revision** and dated for ease in identification.

**(b) Title page**

A title page may be used if desired. The minimum information would be the same as that required for the cover. Additional information may include the county in which the watershed is located, the names of the SLO, and the names of SCS and any other agencies providing assistance.

**(c) Fly sheet**

The sheet shall not exceed one page. It shall include

- A list of responsible agencies and any cooperating agencies,
- Title of the proposed action,
- State(s) and county(ies) in which action is located,
- Name, address, and telephone number of the person who can supply further information,
- Designation of the plan as a draft or final, and
- The date by which comments must be received (reference 40 CFR 1502.11).

A one paragraph abstract of the plan shall be included (40 CFR 1502.11(e)).

The following nondiscrimination statement should appear on either the title page or the fly sheet:

All programs and services of the U.S. Department of Agriculture, Soil Conservation Service, are offered on a nondiscriminatory basis, without regard to race, color, national origin, sex, age, religion, marital status, or handicap.

**(d) Addendum**

An addendum is used in a final plan only when it is necessary to update the plan because of a change in the discount rate, price base, or both. Other minor changes can be incorporated in an addendum. It should contain the new total project costs (plus a breakdown between Public Law 83-566 and other), average annual project costs and benefits, and the benefit-cost ratio. Normally the addendum will be less than one page long.

**(e) Watershed agreement**

The watershed agreement shall follow the fly sheet or addendum and will be in the format shown in subparts 504B or 504C.

**(f) Contents**

Major (first order) and secondary headings should be listed in the contents. Third order headings may be used if desired. Tables, figures, and appendixes should also be listed. Small Roman numerals should be used for all pages up to and including the contents. Each side of a sheet is one page. Begin page (i) with the title

page or fly sheet and page I with the summary. (Note that the page number is never typed on the first page.) Appendixes should be numbered with the letter of the appendix followed by the page number, i.e., A-1, A-2. Each appendix should start with page 1. Figure 504-3 illustrates an example contents page.

**Figure 504-3** Contents page for a watershed plan

<b>Watershed Plan—Environmental Impact Statement for David Creek Watershed, Middlestate</b>	
<b>Contents:</b>	
Watershed agreement .....	ii
Summary .....	1
Introduction .....	3
Project setting .....	4
Watershed problems and opportunities .....	4
Scope of the EIS or EA .....	4
Formulation and comparison of alternatives .....	5
Formulation process .....	5
Description of alternative plans .....	6
Effects of alternative plans .....	6
Comparison of alternative plans .....	7
Risk and uncertainty .....	7
Rationale for plan selection .....	7
Consultation and public participation .....	8
Recommended plan .....	10
Purpose and summary .....	11
Measures to be installed .....	12
Permits and compliance .....	12
Costs .....	13
Installation and financing .....	14
Operation, maintenance, and replacement .....	14
References .....	15
List of preparers .....	16
Index .....	17
<b>Tables:</b>	
No. Title .....	12
<b>Figures:</b>	
No Title .....	3
<b>Appendixes:</b>	
Appendix A—Letters and oral comments on draft Plan-EIS .....	21
Appendix B—Support maps .....	25
Appendix C—Investigation and analysis report .....	31
Appendix D—Supporting information .....	33
Appendix E—Project map .....	35

### 504.33 Summary

The summary is a brief version of the plan. Nothing should be included that is not described in the body of the plan. To ensure that adequate information is presented, the form illustrated in figure 504-4 is used. Much of this information is required by Congressional Committees and others in judging the merit of the project. This format also provides a quickly reproducible document for use at meetings and other events.

### 504.34 Introduction

The introduction explains the purposes served by the watershed plan document and the role of the SLO and SCS in preparing the document. Any unique items pertinent to a particular watershed should also be given here. The idea is to help the reader understand the rationale for project action. An overview of the organization of the document and a reference to the supporting documentation can also be included here.

### 504.35 Project setting

This section should describe pertinent physical, social, and economic information for the watershed. Some conditions will be constant throughout the evaluated life of the project, while others will be subject to change because of social, economic, and political influences. The two factors critical to natural resource evaluation within a watershed are land use changes and management activities. Long-range trends for social and economic conditions affecting land use and management must be predicted. The information must be adequate to forecast the most likely conditions expected to exist in the future with and without the plan.

The following types of information are desired in the project setting. Use of tabular data is encouraged wherever it reduces the need for narrative.

- Describe the physical conditions, such as size and location, stream systems, climatology geology, soils, and topography. These are expected to be constant throughout the project's evaluation period.

- Describe the social and economic conditions within the watershed and discuss the major socio-political factors that may influence major changes in land use or management of the soil, water, air, plant, or animal resources. Include only those items that would, if realized, affect the various alternatives being considered. If none are anticipated, it should be stated. A discussion of population centers and transportation infrastructure should be included.
- Describe the present and future general land cover and uses (using the categories given in the National Planning Manual) based on the predicted socio-political factors described previously.

### 504.36 Watershed problems and opportunities

This section should clearly demonstrate the need for project action. It provides the basis for USDA involvement. From the information presented, the reader should know which problems need to be solved as well as the opportunities for enhancing the quality of life in the project area, based on public concerns and desires.

The introductory paragraph should summarize the contents of this section. Then each problem or opportunity should be quantified and its extent and magnitude clearly explained. Questions that should be answered in this writeup include:

- What is being damaged?
- How much damage is occurring?
- Where does the damage occur?
- How frequent is the damage?

The problems and opportunities should be stated for both present and future conditions. These should be consistent with the conditions described in the "Project setting" section. Desired conditions for the future should also be explicitly stated.

Data on the magnitude of the problems should normally be shown here in aggregate or summary form. Detailed breakdowns, such as damages by evaluation unit or projections by time frames, should be shown later as part of the analysis of alternatives.

**Figure 504-4** Summary of watershed plan

## Watershed Plan—Environmental Impact Statement for

### David Creek Watershed Middlestate

#### Summary of Watershed Plan

Project name: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_

Sponsors: \_\_\_\_\_

Description of recommended plan: \_\_\_\_\_

**Resource Information:**

Size of watershed (acres)

Land cover - Total cropland (acres)

Grassland (acres)

Forest land (acres)

Miscellaneous (acres)

Land ownership-Private(%)

State-Local(%)

Federal(%)

Number of farms-

Average farm size-

Prime and important farmland (acres)

Number of minority farmers

Number of limited resource farmers

Project beneficiary profile (socio-economic information, such as income levels, home values, and ages as compared to those of the State and Nation)

Wetlands (acres by class)

Flood plains (acres by land use)

Highly erodible cropland (acres)

Endangered species (name or none)

Cultural resources (description or none known)

**Problem identification:** Describe problems in terms of erosion and sedimentation (downstream damage, loss of productivity), flood damage (agricultural, urban), water quality impairment (in terms of beneficial uses), and others.

**Figure 504-4** Summary of watershed plan—Continued

Alternative plans considered: Briefly describe the components of each alternative.

Project purpose(s): Describe purpose for which project is planned (flood prevention, watershed protection, agricultural water management). Show which of the identified problems the project will address.

Principal project measures: For structural and nonstructural projects, describe the number and kinds of project measures. For land treatment include an estimate of the number of long-term contracts, acres to be treated, number of waste management systems, and other such information.

Project costs:	PL 83-566 funds		Other funds		Total	
	\$	%	\$	%	\$	%
Land treatment measures						
Nonstructural measures						
Structural measures						
Flood prevention						
Agricultural water management						
Irrigation						
Drainage						
Water quality protection						
Rural water supply						
Fish and wildlife						
Recreation						
Municipal & industrial water						
Technical assistance						
Other						

Project benefits: Describe monetary benefits in terms of categories shown in Tables 5, 5a, and 6. Describe other beneficial effects in physical terms.

Other impacts:

Land use changes (acres): Describe conversions of cropland, grassland, and forest land.

Environmental values changed or lost:

Wooded flood plain (acres) -	Wildlife Habitat (acres) -
Wetlands (acres) -	Fisheries (acres or miles) -
Cultural Resources (no. & type)	Prime farmland (acres) -

Also briefly describe any compensatory mitigation included in the plan.

Major conclusions: (final statements)

Areas of controversy: (final statements)

Issues to be resolved: (final statements)

Other:



Water quality problems should be discussed in terms of designated beneficial uses, impairment of those uses, and pollutants or parameters that exceed standards. Future water quality conditions without project action should be forecasted by key substance(s) for the evaluation period of the project. These forecasts should be based on the projections of future land use and management activities that were discussed in the "Project setting" section.

Some problems identified during the public participation process may prove to be insignificant or irrelevant to the project. These problems should be identified in this section even though they may have not been thoroughly investigated, evaluated, or addressed in the planning. If it is obvious that nothing can be done toward solving a problem, it should be explained in this section.

Opportunities for improving the quality of life and enhancing environmental values should also be discussed. These opportunities must reflect specific effects desired by concerned groups and individuals.

### 504.37 Scope of the EIS or EA

An important part of the planning process is scoping, the results of which are documented in this section (P&G and 40 CFR 1501.7). The Council on Environ-

mental Quality (CEQ) defines scope as the range of actions, alternatives, and impacts to be considered in an EIS (40 CFR 1508.25). The issues significant in defining the problems and formulating and evaluating alternative solutions are to be identified here.

This section also provides a record of the issues that were considered, but found not to require detailed discussion in the plan. The relative insignificance of these issues should be agreed upon by all agencies involved in the scoping process. If many such issues occur, it may be helpful to put them in an appendix, explaining why further discussion is unnecessary. This would allow the main text to focus on the important items.

Certain items are always of concern and would be expected to be identified in this section. These items include cultural resources, endangered and threatened species, fish habitat, human health and safety, important agricultural land, highly erodible cropland, water quality, wetlands, and wildlife habitat, as well as the identified problems and opportunities.

The purpose of this section is to show the results of the scoping process. The process itself will be described later in the Consultation and public participation section. The table illustrated in figure 504-5 can be used to summarize the results of the process:

**Figure 504-5** Table used to list identified concerns

**Table \_\_**  
**Identified concerns**

Economic, social, environmental, and cultural concerns	Degree of concern	Degree of significance to the decisionmaking	Remarks
T&E species	High	Low	None exist in watershed

**Note:** The number of concerns listed is not limited. All those brought up in the scoping process would normally be in order. The items should be grouped in a way that provides a logical framework for problem definition and the analysis and comparison of alternatives later in the report. Significance can be rated as high, moderate, low, or none. The discussion should explain the basis for the significance ratings.

## 504.38 Formulation and comparison of alternatives

### (a) General

This part should help the reader follow the rationale of plan formulation from the development and comparison of alternatives to the selection of the recommended plan.

### (b) Formulation process

This section will describe the basis for selecting combinations of measures to include in alternatives. The measures considered in developing alternatives should be described. Water conservation is to be fully considered in plan formulation whenever water management is a project purpose.

