DISSERTATION

SPECIFIC DEGRADATION AS FUNCTION OF WATERSHED CHARACTERISTICS AND CLIMATIC PARAMETERS

Submitted by

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In partial fulfillment of the requirements

for the degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

Summer 2003

COLORADO STATE UNIVERSITY

April 15, 2003

WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY BOUBACAR KANE ENTITLED SPECIFIC DEGRADATION AS FUNCTION OF WATERSHED CHARACTERISTICS AND CLIMATIC PARAMETERS BE ACCEPTED IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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ABSTRACT OF DISSERTATION

SPECIFIC DEGRADATION AS A FUNCTION OF WATERSHED CHARACTERISTICS AND CLIMATIC PARAMETERS

Soil erosion and its transport by overland flow involves very complex processes influenced by factors such as climate, watershed drainage area, soil type, topography, vegetation and human activities. Although considerable research has already been done and significant results have been obtained, the prediction of gross erosion, sediment yield and specific degradation (SD) with a great level of accuracy still remains a challenge. In this study, an extensive database covering different climate types throughout continental United States were compiled and used to derive regression equations relating specific degradation with key parameters that were determined through theoretical analysis. New SD relationships were determined at a 95% confidence interval. The database was used to test the accuracy of existing specific degradation relationships. The new obtained relationships were validated using an independent dataset.

The main objectives of this study were:

1) Compile an extensive database on sediment yield and specific degradation;

2) Develop new specific degradation relationships and determine the 95% confidence intervals;

3) Validate the new developed equations using an independent dataset and test the accuracy of other specific degradation relationships found in the literature

Statistical analyses revealed that SD data are log normally distributed with respect to the independent variables.

Using regression analysis, it was possible to derive new SD relationships as a function of a single variable (mean annual rainfall, R, drainage area, A, and slope, S) and as a function of a combination of variables (R and A, and R, A, S, and the vegetation factor, V). The accuracy of the predictions slightly increases as more independent variables are incorporated into the SD equation. The results showed that the equation in which SD is expressed in terms of the four key parameters R, A, S, and V is the most accurate, followed by the equation with R and A. The equation in which SD is expressed in terms of S is the least accurate of all.

The existing equations with R as independent variable are less accurate than the proposed equation. Specifically, with respect to mean SD predictions, the relationships of Langbein and Schumm, Wilson, and Fournier have accuracies in which 76%, 86%, and 24% of the predictions fall within a discrepancy range of $0.5<R<2$ respectively. In contrast, for the same discrepancy range, the accuracy of the new developed equation in which SD is expressed in terms of R is 90%. As of the equations with A as independent variable, all except one overestimate SD by several orders of magnitude. The only equation that has predictions of mean SD lying within $0.5<R<2$ is the one of Fleming with 100%, though 79% of them are with $0.5<R<0.2$, which indicates an slight underestimation. In comparison, using the new

proposed equation, the number of points of mean SD values falling within a discrepancy ratio of $0.5<R<2$ is 100%.

The proposed equations in this study were validated using an independent data set.

It follows that the new developed equations in this study improve significantly the predictions of SD compared with the existing relationships.

The validation of the new equations was completed with a example concerning California Gulch watershed in Colorado.

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ACKNOWLEDGEMENTS

In the Name of Allah, the Infinitely Good, the All-Merciful;

All praise be to Allah, the Lord of the worlds.

I would like to record my gratitude to the Islamic Development Bank (IDB) for providing the funding for this program through the IDB Merit Scholarship for Advanced Technologies.

My deepest gratitude also goes to my adviser Dr. Pierre Julien for his continuous guidance, undivided attention and very helpful financial and academic supports.

I would also like to express my sincere thanks to my committee members Drs. Neil Grigg, James Ruff, and Freeman Smith for their valuable suggestions and assistance throughout the course of my studies at Colorado State University.

I would also like to thank Dr. Rosalia Rojas for providing useful GIS data.

I am indebted to my Company Energie du Mali (EDM) for giving me an extended leave to pursue these doctoral studies.

My sincere thanks also go to my co-workers at Engineering and Hydrosystems, Inc. and particularly to Dr. Annandale, President, for his continuous support and to Steve Blake for providing technical assistance in GIS problems.

Last but not least, my heart-felt gratitude goes to all the members of my beloved family for their patience, permanent support, love and affection.

My deepest thanks also go to my friends for their encouragement and support throughout the course of my studies.

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A	drainage area
A, b	coefficients of the resistance equation
a, b, c	regression coefficients in the specific degradation general equation
A_B	bank erosion
A_G	gully erosion
A_T	annual gross erosion
A_U	upland erosion
C	cropping management factor of the universal soil loss equation
CDF	cumulative distribution function
d_s	sediment size
E	kinetic energy
E	soil loss in Musgrave's equation
f	Weisbach-Darcy friction factor
g	acceleration of gravity
h	flow depth
I	inherent erodibility of the soil in Musgrave's equation
I, i	rainfall intensity
I_{30}	maximum 30-minute rainfall intensity
i_e	excess rainfall intensity
K	soil erodibility factor of the universal soil loss equation
K	total resistance to laminar overland flow
K_0	resistance parameter to laminar overland flow
L	field length factor of the universal soil loss equation

L, l	length of slope
m	mass of the raindrop
m, p	exponents of Musgrave's equation
N	number of measurements of specific degradation
P	conservation practice factor of the universal soil loss equation
P	effective precipitation in Schumm's equation
P_{30}	maximum 30-minute rainfall intensity in Musgrave's equation
q	unit flow discharge
Q_e	watershed size correction factor
q_s	unit sediment discharge
R	discrepancy ratio
R	hydraulic radius
R	mean annual rainfall
Ř	rainfall erosivity factor of the universal soil loss equation
R^2	coefficient of correlation
R_e	Reynolds number
S	field slope factor of the universal soil loss equation
S, s	slope of watershed
S	specific degradation in Schumm's equation
S_0	bed slope
SD	specific degradation
$\overline{SD}$	average specific degradation
SD_{calc}	predicted/calculated specific degradation

SD_{obs}	observed/measured specific degradation
S_{DR}	sediment delivery ratio
S_f	friction slope
t	time
t_e	time of equilibrium
t_r	rainfall duration
$\overline{t_r}$	average rainfall duration
$\overline{u}$	mean flow velocity
u_*	shear velocity
V	vegetation factor
V, v, u	flow velocity
W	field width
x	distance positive in the direction of the flow
x	untransformed variate
y	log transformed variate
$\overline{y}$	mean log transformed variate
Y	sediment yield
Y_r	period of record in years

Greek symbols

α	coefficient of the stage-discharge relationship
α	exponnent in Musgrave's equation
$\alpha,\beta,\gamma,\delta,\varepsilon$	experimental coefficients of the unit sediment discharge equation

β	exponent of the stage-discharge relationship
γ	specific weight of water
Φ	total erosion per unit width
Ψ	dimensionless discharge
λ	ratio of the storm duration to equilibrium time
λ_1	inverse of the average rainfall duration
μ_y	mean of the transformed variate y
ν	kinematic viscosity of water
θ	dimensionless time
ρ	density of water
ρ_s	density of sediment
σ	standard deviation
σ_y	standard deviation of the transformed variate y
τ_c	critical shear stress
τ_0	critical shear stress

CHAPTER I

INTRODUCTION

Soil is one of the most important natural resources available on earth. For centuries, mankind has relied on soil to produce basic needs such as food, fiber and energy. But as the human population grows, so does the world demand for food, thus putting more pressure on soil to produce more crops. As food demand increases, more croplands are being used. The lack of fertile soils has pushed many farmers in developing countries onto sloping lands that gradually lose their topsoil due to excessive agricultural activities. In other areas, farmers have been constrained to extend their activities onto semi-arid regions, which are very vulnerable to wind and water erosion when plowed. Ecologically stable, long-term rotations have been abandoned in favor of continuous cropping of more profitable crops. Over the past decades, as farmers began to lose their topsoil, they have turned to irrigation and fertilization in order to increase productivity. Yet, these techniques have not been able to stop the soil loss. Other techniques such as terracing, crop rotations and fallowing have

produced some results, but they also experienced breakdowns under situations of pressure due to rising demand.

