

SEPTEMBER 24, 1986 VERSION

THESE WORK ITEMS WERE DEVELOPED TO HELP NEW ECONOMISTS IDENTIFY THINGS THAT NEED TO BE ACCOMPLISHED, AND REMIND EXPERIENCED ECONOMISTS OF STEPS NEEDED, TO EVALUATE A PROJECT

URBAN FLOOD

200AG PRELIMINARY
PROJECT EVALUATION

STAFF INFORMATION ABOUT A POTENTIAL PROJECT HAS BEEN RECEIVED. PROJECT POTENTIAL IS DETERMINED BY THE STAFF ACCESSING THE FOLLOWING:

- A. IDENTIFY THE RESOURCE PROBLEMS
 - 1. QUANTIFY PROBLEMS
 - 2. DETERMINE IF PROBLEM FITS PURPOSE LISTED UNDER PL-566 (URBAN FLOOD, AG. FLOOD, WATERSHED PROTECTION, IRRIGATION, ETC.)
 - 3. DETERMINE IF PROJECT CAN BEST BE SOLVED UNDER THE PL-566 PROGRAM
 - 4. DETERMINE POTENTIAL FOR PROJECT ECONOMIC FEASIBILITY
- B. IDENTIFY OBJECTIVES OF LOCAL PEOPLE AND DETERMINE POTENTIAL SPONSORS
 - 1. COMPARE SPONSOR OBJECTIVES TO PROGRAM REQUIREMENTS
 - 2. DETERMINE RANGE OF ALTERNATIVES THAT ARE SOCIALLY ACCEPTABLE
- C. ASSIST IN PREPARING A PRELIMINARY REPORT AND IF PROJECT PLANNING CONTINUES, USE THE FOLLOWING WORK ITEMS TO GUIDE THE ECONOMIC ANALYSIS

201UR DEVELOP A STUDY
PLAN, ECONOMICS PORTION.

- A. LIST IN TIME SEQUENCE ALL ECONOMIC WORK ITEMS NEEDED TO SOLVE THE PROBLEMS IDENTIFIED IN THE PROJECT. USE THE WORK ITEMS DESCRIBED BELOW. ADD AND DELETE WORK ITEMS TO MAKE THE PLAN OF WORK SPECIFIC TO THE PROJECT BEING PLANNED. COORDINATE WITH APPROPRIATE STAFF AND TSC ECONOMISTS AS NEEDED. (BEGINNING OF POST APPLICATION PLANNING 502.31(A) NWSM)
- B. DESCRIBE PROCEDURES FOR ACCOMPLISHING EACH WORK ITEM WITH WORK DAYS REQUIRED. PROVIDE TO STUDY LEADER.
- C. OBTAIN COPY OF THE OVERALL SCHEDULE AND USE IT TO SCHEDULE THE ECONOMIST WORK ITEMS ON DESK CALENDAR, INDIVIDUAL ANNUAL PLAN OF OPERATIONS OR STATE ANNUAL PLAN OF OPERATIONS.

202UR ASSEMBLE BASIC STAFF
RESOURCE DATA

- A. ASSEMBLE ON A WATERSHED OR COUNTY BASIS AS APPLICABLE. GATHER ONLY DATA THAT IS USEFUL FOR THE PROJECT EVALUATION AND NARRATIVE
 - 1. BASIC ECONOMY OF THE AREA
 - A. POPULATION- BOTH RURAL AND URBAN, AGE, EDUCATION, MINORITIES

- B. EMPLOYMENT BY SECTOR, E.G. AG, MFG.,
COMMERCIAL, ETC.
- C. INCOME
 - (1) RANGE
 - (2) MEDIAN
 - (3) COMPARE TO STATE AND NATION
- D. FARM AND RANCH ENTERPRISES
 - (1) TYPE- DAIRY, BEEF, SPECIALIZED,
CASH CROP, ETC.
 - (2) SIZE

ER.