Include the measures or methods considered but not developed into complete alternative plans and the procedure or criteria used to screen them. For example, initial studies may identify potential sites for 40 floodwater-retarding structures, but further studies may eliminate 25 sites from detailed consideration because of size, costs, or adverse environmental impacts.

Studies made to establish various combinations of measures (land treatment, structural, and nonstructural) should be included. Such items as how the evaluation units were established and the incremental analysis made to determine the alternative that reasonably maximizes net contributions to NED should also be shown in this section. If maximizing NED benefits is not the governing criterion, the plan should clearly state what the goals are.

In the formulation of alternative plans, include only increments that provide combined beneficial effects outweighing combined adverse effects. All alternatives are to be formulated considering the four criteria of the P&G: completeness, effectiveness, efficiency, and acceptability. Reasonable alternatives that were considered but found not feasible should be included and the reasons for discarding them explained.

Every identified problem should be addressed either by a remedial measure in at least one alternative plan or by an explanation as to why the problem could not be solved.

### (c) Description of alternative plans

This section will describe the alternative plans, including the recommended plan, that were developed to solve the identified problems. The alternatives will be described in substantially equal detail. Each alternative plan, including any mitigation, should be clearly described to show what it consists of, how it will function, and how much it will cost. A map showing the location of the plan elements for each alternative plan should be included. Land treatment measure locations need not be shown, but the general area to be treated should be shown on the map or described in this section.

The following alternative plans shall be included:

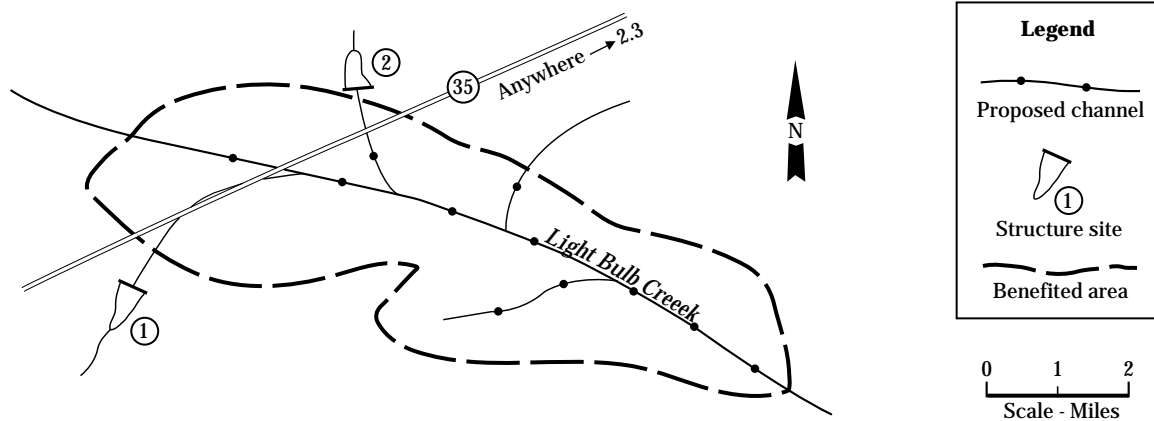
- No action (without-project conditions).
- The NED alternative in water resource plans or an alternative that achieves an acceptable reduction in the offsite or public problem being addressed in watershed protection plans.

Normally other alternative plans showing various levels of tradeoffs between objectives should be considered for inclusion. Reasonable alternatives not within the jurisdiction of USDA should be included.

Figure 504-6 is an example writeup of an alternative plan.

**Figure 504-6** Example writeup of alternative plans

## Alternative 2—Dams and channel



Alternative 2 consists of accelerating land treatment on 1,230 acres of cropland, constructing 2 floodwater retarding structures, and widening and deepening 15.7 miles of channel.

Land treatment would consist of terraces, waterways, conservation tillage, and crop residue management on 430 acres of upland cropland as well as conservation tillage on 800 acres of cropland above the dam sites.

Floodwater-retarding structure number 1 would be located about a mile above State Highway 35 on stream C-1A. It would be about 25 feet high, store 1,420 acre-feet of floodwater, and have a 23-acre sediment pool.

Structure number 2, located 4,000 feet upstream from Highway 35 on channel C-4, would be 32 feet high, store 1,860 acre-feet of floodwater, and have a 16-acre sediment pool.

The main channel (10.2 miles) would be enlarged to a width of 38 feet and a depth of 2 feet. Side streams (5.5 miles) would be widened to 20 feet and deepened to 2.0 feet. Trees would be planted along 3.7 miles of the streams to offset losses due to construction.

Estimated installation cost is \$2,420,000. Average annual cost would be \$280,000, including \$40,000 for operation and maintenance.

**(d) Effects of alternative plans**

This section will describe the economic, environmental, and social effects of each alternative. The results of the scoping process should be used to determine which factors should be addressed and the amount of detail in which each factor is addressed. The type and kind of information depend on the location, type, scope, and complexity of the planned action. The intent of this section is to provide the analytical basis for the comparisons of effects presented in the next section (40 CFR 1502.16). All alternatives including no action (future without project) should be treated in substantially equal detail.

The description of impacts should be by resource or environmental concern. The reader will be helped if the items listed are the same as those used in the “identified concerns” table. All highly and moderately significant concerns should be addressed. Some examples of pertinent items are

- floodwater and sediment damage,
- soil, water, air, plant, and animal resources,
- agricultural production (crop types, yields, acres by type, etc.),
- wetlands, (size, type, significance),
- rare, threatened, and endangered species,
- state and nationally significant archeological and historical resources,
- fish and wildlife (quality and quantity of habitat), and
- prime land.

Special attention should be given to jurisdictional wetlands that may be affected by project activity and to highly erodible land where applicable.

The discussion for each concern should begin with a description of existing conditions. This should be followed by future-without-project (FWOP) conditions, and then by the impacts of each alternative plan. A sample outline would begin as follows:

Floodwater Damage  
Existing conditions  
Future without project  
Alternative 1  
Alternative 2

**Wetlands**

Existing conditions  
Future without project  
Alternative 1  
Alternative 2

This is an outline for the discussion, not a summary table. The discussion should continue in similar fashion for all the concerns on the list.

The discussion of existing resources should give the reader a general knowledge of those resources in the area that will be affected significantly by the various alternative plans. Problems or opportunities should be described by evaluation unit. Give as much detail as needed to explain the existence of a problem or the effect of each alternative on a resource. Avoid repeating information given in the “Project setting” or “Watershed problems and opportunities” sections.

The FWOP discussion should present the most likely future conditions. The basis for forecasting must be stated. The effects of the conservation compliance and conservation reserve provisions of the Food Security Act should be included in the projections. If erosion and sediment problems have been identified or if cost-shared land treatment is proposed, the ongoing land treatment program should be discussed here. Indicate how long the ongoing program would take to complete the job.

In cases where a project is addressing resource deterioration (as opposed to, for example, recurring flood damage to existing land uses), the FWOP discussion should describe that aspect of the problem. Evaluation units and time frames should be used where appropriate.

Impacts should be described for each alternative. Direct, indirect, and cumulative effects should be identified.

The narrative should present data in summary form, using tables, drawings, maps, and other graphics. If an extensive listing of data needs to be included, it should be shown in an appendix.

The effects of alternative plans section should fully explain the degree or extent to which each problem or opportunity is satisfied. For example, if flooding is a problem, any damages and flood hazards expected after the project is installed should be clearly de-

scribed.

Laws and regulations protecting cultural resources and threatened and endangered species include specific consultation requirements. If either of these consultation processes has not been completed before the plan is prepared, then the plan should describe its status.

If the project has recreation benefits and must go to the Public Works Committee, describe the usage of other similar public recreational facilities within the general area of the project and the anticipated impact of the alternatives on the usage of such existing recreational facilities (Public Law 99-662).

The effects section should include the probable beneficial or adverse effects on identified wetlands and how these effects relate to the wetland conversion provisions of the Food Security Act. This may include a statement that a determination has been made in consultation with the U.S. Fish and Wildlife Service that the project will have minimal (or no) effect on wetlands.

Describe the relationship of the alternatives to local and regional comprehensive plans and land and water use plans, policies, and controls. Mention Executive Orders 11988 and 11990, when appropriate. Also include the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources that would be caused by the installation of an alternative. These items are probably best handled in separate subsections after all the items from the "Identified concerns" table have been addressed.

### **(e) Comparison of alternative plans**

This section should summarize the alternative plans in a comparative form, in substantially equal detail. It should normally include a "Comparison of alternative plans" table. It is important to include major items used in the decision-making process. Those items shown as high or moderate in the table "Identified concerns" (fig. 504-5) should be included as a minimum in this section. Significant differences between the alternative plans should be shown. The without-project conditions should be included to allow a

complete comparison.

Estimated costs and cost sharing should also be included. This allows the reader to see what the Public Law 83-566 contribution to each alternative would be.

The comparison of alternatives is the heart of the EIS. It should be as complete as possible, but focused on the important concerns ("analytic rather than encyclopedic," according to 40 CFR 1502.2). The four accounts of the P&G will be used as a framework for the comparison. Items that might be shown include the following:

#### NED account

- Reduced crop damage from flooding, erosion, or sedimentation
- Land voiding and depreciation
- Onsite savings in water
- Maintaining productivity for the evaluation period
- Maintaining productivity for future generations
- Offsite sediment damage reduction
- Increased values of offsite properties
- Reduced treatment costs for M&I water
- Increased recreation use
- Increased fish and wildlife values
- Offsite savings in water

#### EQ account

- Degree to which State standards are met
- Fish and wildlife improvements
- Scenic/aesthetic improvements
- Rare, threatened, and endangered species habitat improvement
- Other favorable downstream effects

(See P&G and the Environmental Assessment Manual for additional items. The P&G subdivide the EQ account into ecological, cultural, and aesthetic attributes. It may be helpful to further subdivide the ecological attributes into the five resources addressed by the Field Office Technical Guide (FOTG): soil, water, air, plants, and animals.)

#### OSE account

- Impact on disadvantaged persons
- Impact on rural development
- Nuisance/safety effects

- Health effects
- Social well-being
- Social indicators, including numbers of disadvantaged, length of time in farming, land tenure, planning horizons, educational level, ethnic groupings
- Risk of loss of life
- Social effects of maintaining productivity

#### RED account

- Effects on employment
- Effects on income
- Effects on other economic activity
- Miscellaneous effects on rural development

A sample table for comparing alternative plans is shown in figure 504-7.

#### (f) Risk and uncertainty

Plans and their effects should be examined to determine the uncertainty inherent in the data or various assumptions of future economic, demographic, social, attitudinal, environmental, and technological trends. Methods for making these determinations are described in P&G 1.4.13. This section should discuss the areas of sensitivity in each of the alternative plans. Risk and uncertainty may involve increased costs or reduced benefits through adjustments in design. These facts should be clearly described to enable the reader to fully understand these effects on each plan. This section does not eliminate the need for discussing risk and uncertainty in other parts of the plan where appropriate.