But agriculture is not the only manmade activity that causes soil erosion. Other causes of soil erosion include mining, construction, grazing, etc. Those activities can also provoke extensive environmental damages by removing chemicals from their sites and dumping them into waterways causing major pollution hazards. Agricultural by-products such as nitrogen, phosphorous, pesticides, etc. constitute major environmental hazards. Eroded soil (sediment) can end up in waterways, lakes and reservoirs decreasing the water yield, blocking reservoir outlets, gates and valves and affecting the structural stability of dams and other structures. In the state of Colorado for example, Wohl (1998) lists three categories of sediment hazards: excess of sediment, decrease of sediment, and contamination of sediment. The first category implies that the transport capacity of the channel is not enough to move all of the sediment supplied, which can result in changes in channel pattern such as pools or spawning sites, filling of the channel and overbank flooding, or filling of a reservoir. The second category implies that the channel is capable of transporting more sediment than is being supplied. Consequently, the excess flow energy can provoke channel erosion resulting in bank collapse, bridge pier scour, and other changes. The third category concerns contamination of sediments by materials that can be toxic to humans and aquatic organisms. The contaminants can include agricultural and urban pesticides or mining leachates.

Natural causes of erosion include wind erosion, water erosion through overland flow and river bed and bank erosion, temperature-induced erosion like freeze and thaw cycles, etc. There is a substantial difference between natural erosion caused by wind, water, temperature

and glaciers and human-induced erosion. Natural or geological erosion almost occurs unnoticed as the loss of soil particles is set off by the formation of new soil following a natural process of regeneration. Human activities through agriculture, industrialization and urbanization cause an accelerating erosion process by removing soil particles and nutrients, which can no longer be recovered by the natural soil formation process (Holy, 1980). Some researchers argue that natural erosion sometimes can be more devastating (droughts, avalanches, plants diseases, pests, etc.) than man-accelerated erosion. Moreover, in some situations, man may even slow down erosion (decelerated erosion) by adopting conservation measures. Therefore, they argue, it would not be entirely correct to identify any form of erosion modified by man with accelerated erosion. Based upon this approach, Zachar (1982) suggested a classification based on the intensity of erosion, i.e. benignant erosion and malignant erosion. From this standpoint, he proposed:

1) Natural normal erosion (benignant) and natural abnormal erosion (malignant);

2) Altered accelerated erosion (malignant) and altered decelerated or inhibited erosion (benignant).

As a result of all the factors cited above, soil erosion with its natural consequence of sedimentation has become a major preoccupation for researchers, planners and the society as a whole. A top U.S. Department of Agricultural senior official described the phenomenon in the U.S. alone as "epidemic in proportion" (Bertrand, 1980). In China, Asia Minor, Latin America and Africa, the situation is sometimes even worse. In China, the Upper Yangtze basin constitutes one of the major sedimentation areas in the country. Dingzhong and Tan (1996) found that the specific degradation could be as high as 36,000 metric tons/km^2/year. Sheet and gully erosions have been found to be the main causes of land erosion in the region.

In a study, Lahlou (1996) emphasizes on the increasing importance of sediment production in northern Africa. Specific degradation has been found to be as high as 5,900 metric tons per km^2 per year in Morocco, 7,200 metric tons per km^2 per year in Algeria and 5,070 metric tons per km^2 year in Tunisia. In Latin America, Llerena (1987) reports that farmers in the high lands and high jungle in Peru have been forced to cultivate on slopes steeper than 50% sometimes. Accelerated factors in land erosion in Peru include agricultural activities, overgrazing, deforestation, mining and acid rain. Average specific degradation values in the region can reach 2,000 metric tons per km^2 per year. In a study on Poza Honda watershed, located in the coastal province of Ecuador, Fleming (1987) discovered a sedimentation rate of 4% of the total reservoir volume per year. Sediment eroded from the watershed was estimated to be 438 m^3 per year, mainly due to sheet erosion. In Japan, sediment disasters vary at a rate of 200 to 1200 per year. The main causes of these disasters include slope failures (73%), debris flows (15%), and landslides (12%). Erosion control public expenses in Japan amounted to $ 2 billion U.S only in 1985.

Soil erosion and sedimentation problems have been recognized more than fifty years ago. In order to understand and quantify the rate of soil erosion and sedimentation, researchers have adopted several methods including modeling. Modeling of soil erosion consists of mathematically describing the process of particle detachment from the soil, its transport and deposition. Sediment yield is the total sediment outflow from a watershed over a period of time measured at a given cross section and the specific degradation is the ratio of yield over drainage area. Estimating the rate of sediment yield and its corresponding specific degradation, its transport, deposition and distribution in a watershed is essential to the development of sound sediment management plans and policies (Yang and Hsu, 1998).

1.1. Problem Statement

Soil erosion and its transport by overland flow involves very complex processes influenced by factors such as climate, watershed drainage area, soil type, topography, vegetation and human activities. Although considerable research has already been done and significant results have been obtained, the prediction of gross erosion, sediment yields and specific degradation with a great level of accuracy still remains a challenge. In this study, an extensive database covering different climate types throughout continental United States will be compiled and used to derive regression equations relating specific degradation with key parameters that will be determined through theoretical analysis. Mean specific degradation relationships will be determined at a 95% confidence interval. The database will be used to test the accuracy of existing specific degradation relationships. The obtained regression relationships will be validated using independent datasets within a 95 % confidence interval. Soil erosion processes involve raindrop impact followed by soil detachment, sheet erosion induced by overland flow and rill and gully erosion.

1.2. Objectives

The main objectives of this study are:

1) Compile an extensive database on sediment yield and specific degradation;

2) Develop new specific degradation relationships and determine the 95% confidence intervals;

3) Validate the new developed equations using an independent dataset and test the accuracy of relevant existing specific degradation relationships found in the literature including:

a) Specific degradation as a function of mean annual rainfall: Langbein and Schumm (1958), Wilson (1973), and Fournier (1948), and

b) Specific degradation as a function of drainage area: Scott et al. (1968), Fleming (1969), Strand (1975), Khosla (1953), Joglekar (1960), and Lahlou (1982).

1.3. Approach and Methodology

The following approach and methodology will be used to achieve the objectives of this study:

- Compilation and analysis of specific degradation data in different regions of continental United States.
- Use of regression analyses to derive specific degradation equations using key sediment production parameters found in the literature. In this step, a simple regression analysis will first be used to correlate the specification degradation with single independent variables such as mean annual rainfall, drainage area, and slope. The next step will consist of performing multiple regression analyses using a combination of the three independent variables. First, drainage area plus mean annual rainfall will be used, then drainage area, mean annual rainfall and slope will be correlated with specific degradation. Throughout this study, the following symbols will be used: SD = specific degradation, A = drainage area, R = mean annual rainfall, S = slope and V = vegetation factor. In our research, we have not found any consistent value for the vegetation cover parameter, hence we will use the following technique to determine it: Once we determine the relationship between SD, R, A, and S, and knowing that SD = V*f(R, A, S), where V is the effect of vegetation, then $V = \frac{SD}{f(R, A, S)}$. After V is calculated for each SD observation, a mean value is

computed and retained as the V factor for each specific land cover type. Note that the obtained V is a parameter derived from our relationship and therefore is different from the C-value of the USLE.

- The new developed SD equations will be compared with the existing relationships listed in the objectives and validated using an independent dataset.

CHAPTER II

LITERATURE REVIEW

In order to achieve the objectives assigned to this study, it is important to understand the different processes involved in sediment production as well as the methods and techniques used to quantify the rate of soil erosion and sedimentation. In this chapter, we will review theoretical and empirical derivations of the mechanisms of soil detachment, its transport by overland flow and its deposition into streams, and reservoirs.

2.1: Erosion processes

Soil erosion and its transport by overland flow involves very complex processes. Jansson (1982) grouped the main factors affecting upland erosion into five categories: (i) climate, (ii) topography, (iii) soil type, (iv) vegetation and (v) land use. The climate factor can be subdivided into precipitation, temperature, frost and snow, season variation, and wind. Among those factors, precipitation is by far the most important.

Soil particles detached from upland areas of a watershed constitutes the primary source of sediments (Julien, 1995). Soil particles are first detached by the impact of raindrop and then transported by overland flow to rivers, which carry them to reservoirs and estuaries. Therefore, to fully grasp the processes involved in sediment production, it is important to first understand soil detachment by raindrop impact and overland flow.

2.2: Erosion potential of the rain

The erosion potential of the rain or its erosivity is dependent upon the kinetic energy that it can produce. The kinetic energy equation is given by the expression:

$$E = \frac{1}{2} m v^2 \qquad (2.1)$$

where E is the kinetic energy , m is the mass of the raindrop and v is the velocity of the raindrop. Wischmeier and Smith (1958) experimentally derived an equation that relates the kinetic energy and the rainfall intensity. In metric units, this equation becomes:

$$E = 210.2 + 89 \log I \qquad (2.2)$$

where E is the kinetic energy in ton-m/ha/cm and I is the rainfall intensity in cm/h.