(3) NUMB

(4) TENURE

(5) AVERAGE VALUE OF BUILDINGS

E. OFF-FARM EMPLOYMENT

(1) NUMBER OF DAYS

(2) KINDS, IF KNOWN

- 2. PROJECT BASE MAP.
- 3. SOILS INFORMATION
- 4. DRAINAGE AREA
- 5. COUNTY MAPS
- 6. AERIAL MOSAICS
- 7. WATERSHED LAND USE (PRESENT AND FUTURE)
- 8. WATER AND LAND RESOURCE PROBLEMS
- 9. PAST FLOOD EVENTS (DATES, BENCHMARKS, EXISTING DAMAGE SURVEYS, PHOTOS, VIDEOS)
 - A. MOST RECENT
 - B. LARGEST (ATTEMPT TO DELINEATE FLOOD BOUNDARIES.
 - C. SIGNIFICANCE OF LARGE FLOODS COMPARED TO SMALLER INFREQUENT FLOODS

SOURCE: PUBLISHED SOIL SURVEYS, AERIAL PHOTOS, CITY & COUNTY DATA BOOK, AG. CENSUS, STATE AG. STATISTICS, ONSITE FIELD EXAMINATION, FLOOD DAMAGE REPORTS, APPLICATION FOR ASSISTANCE, AND OTHER SUCH SOURCES.

B. OTHER DATA: (MOST RECENT PRICES AND INTEREST TO BE USED IN PLAN.)

- 1. PRICE DATA: EHWR 620-C
- 2. INTEREST RATES EHWR 620.02 (C)
- 3. EVALUATION PERIOD EHWR 620.02 (D)

SOURCE: NATIONAL BULLETINS

203UR CHOOSE ONE OF HY PROCEDURES TO USE FOR EVALUATION

- A. FREQUENCY METHOD (PREFERRED BY P&G)
 - 1. DEFINED CHANNEL AND VALLEY
 - A. CALCULATE DAMAGES BASED ON DEPTH
 - B. CALCULATE DAMAGES BASED ON DURATION
 - 2. OVERLAND FLOW
 - A. CALCULATE DAMAGES BASED ON AVERAGE FLOOD PATH

B. HISTORICAL SERIES METHOD (P&G LIMITS ITS USE) NEED FREQUENT FLOODING AND MAJOR DAMAGE TO CROPS

SOURCE: EHWR 621-A

204UR COMPUTER PROGRAMS

- A. DETERMINE POTENTIAL FOR USE OF COMPUTER PROGRAMS
 - 1. URB I-CALCULATE FLOODWATER DAMAGES TO BUILDINGS AND CONTENTS

205UR PROBLEM AREA

- A. AERIAL PHOTOS OR MOSAICS OR OTHER SUITABLE BASE

LC TION

AND FLOOD PLAIN PROFILE SHOWING ELEVATION OF SIGNIFICANT PROPERTIES, PROBLEM AREAS, (FLOOD PLAINS), REACHES, AND CROSS SECTIONS.

B. DETERMINE IF FLOOD DAMAGES WILL COVER ALL THE AREA OR IF A SAMPLE WILL BE USED.

HY

C. DEFINE NUMBER AND LOCATION OF REACHES IN ORDER TO PROPERLY STRATIFY RESOURCE PROBLEMS FOR ANALYSIS. THINGS TO CONSIDER:

1. ROAD CROSSINGS IN THE FLOODPLAIN
2. HEIGHT OF ROADS CROSSING THE FLOODPLAIN

RA INSTRUCTIONS

3. OTHER NATU

4. HIGH DAMAGEABLE PROPERTIES

5. SIMILIAR DAMAGE VALUES AND RATES

206UR INVENTORY HY
FLOODPLAIN CHARACT-
ERISTICS

- A. LIST INHERENT CHARACTERISTICS OF FLOODPLAIN
1. DESCRIBE FLOOD SITUATION, HIGH HAZARD AREA, DEPTHS OF FLOODING, VELOCITY, DURATION, DEBRIS CONTENT
 2. DESCRIBE AND SHOW AREAS OF FLOODWAY OR NATURAL STORAGE THAT IF URBANIZED OR STRUCTURALLY PROTECTED WOULD AFFECT NATURAL STORAGE, VELOCITY, STAGE, OR FLOOD FLOWS ELSEWHERE.
 3. SHOW AREAS WITH NATURAL AND BENEFICIAL VALUES SUCH AS OPEN SPACE, RECREATION, WILDLIFE, AND WETLANDS.
 4. SHOW TRANSPORTATION SITES (RAILROADS, HIGHWAYS, PIPELINES, AND WATER-ORIENTED TRANSPORTATION.
 5. LIST OTHER ATTRIBUTES OF FLOODPLAIN
- B. PHYSICAL CHARACTERISTICS THAT ARE PERTINENT SUCH AS SLOPE, SOIL TYPES, WATER TABLE, MINERAL DEPOSITS, WASTE DISPOSAL, AND WATER SUPPLY
- C. AVAILABLE SERVICES SUCH AS TRANSPORTATION, POWER, SEWERAGE, WATER, LABOR, ACCESS TO MARKETS AND PROXIMITY TO FLOODPLAIN
- D. SHOW EXISTING ACTIVITIES IN THE FLOODPLAIN, NUMBER OF ACRES, DENSITY, AGE, AND VALUE OF STRUCTURE FOR EACH ACTIVITY TYPE BY FLOOD HAZARD ZONE.

REFERENCE: P&G 2.4.6

207UR PROJECT ECON-
OMIC ACTIVITIES IN
AFFECTED AREA

- A. ESTIMATE FUTURE POPULATION, PERSONAL INCOME, RECREATION DEMAND, MANUFACTURING, EMPLOYMENT, AND OUTPUT. SHOW BASIS FOR PROJECTIONS.

REFERENCE: P&G 2.4.7

208UR ESTIMATE
POTENTIAL LAND USE

- A. ESTIMATE POTENTIAL LAND USE WITHIN AFFECTED AREA BASED ON WORK ITEM 208UR AND SIMILAR AREAS

REFERENCE: P&G 2.4.8

209UR PROJECT LAND
USE

- A. ALLOCATE LAND USE DEMAND BASED ON WORK ITEM 208UR AND 209UR BETWEEN FLOODPLAIN AND NON-FLOODPLAIN LANDS
1. ALLOCATE BASED ON FLOODPLAIN CHARACTERISTICS, CHARACTERISTICS SOUGHT BY POTENTIAL OCCUPANTS, AND AVAILABILITY OF SOUGHT-AFTER CHARACTERISTICS IN THE NON-FLOODPLAIN PORTIONS OF THE AFFECTED AREA.
 2. SHOW FLOODPLAIN HAS SIGNIFICANT ECONOMIC ADVANTAGE TO USERS COMPARED TO LAND OUTSIDE OF THE FLOODPLAIN. SHOW THIS ECONOMIC ADVANTAGE TO BE GREATER THAN POTENTIAL FLOOD LOSSES, POTENTIAL FLOODPROOFING COSTS, AND OTHER

HAZARDS.

REFERENCE: P&G 2.4.9

210UR DETERMINE
EXISTING FLOOD
DAMAGES

HY

DEVELOP PRESENT AVERAGE ANNUAL DAMAGES USING THE
WORK ITEMS 212-217

211UR DETERMINE
RESIDENTIAL DAMAGES

A. INTERVIEW RESIDENTS IN FLOODPLAIN TO DETERMINE
CURRENT RESIDENTIAL DAMAGES USING FORM SCS-ECN-002
IF INTERVIEW INFORMATION IS INADEQUATE, DO SECTION

B, C, AND THE COMPAR

IS PART OF D. CONSULT THE

NTC ECONOMIST FOR AN ADEQUATE SAMPLE SIZE.

1. DETERMINE PROPERTY VALUE
2. DETERMINE LAND VALUE
3. DETERMINE STRUCTURAL VALUE
4. DETERMINE CONTENT VALUE & DAMAGE BY DEPTH