#### (g) Rationale for plan selection

This section should state which of the alternatives is the recommended plan and provide enough information for the reader to understand the rationale for selection. If the NED plan is selected, the rationale need not be extensive because the primary objective is to maximize net economic benefits. Key factors that influenced the decision should be described.

If the NED plan is not selected, an exception to the P&G rule will be required for water resource plans. This section is where the information is included to justify the request for an exception. The following information should be provided:

- A description of the NED plan.
- A description of the added increment.

- All beneficial effects, including economic benefits, of the added increment.
- All adverse effects, including the cost, of the added increment.
- The economic benefit-cost ratio of the added increment.
- The economic benefits foregone by including the added increment. This represents the economic cost of obtaining the noneconomic benefits of the added increment.
- A description of the other Federal, State, or local concerns being addressed and the degree to which they are satisfied by the added increment.

The information should be presented objectively, but the discussion should make clear why the SLO are asking for an exception and why the cost of the added increment is a reasonable expenditure of Federal funds.

**Figure 504-7** Sample table of summary and comparison of candidate plans

## Summary and Comparison of Candidate Plans

Effects	Without project	Alternative 1 (NED)	Alternative 2	Alternative 3	Alternative 4 (recommended) *
Measures	---	1 multi-purpose flood, recreation & M&I structure.	365 acres of evt. corridor, 988 ac. wildlife habitat, LT, 4 grade stab. structures.	Repair leak in M&I delivery pipe.	1 multi-purpose flood, recreation & M&I structure, 4 grade stab. structures, LT.
Project invest.	\$0	\$11,433,969	\$1,280,000	\$1,000,000	\$12,389,000
<b>National Econ. Devel. Acct.</b>					
Beneficial annual	---	1,207,180	5,370	90,000	1,213,175
Adverse, annual	---	\$1,005,470	\$11,669	\$87,937	\$1,071,139
Net beneficial	---	201,710	-6,299	2,063	142,036
<b>Environmental Quality Acct.</b>					
(Report impacts in the EQ units for which the analyses were made.)	Shortage of 2,560 ac. of warm water fishing lakes.	Create 1,000 ac. warm water fishing & 25 mi. of shoreline	Create 20 acres for warm water fishing & 1 mile of shoreline	No effect.	Create 1,021 ac. for warm water fishing and 26 mi. of shoreline.
		Reclassify 400 ac. of bottom land as prime agric. land.	No effect.	No effect.	Same as alternative 1.
	Water quality poor because of high PO <sub>4</sub> levels.	No effect.	Reduce PO <sub>4</sub> level to meet state water quality standard.	No effect.	Same as alternative 2.
	Habitat is decreasing each year.	No effect.	Increase wild-life production by 10,000 H.U.	No effect.	Same as alternative 2.

See footnote at end of table.

**Figure 504-7** Sample table of summary and comparison of candidate plans—Continued

## Summary and Comparison of Candidate Plans

Effects	Without project	Alternative 1 (NED)	Alternative 2	Alternative 3	Alternative 4 (recommended) *	
<b>Environmental Quality Acct.</b> (cont.)		Introduce permanent water body as a unique feature in the landscape.	Introduce 4 permanent water bodies & maintain or improve 1,353 ac. of distinctive visual resource as environmental corridor & wildlife habitat.	No effect.	Introduce permanent water bodies as unique feature in this landscape.	
		Close 4 mi. of public roads.	No effect.	No effect.	Close 4 mi. of public roads.	
		Inundate 5.9 mi. of natural intermittent stream channel & associated ecosystem.	Inundate 0.4 mi. of natural intermittent stream channel & associated ecosystem.	No effect.	Inundate 6.3 mi. of natural intermittent stream channel & associated ecosystem.	
		Land use in watershed—55,680 ac. cropland, 5,650 ac. pasture, 53,100 ac. forest land.	Permanently alter 1,075 ac. of cropland, pasture, forest land.	Permanently alter 28 ac. of cropland, pasture, & forest land.	No effect.	Permanently alter 1,103 ac. of cropland, pasture, & forest land.
		15,620 ac. prime agric. land in watershed.	Convert 710 ac. of prime agric. land to structural measures.	Convert 10 ac. of prime agric. land to structural measures.	No effect.	Convert 720 ac. of prime agric. land to structural measures.
		1,460 ac. of wetlands in watershed.	No effect.	No effect.	Dry up 3 ac. of class 3 wetlands.	No effect.
		Introduce highly visible manmade structure as a permanent feature in the landscape.	Introduce 1 highly visible & 2 moderately visible manmade structures as permanent features in landscape.	No effect.	Introduce 2 highly visible & 2 moderately visible manmade structures as permanent features in landscape.	

See footnote at end of table.



**Figure 504-7** Sample table of summary and comparison of candidate plans—Continued

## Summary and Comparison of Candidate Plans

Effects	Without project	Alternative 1 (NED)	Alternative 2	Alternative 3	Alternative 4 (recommended) *
<b>Other Social Effects Acct.</b>	22,570 ac. damaged by moderately severe erosion.	No effect.	Adequately protect 17,466 ac. from accelerated erosion.	No effect.	Adequately protect 19,415 ac. from accelerated erosion.
	Region has insufficient opportunities for recreation—shortage 750,000 recreation visits.	Produce 398,800 recreation visits annually.	No effect.	No effect.	Produce 398,800 recreation visits annually.
	About 1,200 homes in need of water because of unreliable supplies.	Provide adequate water for 1,200 households.	No effect.	Provide adequate water for 1,000 households (90% of need).	Provide adequate water for 1,200 households.
	Agric. flood damage occurs on 3,000 ac., amounts to \$643,500.	Reduce flood damages by 45% on 2,540 ac.	No effect.	No effect.	Reduce flood damages by 45% on 2,540 ac.
<b>Regional Economic Development Acct.</b>					
Beneficial effect					
Annualized					
Region		\$1,207,810	\$5,370	\$90,000	\$1,213,175
Rest of Nation		0	0	0	0
Adverse effect					
Annualized					
Region		\$921,190	\$1,700	\$87,937	\$922,890
Rest of Nation		84,280	9,969	0	148,249

\* This example would require a Secretarial exception before approval.

**Notes:** In this example:

Interest rates—All alternatives evaluated at 7 5/8 percent interest.

Period of analysis—All plans evaluated over 100 years.

Price levels—Current 1980 price levels except current normalized (Oct. 1980, WRC) used for crop and pasture.

### 504.39 Consultation and public participation

The purpose of this section is to document the opportunities provided for the public's participation throughout the process from the initial request for SCS assistance to preparation of the final plan. This is to include the date, type, and purpose of the activity and the names of participating organizations. Special note should be made of the coordination with the State Historic Preservation Officer regarding cultural resources and the Fish and Wildlife Service regarding threatened and endangered species.

Where a project will affect wetlands that could be converted to a commodity crop, this section should show that the SLO and land users have been informed and are aware of the potential effect of the wetland conversion provisions and of the actions needed to avoid loss of program benefits.

This section should be expanded in the final plan–EIS to summarize and provide responses to significant written comments. Similar comments may be grouped. The response should indicate where revisions were made in the document. For a plan–EA, a brief summary of the comments received and actions taken are normally sufficient.

### 504.40 Recommended plan

#### (a) Purpose and summary

The first paragraph of this section should summarize the content of the plan. Describe the purposes to be served by the plan in terms consistent with Public Law 83-566 (e.g., watershed protection, flood prevention, or agricultural water management). For plans with numerous plan elements, include a brief summary of the works of improvement and how long it will take to install them.

#### (b) Measures to be installed

**(1) Land treatment practices**—In this part, the relationship of the ongoing program to the accelerated program is described. Make it clear that the ongoing program will be implemented without project action and that the accelerated program will supplement the ongoing program. Emphasize that participation in the program is voluntary and that the land user makes the final decision on land use and practices to be installed.

If the plan includes cost sharing for land treatment, provide an estimate of the participation rate.

The types and amounts of assistance (technical and financial) that will be provided should also be described in this part. Differentiate among the categories shown in Table 1 (fig. 504–8). Describe technical assistance in terms of person-years and category (e.g., soil surveys, conservation planning, or practice application) and financial assistance in terms of the types and amounts of practices, or interdependent practices, for which assistance will be provided. Separate discussions are needed for each evaluation unit. State the amount of erosion, condition of the impaired use, remaining sediment damage that will remain after installation of the practices. Explain that alternative practices which provide equal or greater benefits are permitted, but the cost-share amount is limited to the amount that would have been paid for the practices in the selected plan.

Discuss the location where the assistance will be provided in sufficient detail to guide the implementation of the plan (e.g., critical areas, class IV(e) cropland, or roadsides). Problem areas for which assistance is to be provided should be identified on maps as much as possible, but it is not intended that every acre be identified. Describe any specific criteria to be used to make a final determination of eligibility during implementation.

Describe the practices, or interdependent practices, expected to be used to solve identified problems and achieve identified objectives. Also, provide an estimate of the acres by land use for which technical and financial assistance will be provided.

Clearly state that there are limitations on technical and financial assistance. For example, assistance will be provided only when it contributes to identified project objectives and does not result in significant adverse impacts.

For Federal land, clearly describe the conservation land treatment measures jointly agreed upon by SCS, the land administering agency, and the SLO.

Give any other pertinent information that would clarify the work to be done.

**(2) Nonstructural measures—**

*(i) Flood plain acquisition.* Describe the location and amount of land, the type of rights to be acquired, and the planned land use. Include a map. It should be evident that the rights to be acquired are needed to provide a floodway and that elements are included to provide for any changed land use.

*(ii) Floodproofing.* Identify locations of buildings and the type of floodproofing. The plan should include sufficient details concerning the existing buildings to show that they are suitable for floodproofing. If a flood warning system is to be provided, describe its type and location and include sufficient details concerning its operation to show that the system will function.

*(iii) Relocation of existing flood plain properties.* Describe the type, number, and location of improvements. Make it clear that the proposed relocation site is outside the flood plain.

*(iv) Wetland or flood plain conservation easements.* Describe the location and amount of land to be acquired. Include a map.

**(3) Structural measures—**Describe reservoir-type structures in detail to include such items as:

- foundation conditions,
- kind of principal spillway (including the type of inlet and outlet),
- kind of emergency spillway (i.e., rock, earth, structural, other),
- frequency of storm controlled by the principal spillway and retarding storage,
- type of fill material,
- type and extent of clearing to be performed,
- design life of structures and portion of sediment capacity that will initially store water,
- borrow (type, location, relation to geology, and land rights), and
- provisions for safeguarding public health, water quality, sanitation, and safety.

Reference should be made to Table 3 or 3a (fig. 504–12 or 504–13). Similar structures may be grouped for discussion purposes.