2.3: Overland flow

Overland flow, is the thin layer of surface runoff that flows over upland areas. It occurs when the rainfall intensity is greater than the infiltration rate of the soil or when subsurface flow returns to the surface and become overland flow. Although some authors have found overland flow to be turbulent, the general agreement is that it is mostly laminar (Woolhiser et al.1972 and Kilinc and Richardson, 1973).

Overland flow exerts a boundary shear stress τ_o on the surface and performs the transport of the eroded material down the slope. $\tau_o = \rho u_*^2$ where ρ is the density of the water and u_* is the shear velocity.

Overland flow, which is sketched on figure 2.3.1 can be described by the two nonlinear partial differential equations of conservation of mass or continuity equation and conservation of momentum derived by Saint-Venant used to solve gradually varied unsteady flow. The two equations can be written as follows:

Continuity equation:

$$\frac{\partial h}{\partial t} + \frac{\partial q}{\partial x} = \frac{\partial h}{\partial t} + u\frac{\partial h}{\partial x} + h\frac{\partial u}{\partial x} = i_e(x,t) \tag{2.3}$$

Conservation of momentum:

$$g(S_0 - S_f) = \frac{\partial u}{\partial t} + u\frac{\partial h}{\partial x} + g\frac{\partial h}{\partial x} + i_e\left(\frac{u}{h}\right) \tag{2.4}$$

where:

i_e = excess rainfall intensity, LT^{-1}

g = acceleration of gravity, LT^{-2}

S_0 = slope of the plane

S_f = friction slope

u = flow velocity, LT^{-1}

h = flow depth, L

x = distance positive in the direction of the flow, L

t = time, T

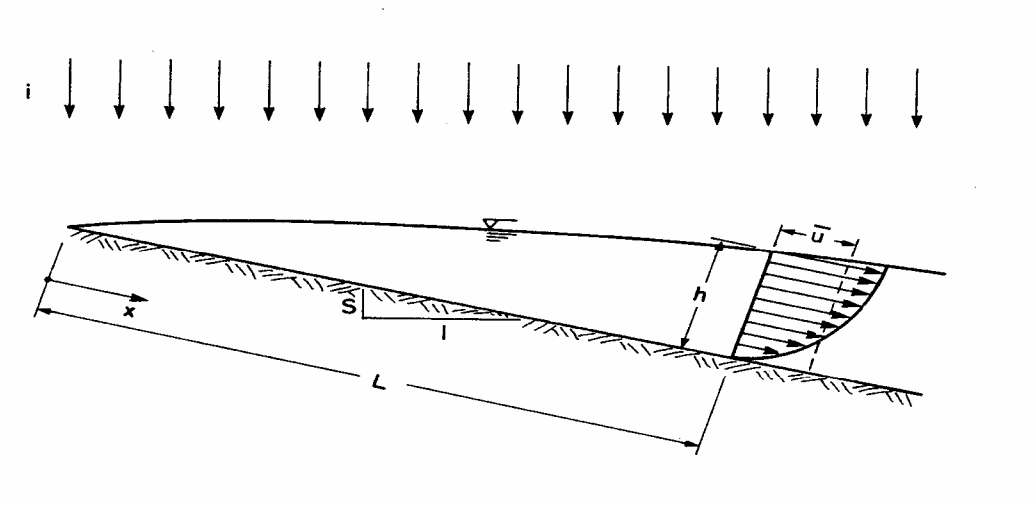


Fig. 2.1: Definition sketch of overland flow:

i = rainfall intensity

u = flow velocity

S = slope

x = distance positive in the direction of the flow

L = length of the slope

Woolhiser (1975) recommends the kinematic wave approximation to describe overland flow. Thus the terms in the right-hand side of the momentum equation vanish and $S_f = S_0$. Accordingly, the unit flow rate can be expressed as a function of flow depth in the following equation:

$$q = \alpha h^{\beta} \tag{2.5}$$

The friction slope is obtained using the Darcy-Weisbach equation:

$$S_f = \frac{f}{8}\frac{u^2}{gh} \tag{2.6}$$

where f is the Darcy-Weisbach coefficient.

For laminar flow over a smooth surface, the Darcy-Weisbach friction factor is obtained using the following expression:

$$f = \frac{24}{R_e} \tag{2.7}$$

where $R_e = \frac{uh}{\nu}$ is the Reynolds number.

For laminar flow over a rough surface, f is obtained using the following expression:

$$f = \frac{K}{R_e} \tag{2.8}$$

where

K is a resistance coefficient related to the characteristics of the surface and can be very large: for dense turf surface for example, K can reach 40,000 (Woolhiser, 1975).

Combining the Darcy-Weisbach equation, the Reynolds number expression and the friction factor f for laminar flow over rough surfaces, the mean flow velocity can be obtained as follows:

$$u = 8gh^2 \frac{S_f}{K\nu} \tag{2.9}$$

For laminar flow, it results that

$$\alpha = 8g \frac{S_f}{K\nu} \tag{2.10}$$

and

$$\beta = 3 \tag{2.11}$$

For hydrographs from simple watershed geometries, Woolhiser (1975) suggests the following relationship for the flow velocity:

$$u = \alpha h^{\beta-1} \tag{2.12}$$

therefore, the continuity equation can be written as follows:

$$\frac{\partial h}{\partial t} + \alpha \frac{\partial h^{\beta}}{\partial x} = i_e(x,t) \tag{2.13}$$

Assuming uniform flow over the surface, then $\frac{\partial h^{\beta}}{\partial x}$ vanishes and

$$\frac{\partial h}{\partial t} = i_e(x,t) \tag{2.14}$$

Integrating from t = 0 to t and h = 0 to h yields

$$h = i_e t \tag{2.15}$$

Therefore, from Eq 2.14,

$$q = uh = \alpha(i_e t)^{\beta} \tag{2.16}$$

Assuming steady state condition, i.e. $\frac{\partial h}{\partial t} = 0$, Eq. 2.13 becomes:

$$\frac{\partial q}{\partial x} = i_e(x,t) \tag{2.17}$$

Integrating from q = 0 to q and from x = 0 to x yields

$$q = i_e x \tag{2.18}$$

Combining equations 2.16 and 2.18, we obtain:

$$x = i_e^{\beta-1} t^{\beta} \tag{2.119}$$

Woolhiser (1975) determined that for steady and uniform rainfall intensity over an impervious surface of length L, the time of equilibrium t_e, elapsed before the runoff hydrograph reaches an equilibrium is given by:

$$t_e = \left(\frac{K \nu L}{8 g S_f i_e^{\,2}} \right)^{\frac{1}{3}} \tag{2.20}$$

for laminar flow conditions. This can be derived equating x = L (when the wave reaches the end of the plane) and the time t reaches the equilibrium, i.e. $t = t_e$.

For overland flow hydrographs, researchers have identified two distinct types: (1) the complete hydrograph where the duration of the storm (t_r) is greater than the time equilibrium, i.e. $t_r > t$ and (2) the partial equilibrium hydrograph where $t_r < t_e$.