B. OBTAIN DEPTH DAMAGE FACTORS FROM VARIOUS AGEN-
CIES FOR DIFFERENT TYPES OF CONSTRUCTION FOR
STRUCTURES AND CONTENTS

C. OBTAIN DEPTH DAMAGE FACTORS FROM OTHER SCS
FLOOD PROJECTS FOR STRUCTURES AND CONTENTS

D. COMPARE DEPTH DAMAGE FACTORS OF OTHER AGENCIES
AND OTHER SCS FLOOD PROJECTS TO THE DAMAGES OB-
TAINED FROM INTERVIEWS

E. MAKE ADJUSTMENTS TO EXISTING DEPTH DAMAGE
FACTORS TO FIT THE PROJECT FOR EACH TYPE OF CON-
STRUCTION.

1. DEVELOP FACTORS FOR STRUCTURAL DAMAGE
VERSUS VALUE OF STRUCTURE
REFERENCE: MARSHALL & SWIFT, ASSESSORS

2. DEVELOP FACTORS FOR CONTENT DAMAGE VERSUS
VALUE OF STRUCTURE

HY F. DEVELOP A MAP SHOWING FLOODPLAIN, CROSS SEC-
TIONS, 100 YEAR AND 500 YEAR FLOOD LINES, AND
TABLES LISTING FIRST FLOOR ELEVATION OF EACH
PROPERTY, ELEVATION WATER ENTERS THE STRUCTURE
AND GROUND ELEVATION

G. CALCULATE DAMAGES FOR WITHOUT PROJECT BY
FREQUENCY FOR EACH PROPERTY

1. CALCULATE DAMAGES TO STRUCTURES
2. CALCULATE DAMAGES TO CONTENTS

H. SUM UP DAMAGES FOR EACH SIZE STORM
FOR THE RESIDENTIAL PROPERTIES

METHOD: EHWR 623

212UR DETERMINE
COMMERCIAL AND
INDUSTRIAL DAMAGES

A. INTERVIEW ALL COMMERCIAL AND INDUSTRIAL
BUSINESSES TO DETERMINE EXISTING DAMAGES USING
FORM SCS-ECN-003. DUE TO THE UNIQUENESS OF THESE
DAMAGES PLACE GREATER EMPHASIS ON THE INTERVIEW
DATA THAN SECONDARY DATA FROM OTHER SOURCES. IF
THE NUMBER OF BUSINESSES IS INADEQUATE DO PARTS B,
C AND THE COMPARISON PART OF D. CONSULT THE NTC
ECONOMIST FOR ASSISTANCE ON DETERMINING AN ADEQUATE
SAMPLE SIZE.

1. DETERMINE PROPERTY VALUE
2. DETERMINE LAND VALUE
3. DETERMINE STRUCTURAL VALUE
4. DEVELOP FACTORS FOR STRUCTURAL DAMAGE
VERSUS VALUE OF STRUCTURE
5. DETERMINE CONTENT VALUE & DAMAGE VALUE BY
DEPTH

6. DEVELOP FACTORS FOR CONTENT DAMAGE VERSUS
VALUE OF STRUCTURE B. OBTAIN DEPTH DAMAGE

FACTORS FROM VARIOUS AGEN-

CIES FOR DIFFERENT TYPES OF BUSINESSES FOR STRUC-
TURES AND CONTENTS

C. OBTAIN DEPTH DAMAGE FACTORS FROM OTHER SCS
FLOOD PROJECTS FOR DIFFERENT TYPES OF BUSINESSES
FOR STRUCTURES AND CONTENTS

D. COMPARE DEPTH DAMAGE FACTORS OF OTHER AGENCIES
AND OTHER SCS FLOOD PROJECTS TO THE DAMAGES OB-

TAINED FROM INTERVIEW

E. CALCULATE DAMAGES FOR WITHOUT PROJECT BY FREQUENCY FOR EACH PROPERTY FOR EACH SIZE STORM.

1. CALCULATE DAMAGES TO STRUCTURES
2. CALCULATE DAMAGES TO CONTENTS

F. SUM UP DAMAGES BY FREQUENCY FOR THE COMMERCIAL AND INDUSTRIAL PROPERTIES.

METHOD: EHWR 623

213UR DETERMINE
TRANSPORTATION AND
UTILITY DAMAGES

A. INTERVIEW PEOPLE TO DETERMINE DAMAGES TO ROADS BRIDGES, RAILROADS, AND UTILITIES USING FORM SCS-ECN-004

1. SEPARATE DAMAGES BETWEEN FLOOD DAMAGES AND NORMAL MAINTENANCE
2. MAKE SURE DAMAGES REPORTED ARE TOTAL FLOOD DAMAGES AND NOT TEMPORARY REPAIRS OR REPAIRS MADE UP TO A BUDGETED MAXIMUM.
3. CROSS CHECK FLOOD DAMAGE ESTIMATES RECEIVED FROM OFFICIALS WITH PEOPLE LIVING NEAR THE FLOODED AREA TO BE SURE ALL ITEMS ARE INCLUDED.