Describe the potential hazard induced by risk of failure of a dam. Point out that although a dam failure is not expected, there is always some remote possibility of failure and that failure, if it were to occur, would

endanger any development in the breach inundation area. Also include information on the geologic or design factors that could contribute to the possible failure of a dam, and design features that have been included to reduce the risk. Refer to the breach inundation map in appendix B of the plan.

Explain the rationale for determining the dam classification. Explain that class “a” and “b” dams are designed for less than the probable maximum flood; therefore, overtopping and subsequent failure are a possibility. Include precautions against future development within the breach inundation area of class “a” and “b” dams that could result in a changed classification. For class “c” dams, explain that an emergency action plan needs to be developed by the SLO and other local groups before initiating construction.

Describe channel characteristics by reaches along the path of the proposed channel work, including the materials through which channels will be constructed. The nature of the planned construction, operation, and maintenance by reaches should be further subdivided as follows:

- Establishment of new channel including necessary stabilization measures.
- Enlargement or alignment of existing channel or stream.
- Clean out of natural or manmade channel (includes bar removal, removal of loose debris, and major clearing and snagging).
- Stabilization as the primary purpose by continuous treatment or treatment of localized problem areas—present capacity adequate.
- Measures or means provided to prevent private landowners from using federally cost-shared channels as outlets for private onfarm drainage of wetlands or bottom land hardwood habitat.
- Presence of rock or other material that will significantly affect the design of the channel. Reference should be made to Table 3b (fig. 504–14).

Write narrative on public recreation facilities to include information on:

- land and water areas made available for recreational use by project action,
- kind and nature of recreational facilities to be installed (in sufficient detail to indicate their quality,

- relationship between the components of the development—water resource improvement(s) and associated facilities, and
- provisions for public access, health, sanitation, safety, and the physically handicapped.

Reference should be made to Table 2b (fig. 504–11).

The following information for each measure should be included:

- minimum land rights (acres) by proposed use and availability for public use;
- approximate planned amount of each plan element;
- planned appurtenances;
- alteration, modification, or change in existing improvements;
- number and kind of relocations that will result from acquisition of real property rights including number of persons or families affected;
- action to be taken to minimize soil erosion, and water, air, and noise pollution during construction;
- type of action to be taken relating to preservation of historical and archeological data, sites, and specimens; and
- non-project features—steps to be taken to minimize the project effects on these values.

Indicate that before construction of any project for local flood protection, the SLO shall agree to participate in and comply with applicable Federal flood plain management and flood insurance programs (Public Law 99-662).

**(4) Mitigation features**—Features or provisions to mitigate losses and other adverse effects should be discussed. Whatever the feature is mitigating should be clear (40 CFR 1502.16(h)). If the project does not have mitigation features, this section may be omitted.

### **(c) Permits and compliance**

A list of all Federal permits and other entitlements that must be obtained and consultation that must be completed to implement the recommended plan should be included. If none are required, include a sentence so stating (40 CFR 1502.25). If the plan will also be used in its present form to obtain a permit, that should be noted here with all supporting information included in the appendix. If a “404” permit will be required, show compliance with EPA’s 404(b)(1) guidelines.

If additional cultural resources or endangered species consultation will be required before project installation, explain that here.

### **(d) Costs**

This section should explain the costs shown on Tables 1, 2, 2a, 2b, and 4 (figs. 504–8, 504–9, 504–10, 504–11, and 504–15). Make reference to the appropriate table. Avoid repeating the figures in the tables. Refer to the agreement for cost-sharing arrangements. The explanation of the costs should be in enough detail to assure that the SLO have a full understanding of their obligations.

The narrative should describe each cost category (e.g., land treatment, construction, engineering, real property acquisition, project administration, relocation payments, operation and maintenance, and nonproject). It should explain what each category consists of and should highlight any significant cost items not shown separately on the tables. Cost estimates for major subitems not listed in the tables should be described and included in the narrative. For example, project administration costs include relocation assistance advisory services and other items. It should be clear that all significant cost items have been included in the estimates. Joint costs and specific costs for multiple-purpose structures should be described.

If costs are allocated to purposes, this section should explain the method of cost allocation. It should also show any allocated costs that are not included in the tables.

If the plan includes cost-shared land treatment, this section should identify the eligible measures and the cost-share rates.

### **(e) Installation and financing**

**(1) Framework for carrying out plan**—This section should explicitly describe the framework for carrying out the plan. It should describe the planned sequence of installation, along with the responsibilities of the SLO, SCS, and other cooperating agencies for installing and financing the project. Where cost-shared land treatment is involved, the responsibilities of the individual participants should also be explained. Also, any preconditions for installing the project should be discussed.

**(2) *Planned sequence of installation***—Show the sequence in which the project measures will be installed. If certain parts of the work must be installed or completed before others, this should be explained.

The plan should specify any mitigation measures that must be installed and their relationship to the construction schedule. It should describe the real property that must be acquired and the land treatment that must be installed before installing structural or nonstructural measures.

In plans with structural measures, Public Law 83-566 assistance for the first unit of construction may be provided before all necessary real property for the entire project is obtained. However, the plan must show that the SLO have sufficient funds and agree to use their power of eminent domain to acquire the needed rights. Including a schedule for real property acquisition in the plan is a good practice. Generally, acquisition of all real property for the project in the first 2 or 3 years of the installation period is desirable.

**(3) *Responsibilities***—Specific responsibilities of each SLO and the SCS should be listed. The plan must show that the SLO have the needed authorities and have agreed to exercise those authorities to implement the plan. Items that should be covered for each planned measure include acquisition of real property and water rights; permits, licenses, and other entitlements; contracting; engineering; project administration; relocation advisory services; financing; and installation.

**(4) *Contracting***—The writeup should indicate the method of contracting used for installing the planned measures and name the SLO responsible for dealing with SCS during installation. This applies to land treatment as well as structural and nonstructural measures.

The plan should state clearly, as appropriate, that the SLO intend to do the contracting, or SCS is formally requested to do a specific part or all of the contracting.

If long-term contracts (LTC's) for cost-shared land treatment are to be used, describe whether the plan involves SCS-participant LTC's or an SCS-SLO project agreement with SLO-participant LTC's. Show that each LTC will be based on a plan/schedule of operations developed by the participant and approved by SCS.

Also show the expected range of durations of the LTC's and explain that all required conservation treatment (cost-shared and non-cost-shared if applicable) will be installed at least 2 years before the end of the contract. Note that no LTC's will be signed until the initial participation requirements are met (fig. 504-2) and that all LTC's must be signed within 5 years of the date on which the plan is approved (see 502.15). If the plan includes required conservation treatment that will not be cost-shared, this should be made clear, as should any other conditions attached to the cost sharing. Other information to help clarify the contracting process and identify the responsibilities of the various parties may also be included.

The plan should make clear that LTC's cannot be entered into if the land involved is within a unit that is under contract for conservation land treatment under another program.

If a "performance of work" or a "division of work" arrangement is to be used, see paragraphs 507.03(f) and (g). Where a "division of work" is involved, this section should include a statement that the value of the work SCS is to perform does not exceed cost-sharing rates for such practices applicable under other cost-sharing programs. Describe the responsibilities of each party.

If the SLO intend to do the contracting or will otherwise receive Public Law 83-566 funds, show that they understand their responsibilities as outlined in OMB-102 and implemented by SCS according to the procedures in the National Contracts Grants and Cooperative Agreements Manual.

**(5) *Real property and relocations***—Describe the real property needed and the number and kind of relocations that will result from the proposed action. Identify the SLO and their responsibilities, and indicate that they will follow standard SCS procedures as outlined in Property Management Regulations in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646).

**(6) *Other agencies***—Describe the responsibilities of and types of assistance to be made available by each Federal agency in accomplishing the plan. Specifically indicate concurrence of any land managing agency with its part in carrying out the plan, except for

the FS, which is a USDA agency with responsibilities in plan development and implementation.

When the plan includes works of improvement to be installed on Federal land, the plan should show how Public Law 83-566 funds will be used in combination with funds available from regular program sources.

Appropriate explanatory statements should set forth the opportunities for Federal assistance from other programs, including cost-sharing programs of USDA and community development block grants from the Department of Housing and Urban Development.

**(7) Cultural resources**—If protection, preservation, recovery, or other mitigation of impacts to cultural resources are anticipated, this section should contain a brief summary of the plans involved. The summary should include responsibilities for financing and carrying out such plans and the timing with respect to implementation.

This section should state that if cultural values are discovered during construction, construction will be halted and the procedures of the SCS General Manual (420 GM 401) will be followed.

**(8) Financing**—The plan should show how the SLO and the Federal Government will finance installation and operation and maintenance costs. It should be clearly indicated that the SLO have analyzed their financial needs in relation to the scheduled installation and the operation, and maintenance requirements for the works of improvement, and that they have arranged for funds to be available when needed through donations, cash reserves, tax or assessment levies, or credit. The plan should include an estimate of the out-of-pocket costs to be borne by the SLO and should show that projected revenues are adequate.

If loans are contemplated, show that sources of credit have been contacted with favorable results. If a watershed loan from the RDA is contemplated, indicate that negotiations are underway with the regional director of the RDA, including the filing of a preapplication.

Describe the extent to which donations, such as land, easements, labor, material, equipment, services, or money, will be used to finance the costs other than those payable with Public Law 83-566 funds. Where applicable, indicate that the SLO may receive credit

for such contributions toward their required cost sharing under conditions to be agreed upon in advance of their performance (507.12 and 507.13).

Costs not eligible for Public Law 83-566 financial or credit assistance should be identified. The means of financing such costs should be described.

When an advance of Public Law 83-566 funds for future municipal or industrial (M&I) water supply is involved, this section of the plan should show

- the estimated amount of the advance, the type of cost for which it will be used, and that the cost will not exceed 30 percent of the total estimated installation cost of the structure involved;
- that the SLO will enter into an agreement, approved by the RDA for repayment of the advance before the execution of the SCS fund-obligating agreement;
- that the SLO intends to use the water from the storage capacity provided for future municipal use within the evaluation period of the structure; and
- that the regional director of the RDA has tentatively concurred in the proposed advance.

**(9) Conditions for providing assistance**—The plan should describe the conditions under which Public Law 83-566 assistance will be made available to the SLO and should show that financial and other assistance to be furnished by SCS for carrying out the project is contingent on the appropriation of funds for this purpose. Items to consider include requirements for land treatment, real property acquisition, and permits.

**(f) Operation, maintenance, and replacement** Operation, maintenance, and replacement responsibilities should be described in the same detail as those for installation. All project features should be described including land treatment, nonstructural and structural measures. The SLO will be responsible for operating, maintaining, and replacing (when needed) each planned measure. This responsibility includes the financing of these actions.

This section should clearly indicate how the SLO will encourage landowners and operators to operate and maintain the land treatment measures on their farms for the protection and improvement of the watershed.

Where cost-shared land treatment is involved, the evaluated life span of the practices and any replacement costs that have been included should be indicated.