If the following dimensionless parameters are introduced

$$\lambda = \frac{t_r}{t_e} \tag{2.21}$$

$$\psi = \frac{q}{i_e L} \tag{2.22}$$

$$\theta = \frac{\left(t - t_e\right)}{t_e} \tag{2.23}$$

where

λ is the ratio of the storm duration to the equilibrium time,

ψ is a dimensionless variable for flow discharge, and

θ is a dimensionless parameter for time

The two types of hydrographs can be sketched as follows:

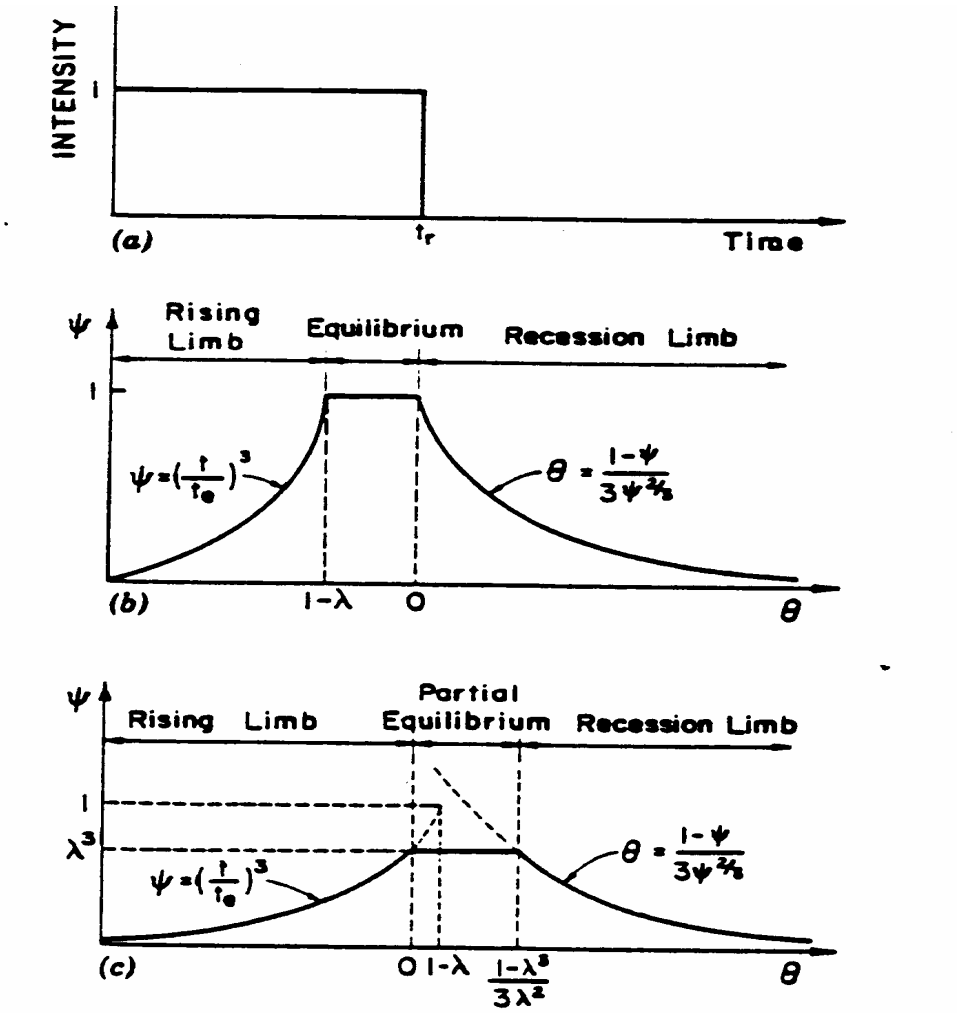


Fig. 2.2: Hyetograph and hydrographs for one rainfall event: a) hyetograph; b) complete hydrograph; c) partial equilibrium hydrograph (after Julien, 1982)

For steady state conditions in the equilibrium part of the complete hydrograph, and from equation 2.16 and the continuity equation (q = uh), it is possible to derive the fundamental hydraulic parameters u, h and the bottom shear stress τ_0 as follows:

$$u=\left(\frac{8g}{K\nu}\right)^{\frac{1}{3}} S^{\frac{1}{3}} q^{\frac{2}{3}} \tag{2.24}$$

$$h = \left(\frac{K\nu}{8g}\right)^{\frac{1}{3}} S^{-\frac{1}{3}} q^{\frac{1}{3}} \tag{2.25}$$

$$\tau_0 = \gamma\left(\frac{K\nu}{8g}\right)^{\frac{1}{3}} S^{\frac{2}{3}} q^{\frac{1}{3}} \tag{2.26}$$

where γ is the specific weight of water.

With the presence of raindrop impact, K can be approximated by:

$$K = K_0 + Ai^b \tag{2.27}$$

where K_0 is the parameter without rainfall and

A and b are empirical parameters related to the raindrop impact.

For smooth surfaces, K_0 is obviously 24. For smooth surfaces, the raindrop impact has been found to be important whereas it becomes insignificant for vegetated surfaces.

Experimental values for A and b have been obtained by various researchers. The following table lists values obtained by Izzard (1944), Li (1972) and Fawkes (1972).

Table 2.1: A and b values: (i in inches/hour)

Source	A	b
Izzard	5.67	1.33
Li	27.2	0.4
Fawkes	10.0	1.0

2.4: Sediment transport

The annual gross erosion (A_T) is the total erosion of detached and entrained material in a given watershed. Its represents the sum of upland erosion (A_U), gully erosion (A_G) and bank erosion (A_B). Thus:

$$A_T = A_U + A_G + A_B \tag{2.28}$$

The Universal Soil Loss Equation (Wischmeier and Smith, 1978) is the most widely used equation in the United States and around the world to predict gross soil losses from sheet and rill erosion. The equation is based on data from more than 10,000 plot-years in the Eastern United States. It was originally developed to serve as a tool to predict long-term soil losses from croplands and thereby implement conservation programs to prevent erosion and maintain soil productivity. Although originally developed for the above purposes, the USLE has progressively been adapted to predict all types of soil losses due to overland flow.

The USLE is given by:

$$At = \check{R}KLSCP \tag{2.29}$$

where

A_T = soil loss per unit area and time interval

Ř = rainfall erosivity factor

K = soil erodibility factor

L = field length factor normalized to a plot length of 72.6 feet

S = field slope factor normalized to a field slope of 9%

C = cropping management factor normalized to a continuous fallow

P = conservation practice factor normalized to straight-row farming and down the slope.

Wischmeier and Smith found the parameter to give the best results under different rainfall and soil conditions was EI_{30}. E is the kinetic energy and I_{30} is the maximum 30-minute rainfall intensity. The rainfall erodibility factor for each storm is given by:

$$R = 0.01\Sigma EI \tag{2.30}$$

where

$$E = 916 + 331\log I \tag{2.31}$$

E = kinetic energy in foot-tons per acre inch

I = rainfall intensity in inches per hour.

The soil erodibility factor K is controlled by factors such as grain size distribution, texture, permeability and organic content. Wischmeier et al. (1971) developed a nomograph in which the K value can be estimated. The nomograph takes in count parameters such as percentage of sand, percentage of silt and fine sand, percentage of organic matter, soil structure and soil permeability.

The slope length-steepness factor LS is a topographic factor that can be obtained from tables. It can also be derived from the following expression:

$$LS = \sqrt{l}\left(0.0076 + 0.53s + 7.6s^2\right) \tag{2.32}$$

where

l = runoff length, L

s = slope

The cropping-management factor C and the conservation practice factor P can also be obtained using tables.

The USLE itself was derived from the Musgrave (1947) equation. Musgrave analyzed soil loss measurements for approximately 40,000 storm-events occurring on some experimental plots in the United States. The results of his analyses yield the following expression:

$$E = IVS^{1.35}L^{0.35}P_{30}^{1.75} \tag{2.33}$$

where:

E = soil loss in acre-inches

I = inherent erodibility of the soil in inches

V = land cover factor

S = land slope in per cent

L = length of slope in feet

P_{30} = the maximum 30-minute amount of rainfall, 2-year frequency, in inches

Julien and Frenette (1985) expressed the unit sediment discharge as a function of various variables, i.e.:

$$q_z = f(h,u,i,q,L,\tau_0,\tau_c,S,\rho_e,\nu_e,d_s,\rho_s) \tag{2.34}$$

where:

q_s = sediment discharge per unit width per unit time (lb/ft x sec. or N/m x sec.)

h = flow depth

u = mean flow velocity

i = rainfall intensity

q = unit flow discharge

L = length of slope

τ_0 = bed shear stress

τ_c = critical shear stress for beginning of motion

S = slope

ρ = water density

ρ_s = sediment density

ν = kinematic viscosity

d_s = sediment size

Using several independent relations that allow the elimination of various parameters, equation 2.34 is reduced to:

$$f(q_s, q, i, L, \rho, \nu, \frac{\tau_c}{\tau_0} S, \rho_s) \tag{2.35}$$

Using dimensional analysis and selecting L, ρ_s and q as repeating variables, equation 2.35 can be written as:

$$\left(\frac{q_s}{\rho\nu}\right) = \bar{\alpha} S^{\beta} \left(\frac{q}{\nu}\right)^{\gamma} \left(\frac{iL}{\nu}\right)^{\delta} \left(1 - \frac{\tau_c}{\tau_0}\right)^{\varepsilon} \left(\frac{\rho_s}{\rho}\right)^{\eta} \text{; for } \tau_0 > \tau_c \tag{2.36}$$

where $\bar{\alpha}, \beta, \gamma, \delta, \varepsilon, \eta$ are experimental coefficients.