B. DETERMINE CONDITION OF THE FACILITY AT TIME OF FLOODING. MAKE ADJUSTMENTS TO DAMAGES IF FACILITY WAS REPLACED BY A BETTER STRUCTURE, ONE LESS SUBJECT TO FLOODING, OR IF FACILITY WAS WORN OUT

C. OBTAIN DESIGN LIFE OF STRUCTURES FROM PUBLIC AGENCY

D. AN ALTERNATE WAY OF ESTIMATING ROAD AND BRIDGE DAMAGE IS TO ESTIMATE THE COST TO RESTORE TRANSPORTATION SERVICE

E. CALCULATE DAMAGES FOR EACH FACILITY FOR WITHOUT PROJECT BY FREQUENCY.

F. SUM UP DAMAGES BY FREQUENCY FOR THE TRANSPORTATION AND UTILITY DAMAGES.

METHOD: EHWR 623

214UR OTHER URBAN
DAMAGES

A. ESTIMATE ANY OTHER DAMAGES THAT HAVE NOT BEEN SUMMARIZED.

1. POWER PLANT FLOODED CAUSING POWER OUTAGES AND DAMAGES TO FOOD IN FREEZERS OFF SITE.
2. EXTRA COST TO VEHICLES FOR EXTRA MILES TRAVELED AS A RESULT OF BRIDGE DAMAGES
3. COST OF TRAFFIC ROUTING AND SIGNING FOR BRIDGE AND ROAD DAMAGE
4. EXTRA COST OF DAMAGED GOODS DISPOSAL

METHOD: EHWR 623

215UR LOSS OF INCOME
DAMAGES

A. LOSS OF WAGES OR NET PROFITS TO BUSINESS AS A RESULT OF FLOODING NEED TO BE ESTIMATED. WHEN INTERVIEWING BUSINESSES INCLUDE ONLY THE DAMAGE THAT WAS NOT POSTPONED OR TRANSFERRED TO OTHER

ESTABLISHMENTS.

REFERENCE: P&G 2.4.2

216UR EMERGENCY
COSTS

A. INTERVIEW POLICE AND PUBLIC OFFICIALS TO DETERMINE EXPENSES OF EVACUATION, REOCCUPATION, FLOOD FIGHTING, AND DISASTER RELIEF.

1. ALLOCATE COSTS BY SEVERITY OF PROBLEM OR EFFORT REQUIRED.

REFERENCE: P&G 2.4.2

217UR PROJECT FUTURE
FLOOD DAMAGES

A. IF FUTURE DEVELOPMENT IS PLANNED IN THE PROJECT AREA USE WORK ITEMS 208 AND 210 TO ESTIMATE THE ASSOCIATED DAMAGES THAT WILL OCCUR IN THE FUTURE AND DISCOUNT TO THE BASE YEAR.

1. ESTIMATE THE NUMBER AND SIZE OF PHYSICAL UNITS WITH POTENTIAL TO USE THE FLOODPLAIN
2. DETERMINE WHETHER EXISTING STRUCTURES WILL CONTINUE TO OCCUPY THE FLOODPLAIN
3. ESTIMATE THE FUTURE VALUE OF THE UNITS. INCREASES MAY RESULT FROM EXPANSION OF FACILITIES OR NEW CONSTRUCTION.

A. OBSERS CAN BE USED TO ESTIMATE PER CAPITA INCOME INCREASES AND RESULTING INCREASES IN VALUE OF CONTENTS

B. LIMIT VALUE OF CONTENTS TO MAXIMUM OF 75 PERCENT OF STRUCTURE AND DON'T PROJECT INCREASE IN VALUE BEYOND 50 YEARS. A USUAL VALUE OF CONTENTS VERSUS STRUCTURES IS 40 TO 50 PERCENT.

4. DETERMINE THE SUSCEPTIBILITY TO DAMAGE FOR THE UNITS. CONSIDER STREAM CHARACTERISTICS, LOCATION, TYPE OF FLOOD PROOFING, AND TYPE OF CONSTRUCTION.