The plan should identify the responsibilities for operating the nonstructural measures to ensure their effectiveness throughout the evaluation.

The responsibilities for operating structures should be identified. They include the use of water in regulated storage capacity; operation of any control works such as tide gates; the legal steps required to establish operating authority; and other significant O&M items.

If the plan includes components that have an expected life span that is less than the evaluation period, discuss the need and arrangements for their replacement.

The kinds of inspections to be made and their frequency should be described. If National Forest land is included, specify that the inspection team will include a FS member.

Sufficient detail should be included to ensure that the requirements and costs for adequate operation and maintenance are fully understood and that arrangements have been made or can be made to satisfy these requirements. This matter is particularly significant for recreational developments because the operation and maintenance of even a modest recreation development may be a significant part of the total operation and maintenance responsibility for the entire project. Because recreation facilities generally require periodic replacement during the project evaluation period, the plan should show the extent to which replacement costs have been included. Custodial, policing, sanitation, safety, and other operational services and the manner of financing operation and maintenance costs should be described fully. If admission or use charges are contemplated, the plan should indicate the basis that will be used for establishing fees.

Specific reference should be made to the provisions and responsibilities for operation and maintenance of fish and wildlife features or measures, fish and wildlife mitigation features, needed sanitary facilities, provisions for public access at any of the project measures, and any unusual operational needs and major maintenance work that may be anticipated. Include provisions for monitoring when appropriate.

Provisions should be included to ensure that installa-

tion and operation and maintenance of the planned features meet the requirements of appropriate State and local public health agencies. This point is especially important if recreation or municipal water supply, or both, are involved. Identify the agencies involved.

Include a statement that a specific operation and maintenance agreement will be entered into before a project agreement is signed. (This includes project agreements for installing land treatment with SLO/participant long-term contracts.) This O&M agreement is to include, in addition to specific sponsor responsibilities for the project measures, specific provisions for retention, use, and disposal of property acquired or improved with Public Law 83-566 assistance. The plan should also state that the O&M agreement will be based on the National Operation and Maintenance Manual and that an operation and maintenance plan will be prepared for each structural, nonstructural, and land treatment measure. Indicate, where appropriate, that an Emergency Action Plan will be developed.

#### **(g) Tables**

The tables in this part are designed to meet as many conditions in a watershed as can be readily anticipated to exist. Show those items or measures applicable to the specific watershed plan. Tables 1 through 6 (figs. 504-8 through 504-18) should use the format shown to facilitate review and summary purposes. Items not applicable to a particular plan may be omitted.

Prime-numbered tables generally are necessary in all plans. Use A and B tables only if applicable. Watershed protection plans should include Tables 1 and 4 (figs. 504-8 and 504-15) as a minimum. For ready reference, reproduce tables on colored paper. Date all tables with the month and year; the date must be reasonably current. Round all dollar figures shown in the tables to a practical level of significance.

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## Instructions for Table 1, Estimated Installed Cost

All measures and items with their total estimated costs should be shown in Table 1 (fig. 504–8) by Federal agency and land ownership category. This table will be the basis for providing technical, cost-sharing, and credit assistance from funds made available under the Act.

1. Land treatment is to be listed in three categories:

**Required land treatment.** This is the treatment that must be installed upstream of dams to comply with the USDA policy that requires 50 percent of the drainage area to be adequately protected. Required land treatment also includes any treatment needed upstream of channels to comply with the SCS policy given in 502.11.

**Accelerated land treatment.** This is land treatment being installed to address public (off-site) water and land-related resource problems. Accelerated land treatment will be the only category shown in watershed protection projects. Water resource projects may include treatment in all three categories.

**Associated land treatment.** This is the land treatment needed to ensure realization of benefits used in the economic justification of structural measures for irrigation or drainage.

2. All land treatment should be listed by land use and evaluation unit. Evaluation units for required and associated land treatment will be the same as those for the related structural measures. Evaluation units for accelerated land treatment should be based on such factors as land capability class, soil type, or erosion-rate categories used to delineate the problem area. They should correspond to the information in the watershed agreement. For associated land treatment, only the onfarm practices to be installed with Public Law 83-566 program assistance (technical or financial) are to be included.

3. List nonstructural measures by types, such as flood plain acquisition, flood warning system, or flood proofing.

4. List structural measures by major types, such as floodwater-retarding structures, multiple-purpose structures, irrigation structures, or channel work. Miles will be used as the unit of measure for channel work. Do not designate purposes or group such measures under a purpose designation.

5. If Federal agencies other than the SCS and FS participate in the installation of works of improvement, add columns so that their participation may be shown in the same manner as that for SCS and FS. Columns that do not have entries (e.g., if the FS is not participating) may be omitted.

6. The estimated number of units and the estimated cost in dollars to be paid from Public Law 83-566 funds and from other sources for measures to be installed on Federal and non-Federal land should be shown in the body of the table. The estimated costs should include any accelerated help that may be provided by other programs for cost-sharing and technical assistance on non-Federal land and works of improvement on Federal lands.

7. Direct project funds for each agency for engineering services and project administration should be sufficient to cover all costs that will eventually be charged to the project. These funds should include allowances for assistance by the State, National Technical Center, and National Headquarters. All costs for the project should be included as part of the cost for the category rather than as a separate line item.



**Figure 504-8** Table 1—Estimated Installation Cost

Table 1, Estimated Installation Cost  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

Installation cost item	Unit	----- Number -----			----- Estimated cost (dollars) <sup>1/</sup> -----								
					---- Public Law 83-566 funds ----			----- Other funds -----			Total		
		Federal land	Non-Fed. land	Total	Federal land SCS <sup>2/</sup>	Non-Fed. land SCS <sup>2/</sup>	Total	Federal land	Non-Fed. land	Total			
<b>Land treatment-Required</b>													
Evaluation unit													
A													
B													
Technical assistance													
Subtotal—Required													
<b>Land treatment-Accelerated</b>													
Evaluation unit													
D													
E													
Technical assistance													
Subtotal—Accelerated													
<b>Land treatment-Associated</b>													
Technical assistance													
Subtotal—Associated													
<b>Subtotal—Land treatment</b>													
<b>Nonstructural measures</b>													
Preservation easements													
Flood proofing													
Land acquisition													
Flood warning system													
Relocation													
<b>Subtotal—Nonstructural</b>													
<b>Structural measures</b>													
Floodwater retarding structures													
Multiple purpose structures													
Channel work													
<b>Subtotal—Structural</b>													
<b>Total project</b>													

<sup>1/</sup> Price base.

<sup>2/</sup> Federal agency responsible for assisting in installation of works of improvement.

Month/year

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## Instructions for Table 2, Estimated Cost Distribution

Table 2 (fig. 504–9) is used to show the various items of installation cost for individual structural and non-structural measures. It will be the basis for determining the percentages of costs to be shared by the SLO and SCS for each measure or group of measures. The following instructions will help in the preparation of the table.

1. Under “Item” list each measure for which a separate cost estimate is available. The same number or name used on the project map should be used in this table. Grade stabilization structures may be grouped when a separate estimate for each structure in a system has not been developed.
2. Care should be taken to ensure that individual measures will not be grouped with other measures for which cost sharing is not the same. For example, specific cost items and recreation facilities should be included as separate line item entries.
3. The estimated construction cost should include costs expected to be incurred during the installation period, including those costs for cultural resource protection and other mitigation, plus a realistic contingency allowance in accordance with good estimating practices.
4. The estimated real property acquisition cost should consist of all costs, including those needed for cultural resource protection and other mitigation, for purchasing the needed real property.

5. For those measures that incorporate nonproject features, the nonproject cost will be shown in parenthesis in the line below the project cost in the appropriate columns. The grand total cost should include only project costs.

6. The estimated cost for project administration will be incorporated as part of each item listed. The project administration part of the installation cost to be borne by the sponsors may include the cost of administering construction contracts and for relocation assistance advisory services.

7. When applicable, footnotes should be included to identify such items as:

- Legal fees, survey costs, or flowage easements and their values.
- Engineering service contract costs to be borne by Public Law 83-566 funds and others.
- Nonproject cost items.
- Kind and value of modifications or alterations included with the real property costs.
- The cost of cultural resource protection and mitigation.
- The cost of other environmental or social mitigation measures.
- Non-NED project costs for nonstructural measures (as described in section 502.22(a)).

**Figure 504-9** Table 2—Estimated Cost Distribution — Structural and nonstructural measures

**Table 2, Estimated Cost Distribution — Structural and nonstructural measures**

(Name of watershed), (State)  
(Dollars) <sup>1/</sup>

	----- Installation cost—Public Law 83-566 -----			----- Installation cost—Other funds -----			Total installation cost
	Construction	Engineering	Real prop. rights	Relocation payments	Project admin.	2/ other	
<b>Structural measures</b>							
Floodwater retard. struc. No. 1							
Multiple purpose struc. No. 2	4/	7/	5/				
Recreational facilities							
No. 3 Water supply				4/			
Water intake tower				8/			
Channel work							
Main A							
10+00-40+00 (M)							
Lateral A							
10+00-20+00 (O)							
<b>Subtotal—Structural</b>							
<b>Nonstructural measures</b>							
Relocation of properties							
Floodproofing							
Flood plain acquisition							
Flood warning system							
<b>Subtotal—Nonstructural</b>							
<b>Grand total</b>							

1/ Price base \_\_\_\_\_  
 2/ Includes \$ \_\_\_\_\_ for relocation assistance advisory service.  
 3/ Includes \$ \_\_\_\_\_ for moving three pipelines and \$ \_\_\_\_\_ for weighting one AT&T cable.  
 4/ Includes \$ \_\_\_\_\_ of Public Law 83-566 funds and \$ \_\_\_\_\_ of other funds for cultural resource protection and mitigation measures.  
 5/ Includes \$ \_\_\_\_\_ of real property cost for mitigation.  
 6/ Includes \$ \_\_\_\_\_ for surveys, legal fees, other costs.  
 7/ Engineering services contract cost to be borne: \$ \_\_\_\_\_ by Public Law 83-566 funds and \$ \_\_\_\_\_ by other funds.  
 8/ Nonproject cost for rerouting State Route 281 across top of dam.

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## Instructions for Table 2a, Cost Allocation and Cost-sharing Summary

Table 2a (fig. 504-10) shows the installation costs allocated to flood prevention, drainage, irrigation, municipal and industrial water supply, recreation, fish and wildlife, and other such purposes, as well as the sharing of costs allocated to each purpose. Relocation payments should be included in the same manner as those for construction, real property rights, and engineering costs. Use as many columns as necessary to show each project purpose.

1. Each of the individual purposes served by project measures should be entered as a subcolumn heading under the column heading "Purpose."

2. All single-purpose measures serving the same purpose may be grouped by purpose under "Item." Each multiple-purpose structure and specific cost items should be listed separately in the same manner as shown in Table 2. List the items of installation cost (as in Table 2) under each measure or group of measures.