In a dimensional form, equation 2.36 is transformed into:

$$q_s = \alpha S^{\beta} q^{\gamma} i^{\delta} \left(1 - \frac{\tau_c}{\tau_0}\right)^{\varepsilon} \tag{2.37}$$

in which:

$$\alpha = \frac{\bar{\alpha} \rho L^{\delta}}{\nu^{\gamma+\delta-1}} \left(\frac{\rho_s}{\rho}\right)^{\eta} \tag{2.38}$$

In equation (2.37), the first three factors (S, q, and i) represent the potential erosion factor (or transport capacity) by overland flow. The transport capacity is reduced by the second factor $(1-\tau_c/\tau_o)^{\varepsilon}$. when τ_c is very small compared to τ_o, then equation 2.37 is reduced to:

$$q_s = \alpha S^{\beta} q^{\gamma} i^{\delta} \qquad (2.39)$$

Table 2.2: Values of α, β, γ, δ, and ε (after Julien and Frenette, 1985)

Equation	Author	α	β	γ	δ	ε	Eqn. Number
$q_s = \alpha' S^m L^n i^p$	Musgrave	α′	M	n	p-n	-	(2.40)
$q_s = \alpha' \int_0^L \tau_0^2 dx$	Li, Chen, Simons	$3\alpha' \frac{\gamma^2}{5}\left(\frac{K\nu}{8g}\right)^{\frac{2}{3}}$	1.33	1.67	-1	-	(2.41)
$q_s = e^{2.05}(\tau_o - \tau_c)^{2.78}$	Kilinc	$e^{2.05}\gamma^{2.78}\left(\frac{K\nu}{8g}\right)^{0.93}$	1.86	0.93	-	2.78	(2.42)
$q_s = e^{0.122}\left[(\tau_o - \tau)\bar{u}\right]^{1.67}$	Kilinc	$e^{0.122}\gamma^{1.67}$	1.67	1.67	-	1.67	(2.43)
$q_s = e^{-3.17}\bar{u}^{3.625}$	Kilinc	$e^{-3.17}\left(\frac{8g}{K\nu}\right)^{1.21}$	1.21	2.42	-	-	(2.44)
$q_s = e^{1.24}\bar{u}^{4.67} R^{-0.878}$	Kilinc	$e^{1.24}\nu^{0.878}\left(\frac{8g}{K\nu}\right)^{1.56}$	1.56	2.24	-	-	(2.45)
$q_s = e^{-11.6} R^{2.05} S^{1.46}$	Kilinc	$e^{-11.6}\nu^{-2.05}$	1.46	2.05	-	-	(2.46)
$q_s = e^{11.7} q^{2.035} S^{1.66}$	Kilinc	$e^{11.7}$	1.66	2.03	-	-	(2.47)

For a single rainfall event, Julien and Frenette (1985) combined equation 2.36 with figure 2.2 to obtain soil erosion by overland flow. In a dimensionless form, total erosion by unit width Φ is obtained by integrating the sediment discharge ($q_s/\rho v$) over the dimensionless runoff period, ($\lambda_1 t$) where:

$\lambda_1 = \frac{1}{\bar{t}_r}$, where $\bar{t}_r$ is the average rainfall duration.

Thus:

$$\Phi = \int_0^\infty \frac{q_s}{\rho v} d(\lambda_1 t) = \frac{\lambda_1}{\rho v} \int_0^\infty q_s dt \qquad (2.48)$$

Replacing q_s by its expression in equation 2.39 (when τ_c tends to zero) yields:

$$\Phi = \frac{\lambda_1}{\rho v} \int_0^\infty \alpha S^\beta q^\delta dt \qquad (2.49)$$

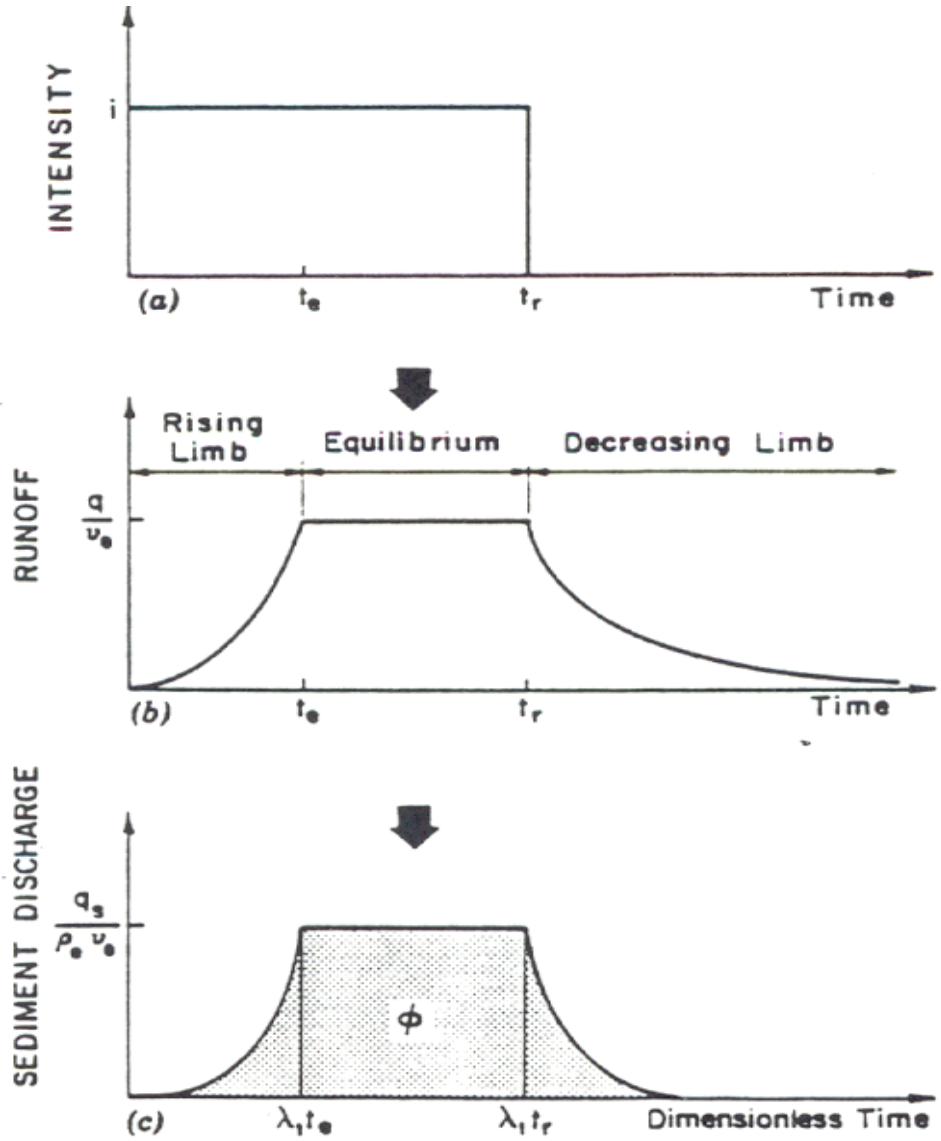


Figure 2.3: Soil erosion for a single event: a) hyetograph; b) hydrograph; c) sedimentograph (after Julien and Frenette, 1985)

Kilinc and Richardson (1973) studied the mechanics of soil erosion from overland flow generated by simulated rainfall. They conducted their experiments on a flume (4 feet deep, 5 feet wide and 16 feet long) in the Engineering Research Center Hydraulic Lab at Colorado

State University. Several sediment transport equations were derived from their experiments using regression analyses. For bare sandy soils, the following expression was obtained:

$$q_s = 25500 q^{2.035} S^{1.66} \quad (2.50)$$

where:

q_s = unit sediment discharge in metric tons/m.sec

q = unit flow discharge in m^2/sec

S = slope in m/m

Equation 2.50 was modified by Julien (1995) to obtain a more general case of erosion from sheet flow that reflects soil type (considering K = 0.15 for bare sandy soil), vegetation and conservation practices. The resulting equation is expressed as follows:

$$q_s = 25500 q^{2.035} S^{1.66} \frac{K}{0.15} CP \quad (2.51)$$

where K, C and P are the USLE parameters.

Using rainstorm intensity and average rainfall duration, Julien derived the following general sediment yield equation:

$$Q_s \cong 3.4x10^5 \nu W S^{1.66} (iL)^{2.035} \overline{t_r} KCP \quad (2.52)$$

2.4.1: Grid size analysis

Julien and Frenette (1986) studied the scale effects in computing upland erosion from large basins. As a result, a correction factor Q_e was defined as the ratio of soil erosion computed with the mean characteristics of the basin, to the soil erosion computed using the process of subdividing the basin into small units.