REFERENCE: P&G 2.4.11

B. ESTIMATE FUTURE INCOME LOSSES BASED ON PROJECTED LAND USE NOT INCREASES IN PHYSICAL LOSSES.

REFERENCE: P&G 2.4.11

C. ESTIMATE FUTURE EMERGENCY COSTS BASED ON THE OCCUPANCY OF THE FLOODPLAIN NOT VALUE OF DEVELOPMENT OR PHYSICAL LOSSES.

REFERENCE: P&G 2.4.11

218UR DETERMINE
OTHER COSTS OF USING
FLOODPLAIN

A. ESTIMATE COSTS OF FLOODPROOFING

1. ESTIMATE FOR FUTURE BUILDING
2. ESTIMATE FOR EXISTING STRUCTURES FOR STATES THAT REQUIRE IT

B. ESTIMATE INCREASED COSTS OF NATIONAL FLOOD INSURANCE PROGRAM

1. CONTACT FIA TO GET ESTIMATE OF INCREASED ADMINISTRATION COSTS

REFERENCE: P&G 2.4.12

219UR COLLECT LAND
MARKET VALUE AND RE-
LATED DATA

THIS WORK ITEM NEEDS TO BE DONE BY A QUALIFIED REAL ESTATE APPRAISER.

A. DETERMINE IF LAND USE WILL CHANGE WITH AS COMPARED TO WITHOUT PROJECT

1. LAND USE IS DIFFERENT

A. ESTIMATE VALUE OF FLOOD FREE LAND

B. ESTIMATE VALUE OF FLOODPLAIN LAND

C. ESTIMATE THE CHANGE IN NET
INCOME

D. ESTIMATE THE ENCUMBERED VALUE
OF LAND IF EVACUATION IS AN
ALTERNATIVE

2. LAND USE IS THE SAME

A. ESTIMATE THE CHANGE IN LAND
VALUE

ESTIMATE THE CHANGE IN NET

B.

INCOME
REFERENCE: P&G 2.4.13

220UR ESTIMATE LOCATION BENEFITS

THIS IS THE PREFERRED METHOD OF EVALUATING UNDEVELOPED LAND THAT WILL HAVE A CHANGE IN USE DUE TO PROJECT ACTION.

- A. DETERMINE IF FUTURE DEVELOPMENT IS CHEAPER IN FLOODPLAIN VERSUS AN ALTERNATE LOCATION
1. DETERMINE IF THERE IS DEMAND FOR ADDITIONAL LAND FOR DEVELOPMENT
 2. DETERMINE FUTURE WITHOUT PROJECT COST OF DEVELOPMENT IN FLOODPLAIN WITH FLOODING
 3. DETERMINE COST OF DEVELOPMENT IN ALTERNATIVE AREA
 - A. INCLUDE ROADS, UTILITIES, DRAINAGE FACILITIES
 4. THE DIFFERENCE IN COST BETWEEN 2 AND 3 IS THE LOCATIONAL BENEFIT.

REFERENCE: P&G 2.4.14
EHWR 623

221UR ESTIMATE PROJECT BENEFITS

REFER TO TABLE 2.4.14 IN P&G TO DETERMINE BENEFITS THAT ARE CLAIMABLE FOR DIFFERENT ALTERNATIVES

222UR DEVELOP ALTERNATIVES

USE ALL COMBINATIONS OF STRUCTURAL AND NONSTRUCTURAL MEASURES TO DEVELOP ALTERNATIVES. USE INCREMENTAL ANALYSIS TO ADD INCREMENTS TO EACH ALTERNATIVE. PARTS OF NONSTRUCTURAL MEASURES SUCH AS FLOODPROOFING SHOULD BE CONSIDERED WITH SMALLER SCALE STRUCTURAL MEASURES SUCH AS 25 YEAR LEVEL OF PROTECTION TO DEVELOP THE NED PLAN. INVESTIGATE RANGES OF PROTECTION FROM A LOW LEVEL TO A HIGH LEVEL OF PROTECTION.

223UR FOR VARIOUS ALTERNATIVES OBTAIN COST OF STRUCTURAL AND NONSTRUCTURAL MEASURES

ESTIMATES ARE MADE BY PLANNING STAFF BASED ON RECENT INSTALLATION EXPERIENCE.