3. In the cost-sharing section of the table, distribute the total cost allocated to each purpose to Public Law 83-566 funds and other funds in accordance with applicable cost-sharing policy.

4. When relocation costs are involved, it may be necessary to show Public Law 83-566 costs for municipal water supply. In such an instance, this should be identified by a footnote.

**Figure 504-10** Table 2a—Cost Allocation and Cost-sharing Summary—Structural and nonstructural measures

Table 2a, Cost Allocation and Cost-sharing Summary—Structural and nonstructural measures  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

	----- Cost allocation -----				----- Cost sharing -----							
	----- Purpose -----				----- Public Law 83-566 -----				----- Other -----			
	Flood preven- tion	Recre- ation	M&I water supply	Total	Flood preven- tion	Recre- ation	M&I water supply	Total	Flood preven- tion	Recre- ation	M&I water supply	Total
<b>Grade stabili- zation struc.</b>												
Construction												
Engineering												
Relocation												
Real prop rights												
Project admin.												
<b>Subtotal</b>												
<b>Multiple pur- pose</b>												
Structure No.												
Construction												
Engineering												
Relocation												
Real prop rights												
Acquisition												
Legal fees												
Easements												
Road & utility modification												
Project admin.												
<b>Subtotal</b>												
<b>Recreation facilities</b>												
Construction												
Engineering												
Real prop rights												
Acquisition												
Legal fees												
Project admin.												
<b>Subtotal</b>												
<b>Total</b>												

<sup>1/</sup> Price base \_\_\_\_\_.

## Instructions for Table 2b, Recreational Facilities, Estimated Construction Costs

Table 2b (fig. 504-11) shows the number, estimated unit construction cost, and total cost for each individual type of recreational facility. This table should be included in all plans that have recreational development as an integral part of the plan and if recreational benefits for a planned development are evaluated monetarily, regardless of whether Public Law 83-566 funds will share any of the cost for facilities.

1. Where more than one development is involved, identify the facilities to be installed at each development. Types of facilities may include access roads, parking lots, water supply, sanitary facilities, beach development, boat docks, picnic tables, or fireplaces. Where possible, include descriptive terms, such as blacktop road—16 feet wide, flush toilet, and concrete picnic table.
2. Under “Number” show the number of units of each type of facility planned. Include a footnote to indicate those items that are estimated and subject to minor variation.

**Figure 504-11 Table 2b—Recreational Facilities — Estimated Construction Costs**

Table 2b, Recreational Facilities — Estimated Construction Costs  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

Item	Number	Estimated unit cost	Total construction cost
	(Indicate quantities that are estimated. <sup>2/</sup> )		
<b>Total</b>			

<sup>1/</sup> Price base \_\_\_\_\_.

<sup>2/</sup> Estimated quantity, subject to minor variation at time of detailed planning.

Month/year

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## Instructions for Table 3, Structural Data—Dams With Planned Storage Capacity

Most of the items in Table 3 (fig. 504–13) are self-explanatory. Some additional clarification includes:

1. Class of structure should be indicated as a, b, or c, as defined in the National Engineering Manual, 210-520.21(e).
2. Total drainage area should include the controlled and uncontrolled drainage area above the planned structure. If two or more structures are in series, the drainage area above the upstream structure(s) is the “controlled” drainage area, and the area between the upstream structure and the structure being listed is the “uncontrolled” drainage area.
3. The emergency spillway type refers to the type of material, such as vegetated, rock, earth, or concrete.
4. The 1-day runoff curve number used for design of the structure(s) should be indicated. Any deviation from the use of an antecedent moisture condition II runoff curve number should be appropriately noted.
5. The floodwater-retarding pool is the reservoir space allotted for the temporary impoundment of floodwater and aerated sediment. Its upper limit is the elevation of the crest of the lowest emergency spillway. Floodwater-retarding capacity is the volume in the floodwater-retarding pool less the aerated sediment. The surface area of the floodwater retarding pool is the area at the crest elevation of the lowest emergency spillway.
6. The submerged sediment capacity should account for all of the reservoir space allotted to the accumulation of submerged sediment during the life of the structure. Sediment aerated is the volume of sediment that deposits above the lowest ungated outlet.
7. The surface area for the sediment pool is the area of the reservoir at the elevation of the anticipated sediment accumulation at the dam. If the lowest ungated outlet is below the sediment pool elevation, the area to initially store water should be shown by footnote, or by adding another line. The sediment pool area is shown in parenthesis if the reservoir contains beneficial storage or the sediment capacity will not store water.
8. Beneficial use storage should be shown separately for each applicable purpose, including the capacity needed for losses.
9. In listing the surface area for the beneficial use pool, identify the use of recreation or fish and wildlife pools, when applicable. Water storage for either of these purposes normally is considered the first increment above the sediment pool. Where other beneficial uses are included in a reservoir, the maximum water surface area is shown for all beneficial uses.
10. Table 3 should also be used for joint-use storage structures. Joint-use storage is reservoir storage capacity partly allocated to flood prevention, but also used for conservation or beneficial storage during seasons when floods normally do not occur. The operation of joint-use storage is based on water supply forecasts and continuous inflow and outflow measurements or on a fixed time schedule. The table headings should be modified as appropriate to show capacities for separate storage purposes and capacities for beneficial use storage shared with floodwater-retarding capacity.
11. The principal spillway is the lowest ungated spillway designated to convey the water from the floodwater-retarding pool. Type of conduit refers to the material used, such as R/C pipe, R/C box, or CMP.
12. The emergency spillway system of a dam is the spillway system designed to convey water in excess of that impounded for flood prevention or other beneficial purposes.
13. The exit channel of an earth, vegetated, or rock emergency spillway is that part of the channel downstream from the control section which safely conducts the water to a point where it may be released without jeopardizing the integrity of the structure.  $V_e$  is the maximum velocity of flow in the exit channel for the emergency spillway hydrograph.
14. The emergency spillway hydrograph (ESH) is used to establish the minimum design dimensions of the earth or rock emergency spillway.
15. The freeboard hydrograph (FH) is used to establish the minimum elevation of the top of the dam.
16. Elevations should be referenced to mean sea level.
17. All flow capacities should be shown as maximum or peak.



**Figure 504-12** Table 3—Structural Data—Dams with planned storage capacity**Table 3, Structural Data — Dams with planned storage capacity**  
(Name of watershed), (State)

Item	Unit	Structure no. (1, 2, 3, 4, ...)	Total
Class of structure			
Seismic zone			
Uncontrolled drainage area	mi <sup>2</sup>		xxx
Controlled drainage area	mi <sup>2</sup>		xxx
Total drainage area	mi <sup>2</sup>		xxx
Runoff curve No. (1-day) (AMC II)			xxx
Time of concentration (T <sub>c</sub> )	hrs		xxx
Elevation top dam	ft		xxx
Elevation crest emergency spillway	ft		xxx
Elevation crest high stage inlet	ft		xxx
Elevation crest low stage inlet	ft		xxx
Emergency spillway type			
Emergency spillway bottom width	ft		xxx
Emergency spillway exit slope	%		xxx
Maximum height of dam	ft		xxx
Volume of fill	yd <sup>3</sup>		xxx
Total capacity <sup>1/</sup>	acre ft		
Sediment submerged	acre ft		
Sediment aerated	acre ft		
Beneficial use (identify use)	acre ft		
Floodwater retarding	acre ft		
Between high and low stage	acre ft		
Surface area			
Sediment pool <sup>2/</sup>	acres		
Beneficial use pool (identify use)	acres		
Floodwater retarding pool <sup>1/</sup>	acres		
Principal spillway design			
Rainfall volume (1-day)	in		xxx
Rainfall volume (10-day)	in		xxx
Runoff volume (10-day)	in		xxx
Capacity of low stage (max.)	ft <sup>3</sup> /s		xxx
Capacity of high stage (max.)	ft <sup>3</sup> /s		xxx
Dimensions of conduit	ft/in		xxx
Type of conduit			
Frequency operation-emerg. spillway	% chance		xxx
Emergency spillway hydrograph			
Rainfall volume	in		xxx
Runoff volume	in		xxx
Storm duration	hrs		xxx
Velocity of flow (V <sub>e</sub> )	ft/s		xxx
Max. reservoir water surface elev.	ft		xxx
Freeboard hydrograph			
Rainfall volume	in		xxx
Runoff volume	in		xxx
Storm duration	hrs		xxx
Max. reservoir water surface elev.	ft		xxx
Discharge per ft of width (O <sub>e</sub> /b)	acre ft		xxx
Bulk length	ft		xxx
Capacity equivalents			
Sediment volume	in		xxx
Floodwater retarding volume	in		xxx
Beneficial volume (identify use)	in		xxx

<sup>1/</sup> Crest of emergency spillway.

Month/year

<sup>2/</sup> If reservoir contains beneficial storage or if sediment capacity will not store water, show area in parenthesis and footnote accordingly.

## Instructions for Table 3a, Structural Data—Dikes

Table 3a (fig. 504-13) shows each dike separately. Data in each column to the right of the stationing should be entered on the same line as the station location.

**Figure 504-13** Table 3a—Structural Data — Dikes

**Table 3a, Structural Data — Dikes <sup>1/</sup>**  
(Name of Watershed), (State)

Dike	Stationing	Top width (ft)	Average side slope	Average height of dike (ft)	100-year frequency velocity (ft/s)	Dike protection	Volume of earth fill (yd <sup>3</sup> )

<sup>1/</sup> Dikes are Class \_\_\_\_ (reference SCS Engineering Standard No. 356)

Year/month

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## Instructions for Table 3b, Structural Data—Channel Work

Table 3b (fig. 504-14) should be used for flood channels, irrigation canals, and drainage channels.

1. The data in each column to the right of station should be entered on the same line as the station location it represents.
2. Data, such as hydraulic gradient,  $n$  value, and excavation volume, should be entered to represent values between the station given and the preceding station, or it should be entered on intervening lines.
3. Drainage area is the uncontrolled area at the station.

4. As-built and aged velocities entered in the table should be the velocities associated with the discharges used for stability analysis. If velocities are for other than design discharge, explain by footnote.
5. The information in footnotes may be shown by a separate legend sheet.
6. The totals for length of channel work and volume of excavation should be shown.
7. If design discharge includes overbank flow, this shall be indicated by an appropriate footnote.
8. If the design discharge cannot be expressed in meaningful terms by frequency, the basis for design (drainage curve, numbers, removal rate) should be shown.