For basins with a drainage area A<= 0.125 km^2, the correction factor Q_e remains constant, which indicates that the soil loss equation can be used for these areas without bias. But as drainage area increases beyond 0.125 km^2, the authors found that the correction factor decreases gradually as shown in figure 2.4.

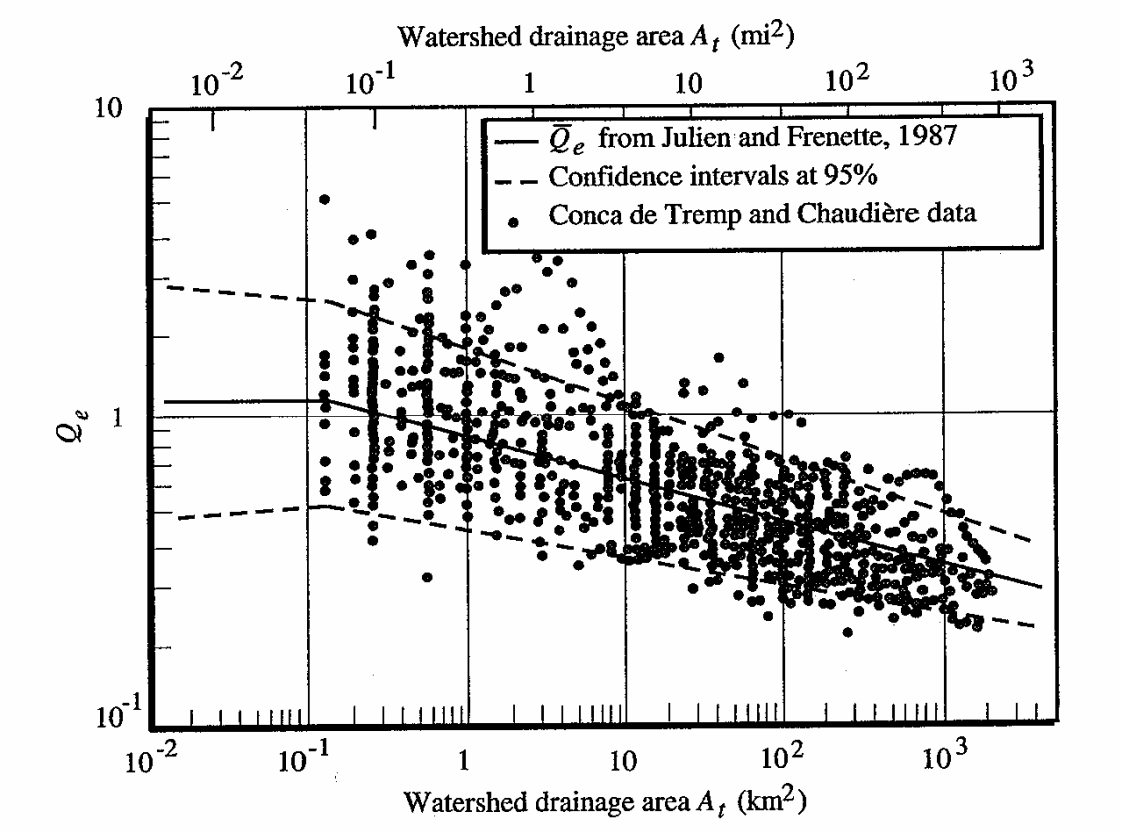


Fig. 2.4: Correction factor Q_e (after Julien and Frenette, 1986)

2.4.2: Sediment yield and sediment delivery ratio

Sediment yield is the total sediment outflow from a drainage basin over a specified period of time. It is generally measured in tons per year. Sediment yield (Y) can be estimated by applying a sediment delivery ratio (S_{DR}) to the gross erosion amount. Sediment delivery ratio is the percentage of gross erosion that reaches a designated downstream location. Thus:

$$Y = S_{DR} A_T \tag{2.53}$$

It has been observed that the probability of entrapment of particles increases with the size of the drainage area. Boyce (1975) developed the following expression for the sediment delivery ratio as shown in figure 2.5.

$$S_{DR} = 0.41 A^{-0.3} \tag{2.54}$$

with A in km^2 or

$$S_{DR} = 0.31 A^{-0.3} \tag{2.55}$$

with A in mi^2

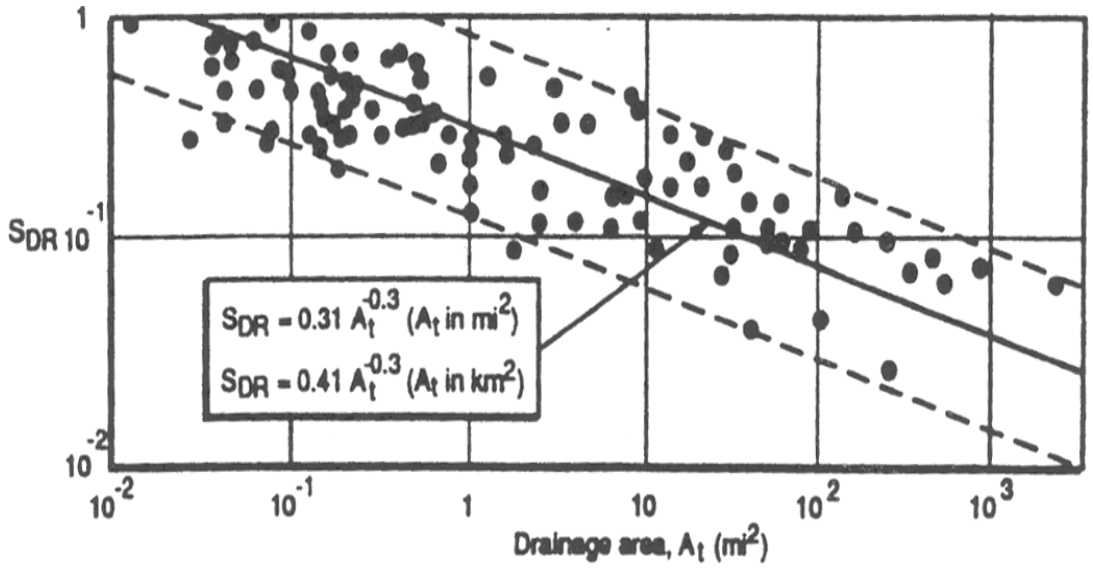


Fig. 2.5: Sediment delivery ratio in function of drainage area (Boyce, 1975)

2.4.3: Specific degradation

For a given drainage basin, the specific degradation is obtained by dividing the sediment yield by the drainage area. Thus:

$$SD = \frac{Y}{A} \tag{2.56}$$

where:

SD = specific degradation in metric tons/km^2 year or English tons/mi^2 year

A = drainage area in km^2 or mi^2

Several researchers have tried to correlate specific degradation with climatic parameters such as: precipitation, runoff, drainage area, etc. Rainfall and drainage area are the most widely independent variables used in specific degradation relationships. For rainfall as independent invariable, the models of Fournier (1949), Langbein and Schumm (1958), and Wilson (1973) are very well-known. For drainage area as independent variable, the models of Khosla (1958), Joglekar (1960), Scott et al. (1968), Fleming (1969), and Strand (1975) are also very well-known. The above models and a model used in Northern Africa (Lahlou, 1982) will be reviewed in this chapter and tested in chapter V.

2.4.3.1: The Fournier model

In 1949, Fournier published a curve that correlates specific degradation with mean annual precipitation as shown in figure 2.6 (The curve shown in this figure has been digitized into a spreadsheet and drawn using Excel). Fournier's curve has a parabola shape with a minimum specific degradation value of approximately 100 tons/km^2 per year occurring at a mean annual precipitation of about 900 mm and two peaks occurring at mean annual precipitations of about 250 mm and 1600 mm. The first peak represents basins located in arid and semi-arid climates, and the second peak represents basins located in monsoon climates. Fournier

used data from 96 drainage basins, all greater than 2000 km^2. Data were obtained from basins such as the Yangtze kiang, the Sikiang, the Red River, the Ganges, the Rio Grande, the Yellow River, the Tigris and the Colorado River basins. The dataset is shown on Appendix D.