- A. CONSTRUCTION COST - NWSM 501.30H, EHWR 630.01
- B. ENGINEERING SERVICES - NWSM 501.30E
- C. LAND RIGHTS - NWSM 501.30G, EHWR 629
- D. WATER RIGHTS - NWSM 501.30F
- E. PROJECT ADMINISTRATION COST - NWSM 501.30J
- F. RELOCATION COST - NWSM 501.30K

- G. OPERATION, MAINTENANCE AND REPLACEMENT - ESTIMATES MADE BY PLANNING STAFF AND LOCAL SPONSORS BASED ON SIMULATED OR RECENT O&M EXPERIENCES. NWSM 501.30L, EHWR 630.01B
- H. ASSOCIATED COST - NWSM 501.30M, EHWR 630.02
- I. EXTERNAL DISECONOMIES - NWSM 501.300, EHWR 630.01C
- J. NONPROJECT COST - NWSM 501.30P

22 DEVELOP NED
ALTERNATIVE

DO INCREMENTAL ANALYSIS TO ADD STRUCTURAL AND
NONSTRUCTURAL ITEMS TO DEVELOP THE NED PLAN.
DESIGNATE THE NED ALTERNATIVE AND DOCUMENT IN
TABULAR FORM.

METHOD: CONSULT NTC ECONOMIST FOR ASSISTANCE

225UR DEVELOP NED
PORTIONS OF OTHER AL-
TERNATIVES AND DETER-

ASSIST IN SELECTION OF MEASURES FOR EACH ALTERNA-
TIVE PLAN. DETERMINE CONTRIBUTION MADE TO COMPON-
ENT NEEDS. DOCUMENT IN TABULAR FORM WITH APPRO-

TIME CONTRIBUTION OF
CATION AND FILE.
EAL ALTERNATIVE TO
NED COMPONENT NEEDS.

APRIATE NARRATIVE DES

226UR ESTIMATE EM-
PLOYMENT BENEFITS
RESULTING FROM
PROJECT INSTALL-
ATION AND PROJECT
OPERATION AND
MAINTENANCE.

EMPLOYMENT BENEFITS CAN BE CLAIMED IN AREAS OF
UNEMPLOYED OR UNDEREMPLOYED LABOR.
METHOD: EHWR 627

227UR DEVELOP DATA
FOR SWB ACCOUNT.

WHERE NECESSARY DEVELOP A SOCIAL WELL BEING ACCOUNT
TO DISPLAY PROJECT EFFECTS RELEVANT TO DECISION-
MAKERS. USE CENSUS DATA AND OTHER APPROPRIATE
REFERENCES TO DEVELOP INCOME CLASS AND PERCENTAGES
FOR EACH CLASS.

228UR COST ALLO- PE
CATION.

USE COST ALLOCATION WORKSHEET. NWSM 501.31,
EHWR 631

229UR COST SHARING PE

METHOD: NWSM 506.60

230UR DEVELOP NED
DISPLAYS

A. ASSIST STUDY LEADER TO PREPARE FOR PUBLIC MEET-
INGS AND REPORTS, THE NECESSARY MAPS, TABLES, AND
DISPLAYS TO CLEARLY DESCRIBE NED MEASURES AND
EFFECTS: USE DATA FROM COMPLETED WORK ITEMS ABOVE
B. PROVIDE SIGNIFICANT NED EFFECTS FOR THE FOUR
ACCOUNT TABLES AS NEEDED. (INCLUDE TIME FOR
REVISIONS AS A RESULT OF PUBLIC INPUT.)

231UR PREPARE ECON-
OMIC PORTIONS OF THE
PLAN, EIS, AND DOC-
UMENTATION.

A. PREPARE, AS ASSIGNED, ECONOMIC PORTIONS OF THE
PLAN, EIS, ENV. ASSESS. SUMMARY, I&A REPORT, ETC.
B. ASSEMBLE ALL RELEVANT ECONOMIC DOCUMENTATION
IN NOTEBOOKS (PREFERABLY ONE) SUITABLE FOR REVIEW.
REFER TO ORGANIZATION OF DOCUMENTATION CHECKLIST
IN THIS GUIDE.
C. PARTICIPATE IN RESOLVING STATE AND TSC COMMENTS

> KK