**Figure 504-14** Table 3b—Structural Data — Channel Work

**Table 3b, Structural Data—Channel Work**  
(Name of Watershed), (State)

Channel name (reach)	Station	Drain. area (mi <sup>2</sup> )	( ) Year freq. design dischg. (ft <sup>3</sup> /s)	Water surface elev. (msl)	Hydrau. gradient (ft/ft)	---- Channel dimensions <sup>1/</sup> ----				--- n Value ---		Velocities (ft/s)		Excava- tion volume (yd <sup>3</sup> )	Existing Type of channel work <sup>2/</sup>	Present flow cond. <sup>4/</sup>
						Gradient (ft/ft)	Bottom width (ft)	Elev. (ft/msl)	Side slope	aged	as built	aged	as built			
												<u>5/</u>	<u>5/</u>			

- <sup>1/</sup> Where excavation is not planned, show cross sectional area and wetted perimeter below hydraulic grade lines. Month/year
- <sup>2/</sup> I Establishment of new channel including necessary stabilization measures.  
 II Enlargement or realignment of existing channel or stream.  
 III Cleaning out natural or manmade channel (including bar removal and major clearing and snagging operations).  
 IV Clearing and removal of loose debris within channel section.  
 V Stabilization as primary purpose (by continuous treatment or localized problem areas—present capacity adequate).
- <sup>3/</sup> N An unmodified, well defined natural channel or stream.  
 N ( ) Manmade ditch or previously modified channel or stream ( show approximate date of original construction in parenthesis).  
 O None or practically no defined channel.
- <sup>4/</sup> Pr Perennial—Flows at all times except during extreme drought.  
 I Intermittent—Continuous flow through some seasons of the year.  
 E Ephemeral—Flows only during periods of surface runoff, otherwise dry.  
 S Pounded water with no noticeable flow—Caused by lack of outlet or high ground water table.
- <sup>5/</sup> Explain discharge upon which velocities are based, i.e. design, bankfull, 10-year.

**Note:** A subscript "L" should be added to the Roman numeral classification to indicate an impervious lining.

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## Instructions for Table 4, Average Annual NED Costs

1. List measures, singly or in groups, as used for evaluation purposes. Use the same groupings of measures in Tables 4 and 6 (figs. 504–15 and 504–18). Each evaluation unit will include costs for all items in the evaluation unit whether or not benefits can be evaluated monetarily. Include all these costs in the total and in the annual cost column of Table 6. The rationale for including uneconomical or unevaluated increments will be included in the narrative.
2. Enter the appropriate annual costs for each of the evaluation units. The annual project administration cost will be included in each evaluation unit and in the grand total.
3. Show the current price base for the installation, operation, maintenance, and replacement cost estimates.
4. Because of its magnitude and importance, the operation, maintenance, and replacement cost for recreational or fish and wildlife developments should be identified by footnote.
5. Costs that have been deducted as associated costs are not normally included in this table. All Public Law 83-566 costs, including technical assistance for non-cost-shared measures, should be included in this table.
6. Non-NED project costs for nonstructural measures should not be included. If Table 2 (fig. 504–9) has such costs, Table 4 should include a footnote, such as “Non-NED project costs for upgrading housing have been excluded.”
7. Items that might be “other direct costs” are discussed in P&G 2.12.7.

**Figure 504-15 Table 4**—Estimated Average Annual NED Costs

**Table 4, Estimated Average Annual NED Costs**  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

Evaluation unit	----- Project outlays -----		Other direct costs	Total
	Amortization of installation cost	Operation, maintenance, and replacement cost		
<b>Land treatment</b> —Accelerated Evaluation unit 1 Evaluation unit 2  <b>Reaches 1 to 6</b> Multi-purpose channel, dam, etc.  Land treatment—Associated <sup>2/</sup> Land treatment—Required <sup>3/</sup>  <b>Reaches 7 and 8</b> Multi-purpose channel, etc.				
<b>Grand total</b>				

<sup>1/</sup> Price base \_\_\_\_, amortized over \_\_\_\_ years at a discount rate of \_\_\_\_ percent. Month/year  
<sup>2/</sup> Costs for technical assistance to install associated measures and financially assisted accelerated land treatment in this evaluation unit are included. (Costs for installing associated onfarm measures are not included because they have been netted out of the analysis.)  
<sup>3/</sup> Includes \$\_\_\_\_ for operation, maintenance, and replacement for recreation development.

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## Instructions for Table 5, Estimated Average Annual Flood Damage Reduction Benefits

1. In the "Item" column, enter the types of flood damage that have been evaluated and that will be affected by the structural and nonstructural measures included in the plan.
2. Gully erosion damage includes losses resulting from land voiding and any ephemeral gully damage, sheet and rill erosion damage, or impaired land use that is interrelated with gully erosion. Erosion not associated with flood damage reduction should not be included.
3. In the "With project" column, enter the average annual damage that will continue to be incurred after project installation.
4. Enter the difference between the average annual damage with and without project to show the project's total damage reduction benefits in the last column.
5. When the table indicates no remaining damage in a category, a footnote is needed to show that damages and benefits were not evaluated completely. Examples of appropriate footnotes might be "damages and benefits will accrue from floods of greater magnitude than the \_\_\_\_ frequency event, but these were not evaluated" or "this includes only the damages and benefits occurring from land voiding or deterioration that will be affected by the structural measures."
6. No distinction should be made between benefits accruing within or outside the watershed unless some unusual circumstances make it necessary or desirable.
7. The price base should be clear and specific, such as:
  - <sup>1/</sup> Price base: 1990 current normalized prices for cropland and pasture; 1991 prices for all others.
8. Agriculture-related damage should include damages occurring in rural communities with a population of about 10,000 or less.



**Figure 504-16** Table 5—Estimated Average Annual Flood Damage Reduction Benefits

**Table 5, Estimated Average Annual Flood Damage Reduction Benefits**  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

Item	----- Estimated average annual damage -----				----- Damage reduction -----	
	----- Without project -----		----- With project -----		benefit <sup>3/ 4/</sup>	
	Agric. related <sup>2/</sup>	Nonagric. related	Agric. related <sup>2/</sup>	Nonagric. related	Agric. related <sup>2/</sup>	Nonagric. related
<b>Floodwater</b>						
Crop & pasture						
Other agricul.						
Residential						
Commercial						
Other						
<b>Subtotal</b>						
<b>Sediment</b>						
Overbank deposition						
Reservoirs						
Other (list important items)						
<b>Subtotal</b>						
<b>Erosion</b>						
Flood plain scour						
Streambank						
Gullies						
<b>Subtotal</b>						
<b>Grand total</b>						

<sup>1/</sup> Price base \_\_\_\_\_.

<sup>2/</sup> Agriculture-related damage includes damage to rural communities.

<sup>3/</sup> Includes effects of required land treatment measures.

<sup>4/</sup> Costs and benefits for associated onfarm land treatment have been netted out.

Month/year

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## Instructions for Table 5a, Estimated Average Annual Watershed Protection Damage Reduction Benefits

### 1. Onsite

- a. Crop stand damage—dollar value of benefits attributed to a reduction in crop stand damage caused by erosion or sedimentation.
- b. Land voiding and depreciation—dollar value of benefits attributed to a decrease in land voiding and depreciation.
- c. Water conservation—dollar value of benefits attributed to onsite savings in water.
- d. Maintaining productivity—dollar value of benefits attributed to maintaining productivity over the evaluation period.
- e. Other—dollar value of other types of onsite benefits.
- f. Onsite subtotal—total dollar value of onsite benefits in average annual values.

### 2. Offsite/public

- a. Maintaining productivity—dollar value of benefits attributed to maintaining productivity for future generations. This is that part of the maintaining-productivity benefits that occurs after the end of the evaluation period.
- b. Sediment damages—dollar value of benefits attributed to offsite sediment reduction.
- c. Property values—dollar values of benefits attributed to an increase in values of offsite properties. Care must be taken to avoid double-counting when such benefits are evaluated.
- d. Water treatment—dollar value of benefits attributed to a reduction in costs of treating M&I water.
- e. Recreation—dollar value of benefits attributed to an increase in recreation quality or quantity.
- f. Fish and wildlife—dollar value of benefits attributed to an increase in fish and wildlife values.
- g. Water conservation—dollar value of benefits attributed to offsite savings in water.
- h. Other—dollar value of other types of offsite benefits.
- i. Offsite subtotal—total dollar value of offsite or public benefits, or both, in average annual values.
- j. Grand total—total annual benefits in dollars (should equal the sum of onsite and offsite/public).

**Figure 504-17 Table 5a**—Estimated Average Annual Watershed Protection Damage Reduction Benefits

**Table 5a, Estimated Average Annual Watershed Protection Damage Reduction Benefits**  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

Item	----- Damage reduction benefit average annual -----	
	Agriculture-related	Nonagricultural-related
<b>Onsite</b>		
Crop stand damage		
Land voiding and depreciation		
Water conservation		
Maintaining productivity		
Other		
<b>Subtotal</b>		
<b>Offsite/Public</b>		
Maintaining productivity for future generations		
Sediment damages		
Property values		
Water treatment		
Recreation		
Fish and wildlife		
Water conservation		
Other		
<b>Subtotal</b>		
<b>Grand total</b>		

<sup>1/</sup> Price base \_\_\_\_\_.

<sup>2/</sup> Use other explanatory footnotes as needed.

Month/year

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## Instructions for Table 6, Comparison of NED Benefits and Costs

Table 6 (fig. 504–18) is used to show the estimated average annual benefits and costs and the benefit-cost ratios for project measures. The following instructions are provided for further clarification:

1. List measures, singly or in groups, as used for evaluation purposes. Use the same groupings of measures in Tables 4 and 6 (figs. 504–15 and 504–18).
2. Table 6 should show only NED benefits. Damage reduction benefits should agree with those in Tables 5 and 5a (figs. 504–16 and 504–17).
3. Enter the appropriate average annual benefit. All costs and benefits accruing to accelerated land treatment to protect the soil resource base for sustained productivity, to conserve water, to improve water quality, and to reduce sediment damage are to be shown for each evaluation unit for the land treatment part. The required land treatment costs and benefits upstream of dams and channel improvements are to be shown with the structural evaluation unit. If the associated land treatment benefits and costs have not been netted out of the analysis, they should also be shown

with the structural evaluation unit. Both benefits and costs are to be on the same price base and evaluation period. Unemployed labor benefits will be those stemming from the use of unemployed and underemployed labor.

4. Include only the column headings necessary to show the project benefits. Include additional or substitute columns to show any other evaluated benefits that are not listed in the sample table. Such benefits must be consistent with the P&G. The nature of these benefits should be described in the narrative. All sustained production benefits and other watershed protection benefits from Table 5a should be reported under either the “Other economic effects” column or under the title of “Maintaining productivity” if that is the only category of benefits.
5. Enter the average annual cost for each evaluation unit. These figures should agree with those in Table 4.
6. Enter the relationship of benefits to costs, with costs as unity or 1. Express the ratio to the nearest tenth.
7. If a benefit-cost ratio is less than unity, add a footnote referring the reader to the rationale for plan selection.