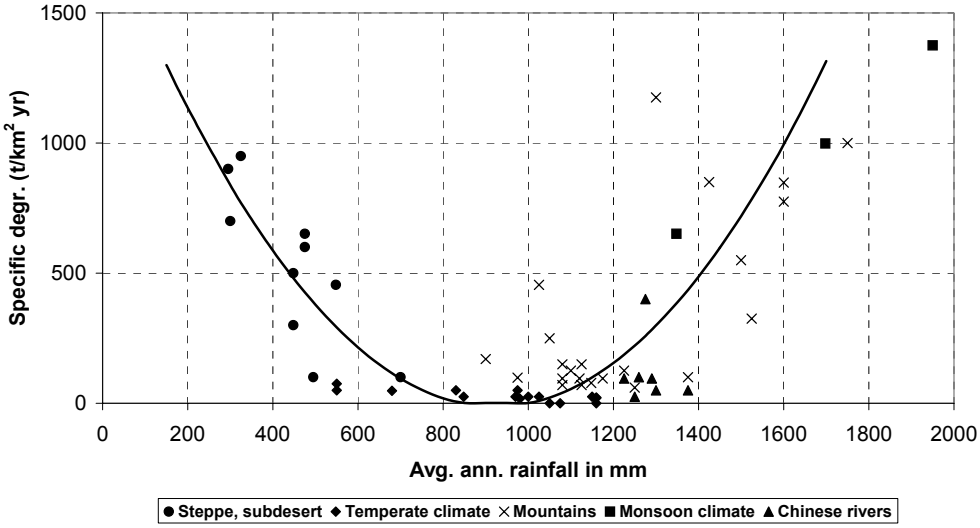


Figure 2.6: Mean SD vs. R (after Fournier, 1949)

2.4.3.2: The Langbein and Schumm model

Langbein and Schumm developed a curve (figure 2.7) between specific degradation and mean annual precipitation using regression analysis and data obtained from 94 sediment stations and 163 reservoirs in the United Stated (see dataset in appendix C). They developed two different equations: the first one for sediment stations and the second one for reservoirs. A peak in specific degradation is obtained at about 250 mm to 355 mm of annual precipitation. The curve decreases sharply on both sides of the peak. Langbein and Schumm attributes the decrease on the left side to a deficiency of runoff and on the right side to an increased vegetation density. The equations are respectively as follows:

$$S = \frac{20.57 * 10^{-4} P^{2.3}}{1 + 1.47 * 10^{-8} P^{3.33}} \quad (2.57)$$

$$S = \frac{41.14 * 10^{-4} P^{2.3}}{1 + 1.47 * 10^{-8} P^{3.33}} \quad (2.58)$$

where:

S = specific degradation in tons/km^2 year

P = effective precipitation in mm

In the two equations, the numerators describe the erosive action of the rainfall in the absence of vegetation, while the denominators represent the protective effect of vegetation.

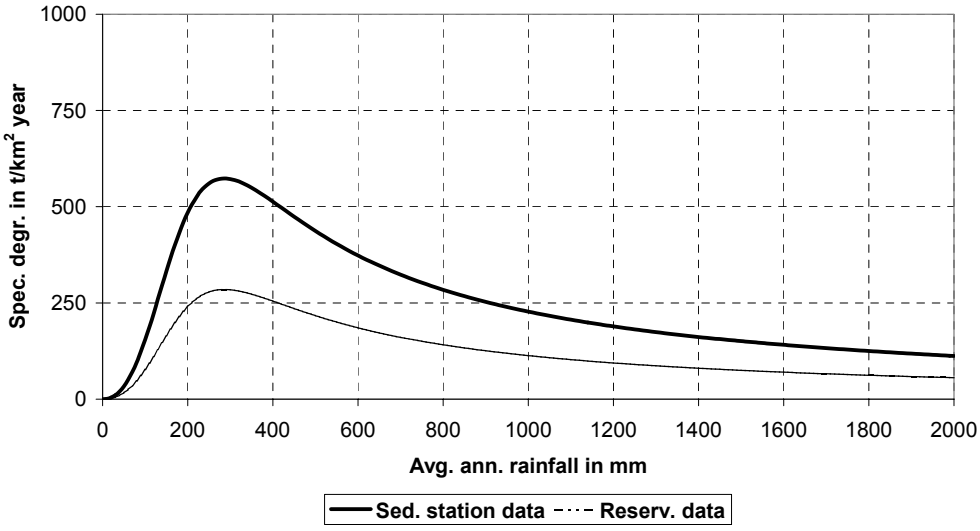


Figure 2.7: SD vs. R (after Langbein and Schumm, 1958)

The two curves do not coincide and Langbein and Schumm attribute this discrepancy to three major factors: (i) the drainage basins for reservoirs averaged about 80 km^2 whereas for sediment stations, they averaged about 3900 km^2; (ii) reservoirs are constructed in steep

terrains whereas sediment stations are in various topographic terrains; (iii) for reservoirs, bedload is measured but is not a factor for sediment stations.

2.4.3.3: The Wilson model

Wilson (1973) developed a curve that relates the specific degradation to mean annual precipitation using data from 1500 drainage basins. An interesting feature of Wilson's curve is that it includes many data from other parts of the world: 1250 continental data, which include 200 Mediterranean data and 50 data from tropical wet-dry climates. The Wilson model is illustrated in Fig.2.8.

Wilson's curve has two distinct peaks, the first one was obtained at 762 mm of mean annual precipitation from loessial material in regions with intensive agricultural activities and the second one was obtained at 1768 mm in tropical wet-dry climates and in Mediterranean regions.

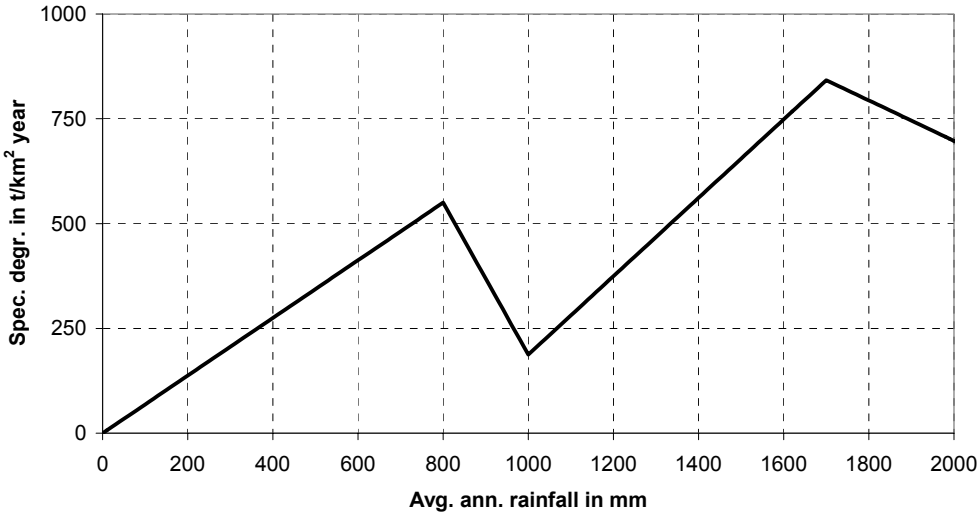


Figure 2.8: SD vs. R (after Wilson, 1973)

2.4.3.4: Models with drainage area as independent variables

The table below summarizes the models of Khosla (1958), Joglekar (1960), Scott et al. (1968), Fleming (1969), and Strand (1975),and Lahlou (1982). Data for the first five equations were not available, the Lahlou data can be see on figure 2.9. The data were for 27 reservoirs in different regions of Morocco, North Africa.

Table 2.3: Relations between SD and A.