**Figure 504-18 Table 6**—Comparison of NED Benefits and Costs

**Table 6, Comparison of NED Benefits and Costs**  
(Name of Watershed), (State)  
(Dollars) <sup>1/</sup>

Evaluation unit	Agriculture-related						Nonagricultural			Recreation	M&I water supply	Unemployed labor	Other econ. effects	Average annual benefits	Average annual costs <sup>3/</sup>	Benefit cost ratio
	Damage reduction			Intensification			Res.	Com.	Other							
	FP	Ir.	Dr. <sup>2/</sup>	FP	Ir.	Dr.										
<b>Land treatment</b> – acres																
Evaluation unit 1																
Evaluation unit 2																
<b>Reaches 1 to 6</b>																
Multi-purpose channel, dam, etc.																
Land treatment, req.																
Land treatment, assoc.																
<b>Reaches 7 &amp; 8</b>																
Multi-purpose channel																
<b>Total</b>																<b>x.x:1.0</b>

<sup>1/</sup> Price base \_\_\_\_\_.

<sup>2/</sup> Amortized costs of \$\_\_\_\_\_ and benefits of \$\_\_\_\_\_ for onfarm associated measures are not included.

<sup>3/</sup> From Table 4.

Month/year

### 504.41 List of preparers

The list of preparers will include the key SCS personnel on the planning staff, state staff, and the area and field office staffs who were directly responsible for significant input in preparing the watershed plan and environmental impact statement. In addition, consultants, individuals, and other agency personnel should be listed if they made significant input. In some cases it may be appropriate to list the agency or firm that provided the input rather than the individuals.

The list should include the person's name, present title, education, experience, employer, and other pertinent qualifications (publications, professional license) as shown in figure 504-19.

Include a brief description of the SCS state staff and NTC review process that was used. A sample description follows:

“The draft watershed plan and environmental impact statement was reviewed and concurred in by state staff specialists having responsibility for engineering, soils, agronomy, range conservation, biology, forestry, and geology. This review was followed by review of the document and supporting data by the SCS (North-east, Midwest, South, or West) National Technical Center. A similar review was also provided by U.S. Forest Service personnel.”

**Figure 504-19** Example list of preparers

Name	Present title (time in job-yrs)	----- Education ----- degree	----- cont. educ.	Experience titles & time in job-yrs	Other (licenses, etc.)
<b>SCS Water Resources</b>					
<b>Planning Staff</b>					
John Black	Staff leader – 9	BS, Ag Eng	Wildlife mgmt Water res. eng Computer sci	Hydrologist – 9 Design eng – 2 Project eng – 2	PE registration
Larry Jones	Ag economist – 9	BS, MS Ag Econ	Computer sci	Dist Cons – 10 Soil Cons – 5	
<b>SCS State Office Staff</b>					
Mary Green	State biologist – 5	BS, MS, Biol	Wildlife mgmt	Area staff biol – 5 Soil Cons – 5	
<b>FWS Area Office</b>					
Bill Gray	Fisheries biol – 5	BS, Biol	Fisheries mgmt	Dist biol. – 5 MO DNR – 6	
<b>State University Chemistry Dept.</b>					
Bob Brown	Head of dept – 4	BS, Chem MS, Chem PhD, Org Ch	Water quality	Asst Prof – 8 Associate – 7	List of papers xxxx xx xxxx xxxx xx xxxx

The draft watershed plan and environment impact statement was reviewed and concurred in by state staff specialists having responsibility for engineering, soils, agronomy, range conservation, biology, forestry, and geology. This review was followed by review of the document and supporting data by the South National Technical Center. The NTC concurred in the technical aspects of the plan and EIS.

## 504.42 Closing pages

### (a) References

This section should provide sources of information contained in the document along with numbers corresponding to appropriate reference numbers in the text. The SCS studies can be covered by one group reference early in the document. If supporting data are incorporated by reference, include information on how the reader can arrange to review it. Material based on proprietary data which is not available for review may not be incorporated by reference (40 CFR 1502.21).

### (b) Index

This section should list key words, phrases, or sub-headings along with appropriate page numbers. Examples of listings include alternatives, archeological resources, installation costs, land treatment, mitigation, National Economic Development Plan, operation, maintenance, replacement, plan elements, sedimentation, and water quality.

## 504.43 Appendixes

### (a) Appendix A

This appendix contains the letters and oral comments received on the draft plan. This item will be included in both the draft and final plans. However, add the following on the draft: "To be included in final environmental impact statement." Letters are not required to be included when an EA is prepared unless they include significant comments.

### (b) Appendix B, Support maps (as appropriate)

(1) **Recreational development map**—If one or more recreational developments are planned as a project purpose, a map or sketch is included to show the general layout of each development. It should show such pertinent features as

- the boundaries of the development,
- purchase area boundaries,
- the dam and emergency spillway,
- the surface area of the recreational pool,
- the high water line of the reservoir, and
- the location and kind of principal use areas (picnicking, camping, bathing, parking, boat ramps) and the access roads.

An example of a recreation development map is shown at the end of this part of the manual.

(2) **Urban flood plain map**—Where existing or likely future urban or built-up areas are affected by the project measures, maps will be included to show those areas that will be flooded by a 100-year event and 500-year event, if significant, with and without the recommended plan. Other flood lines may be included as appropriate. A recent aerial photograph is preferred as the base. The map should be referenced in the discussion of effects. An example of this map is shown at the end of this part of the manual.

(3) **Breach inundation map**—This map is required for all SCS inventory dams and levees. For class "C" dams and class "I" dikes, detailed maps should be similar to the urban flood plain maps. If other dams and dikes are involved, they should be clearly described by the use of maps, by narrative description, or both. Information shown on the map should be the same as specified in the Emergency Action Plan outlined in the Operation and Maintenance Manual. A breach inundation map is shown at the end of this part of the manual.

### (c) Appendix C, Investigations and analyses

The purpose of the Investigation and Analyses Report is to present information that supports the formulation, evaluation, and conclusions of the watershed plan. The report is required for all plans and is to be included as an appendix.

The report should be organized under appropriate headings, such as project formulation, cost allocation, engineering, biology, hydrology, geology, land use, water quality, economics, or cultural resources.

The procedures/techniques, assumptions, and the scope and intensity of the investigations for each subject should be described in sufficient detail so that a reader not familiar with the watershed or its problems can form an opinion on the adequacy of the plan. The information should supplement and not replace or duplicate information contained in the plan. Information of a routine nature, such as how surveys are made or the kind of maps used, is not necessary unless something unusual about the study requires their inclusion to support the decisions made. Likewise, methods, procedures, or criteria should be identified,

but need not be discussed if they are covered in national correspondence, handbooks, manuals, technical releases, or other such documents. A discussion of the intensity of study is desirable when it reflects the reliability of results or the extent that studies have been completed and will not have to be expanded upon during the operation stage.

A summary of the incremental analysis for each evaluation unit in the NED and recommended plans should be included. This should be displayed in a table such as that shown in figure 504–20.

The report should also discuss any significant physical, economic, or environmental interactions between the recommended plan and any existing or planned Federal or non-Federal projects. (If such interactions are a significant factor in choosing among alternatives, this discussion should go in the “Alternatives” section rather than here. In that case, the interactions of each alternative, not just the recommended plan, should be described.)

Include a note showing annualized benefits and costs over the entire period of analysis and the benefit-cost ratio.

Consideration should be given to displaying information concerning watershed protection in a Conservation Effects for Decisionmaking format. This could help accelerate implementation by providing a link with the Field Office Technical Guide.

Include a table, Effects of the Recommended Plan on Resources of National Recognition (fig. 504–21). This table is required by P&G 1.8.2 and is used to display

the effects of the plan on particular types of resources that are recognized by certain Federal policies. No other types of information are to be added. All the items shown should be included.

At times, State agencies, consultants employed by the SLO, or agencies from departments other than those of the Department of Agriculture conduct certain investigations, submit reports, and make recommendations. If this is done, the agency or consultant should be identified with the study. This is generally associated with the investigations for recreation, water quality, fish and wildlife, municipal and industrial water supply, or any other category.

**(d) Other appendixes—supporting information**

This section should be used rather than the body of the document if tabular or other supporting data are needed to make a point. However, extensive lists in any part of the plan are to be avoided whenever possible. They should be confined to the supporting documentation.

**(e) Appendix, project map (last appendix)**

A color project map will be prepared to show the location of important project measures and the location and extent of important watershed conditions that will be affected by the works of improvement to be installed. The map should show the location and kind of measures, watershed areas above structures that have floodwater retarding capacity, and benefited areas. An example is located at the end of this part of the manual.

**Figure 504–20** Summary of incremental analysis for evaluation units

Alternative	Average annual benefits	Average annual cost	Average annual net benefits
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The project map should include, where appropriate, the boundaries of urban areas and public lands, such as State or National forests, grazing districts, or military reservations. Additional information, such as archeological and historic sites, important farmlands, and stream reaches, may also be included. Care should be taken so that the project map does not become cluttered and unclear. Additional maps may be used to show these or other features.

The project map should be large enough to show benefited areas and project features. Colors will be standard for all project maps. The map should be prepared so that it can be extended for easy reference while the plan is being reviewed.

**Figure 504-21** Example table—Effects of the recommended plan on resources of National recognition

### Effects of the Recommended Plan on Resources of National Recognition

Types of resources	Principal sources of National recognition	Measurement of effects
Air quality	Clean Air Act, as amended (42 U.S.C. 7401 et seq.)	Enter area, in square miles, where State air quality classifications would change for each affected classification.
Areas of particular concern within the coastal zone	Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 et seq.)	Enter gains & losses in appropriate units.
Endangered & threatened species critical habitat	Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)	Enter area of each critical habitat type gained & lost, in acres.
Fish & wildlife habitat	Fish and Wildlife Coordination Act (16 U.S.C. Sec. 661 et seq.)	Enter area of each habitat type gained & lost, in acres.
Flood plains	Executive Order 11988, Flood Plain Management	Enter area gained & lost, in acres.
Historic & cultural properties	National Historic Preservation Act of 1966, as amended (16 U.S.C. Sec. 470 et seq.)	Enter number & type of National Register (listed or eligible) properties affected.
Prime & unique farmland	CEQ Memorandum of August 1, 1980: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act, Farmland Protection Policy Act of 1981.	Enter area of each farmland type gained & lost, in acres.
Water quality	Clean Water Act of 1977 (33 U.S.C. 1251 et seq.)	Enter length in miles for water courses, and area in acres for water bodies, where State water classifications would change for each affected classification.
Wetlands	Executive Order 11990, Protection of Wetlands; Clean Water Act of 1977 (33 U.S.C. 1251, et seq.) Food Security Act of 1985.	Enter area of each wetland type gained & lost, in acres.
Wild & scenic rivers	Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271 et seq.)	Enter length of each river type gained & lost, in miles.

**Note:** If a type of resource is not present in the planning area, enter "Not present in planning area." If a type of resource is not affected, enter "No effect."



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## **Subpart 504E Exhibits**

**Flood plain map—100-year and 500-year events**

**Recreational development map**

**Breach inundation map**

**Project map**

**Problem Location Map**

**Project map—Watershed protection project**