A = area in km^2

Author	Place	Basin size km^2	SD ($m^3/km^2/yr$)	SD ($tons/km^2/yr$)	Eq. number
Scott et al.	Southern California	8 - 1036	$SD=1801*A^{-0.215}$	$SD=4772.65*A^{-0.215}$	(2.59)
Fleming	Mostly American, African, and UK basins			$SD=140*A^{-0.0424}$	(2.60)
Strand	Southwestern USA		$SD=1421*A^{-0.215}$	$SD=3765.65*A^{-0.229}$	(2.61)
Khosla	Different parts of the world	< 2590	$SD=3225*A^{-0.215}$	$SD=8546.25*A^{-0.28}$	(2.62)
Joglekar	American, Indian, European,Australian, African basins		$SD=5982*A^{-0.215}$	$SD=15852.3*A^{-0.24}$	(2.63)
Lahlou	Morocco, West & East		$SD=5248*A^{-0.215}$	$SD=13907.2*A^{-0.18}$	(2.64)
Lahlou	Morocco, other regions		$SD=1048*A^{-0.215}$	$SD=2777.2*A^{-0.13}$	(2.65)

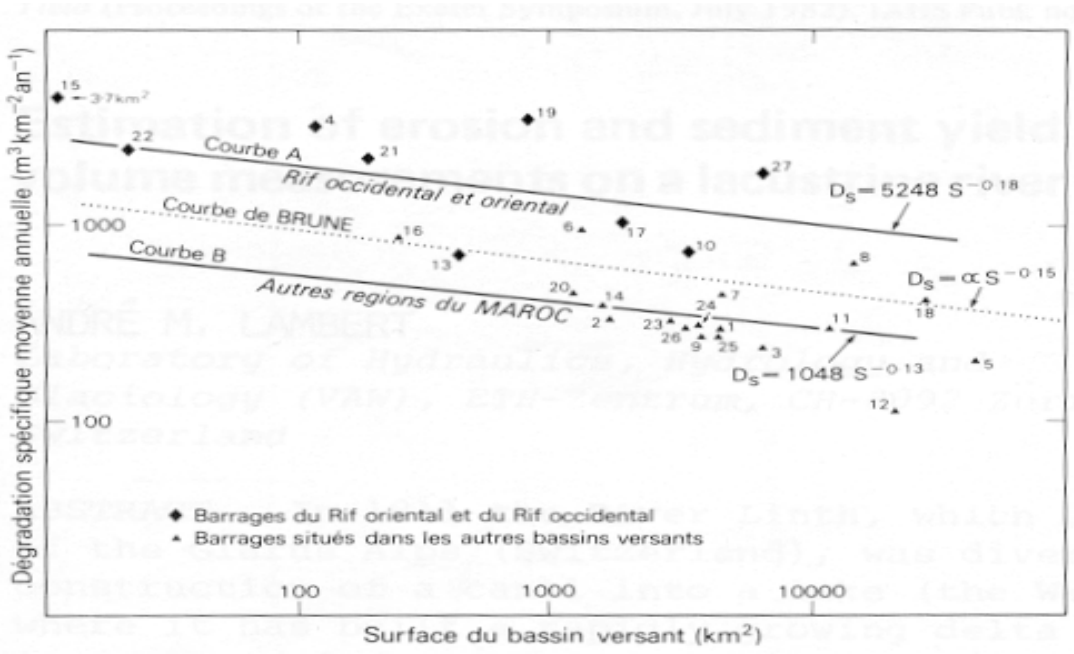


Figure 2.9: Specific degradation in Morocco, North Africa (after Lahlou, 1982)

In addition to the methods described above, there exists some computer models that simulates overland flow and sediment transport as well. One such model is. CASC2D which stands for CASCade 2Dimensional SEDimentation model (CASC2D, Julien and Sagahfian 1991, Sagahfian 1993, Julien et al. 1995, Ogden 1997, Johnson 1997, Ogden 1998, Johnson et al. 2000). CASC2D is a physically-based model that simulates overland flow and soil erosion. It is a distributed, raster-based model that uses the diffusive wave overland flow approximation to simulate soil erosion and deposition by particle size fraction at any given point in a watershed. Initially developed by Julien and Saghafian (1991), the model has been continuously enhanced by the addition of several components including interception, initial depths, evapotranspiration and redistribution. More recently, Rojas (2002) extended its capability by: (i) adding an interception process, (ii) modifying the upland erosion scheme to

include sediment routing by advection in capacity limited transport conditions, (iii) sediment routing by size fraction in channels, (iv) coupling the time series grids output with GIS for their automatic display.

Other computer models include MUSLE/RUSLE (Renard et al.,1991), ANGPS (Young et al.1987, 1994), SMODERP (Holy et al. 1988), WEPP (Lane and Nearing, 1989), KINEROS (Woolhiser et al., 1990), EROSION-2D (Schmidt, 1996), LISEM (De Roo et al, 1995), and SHESED (Wicks, and Bathurst, 1996).

In summary, soil erosion processes and estimation techniques have been reviewed in this chapter. It is observed that equation 2.52 encompasses all the processes involved. From that equation, the following observations can be made:

WL = area, A

$it_r\nu$ = annual precipitation, R

The soil erodibility factor K and the conservation practice factor P will be regrouped and taken in count in this study by the V factor.

It follows that the four most important parameters in the estimation of specific degradation are:

1. Rainfall, R
2. Drainage area, A
3. Slope, S
4. Vegetation (land cover), V

Thus the simplified equation that will be investigated in this study is as follows:

$$SD = VR^a A^b S^c \qquad (2.66)$$

where

SD = specific degradation

V = vegetation factor

R = mean annual rainfall

A = drainage area

S = slope

a,b,c are regression coefficients.

CHAPTER III

ANALYSIS OF TWO-PARAMETER DATABASE

This chapter consists of analyzing the two-parameter database with single-variable regression equations relating SD to R, and A. The source database, which has been converted into digital format, has been compiled from publications made available by the Agricultural Research Service (ARS) from 1964 through 1978 and from a 1992 publication of the Interagency Advisory Committee on Water Data (Subcommittee on Sedimentation). The source database contains 1463 data points relating specific degradation (SD) with drainage area (A) in various U.S. reservoirs. Since it was determined in the literature review that four variables constitute the key parameters involved in sediment production, it was necessary to complete the source database by adding the missing variables. It was then possible to get annual rainfall (R) information for all the 1463 data using different sources such as the National Climatic Data Center and some websites containing rainfall information for different sites. Thus the database contains data of SD, R, and A.

Samples of the database can be seen on Table 3.1 and the detailed database is presented in Appendix A.

Section 3.2 presents an analysis on the four-parameter database. A relationship between SD and R, A, S, and V is then obtained using multiple regression analysis.

3.1. Location of the drainage basins

The ARS divided continental U.S. into 78 river basins as shown in figure 3.1. Each basin contains several reservoirs, which are labeled according to the basin in which they are located. In addition to the specific degradation value, several other data such as reservoir and stream names, nearest town, drainage area, starting and ending dates of survey, period of time between surveys, specific weight of soil during survey and agency supplying the data are given in the publications.

Fig. 3.1: Location of the drainage basins

3.2. Distribution of the periods of records

The period of records for individual basins range from 0.3 to 107 years with a median of 7.8 years as shown on figure 3.2.

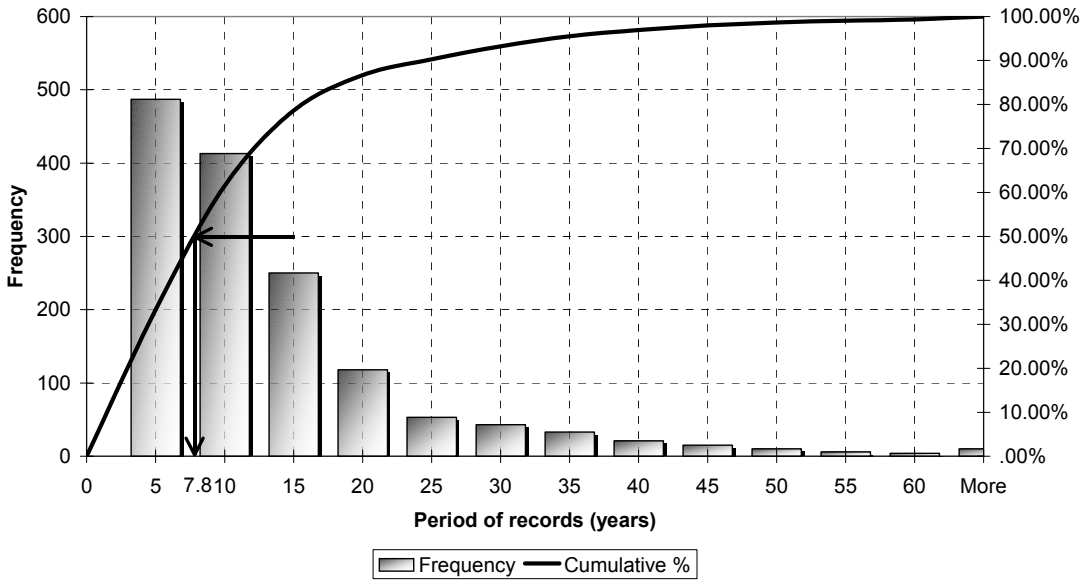


Figure 3.2: Distribution of the periods of records

3.3. Distribution of the drainage areas

The drainage areas of the basins range from 0.017 km^2 to 89,852 km^2 with a median of 6.1 km^2 as shown in figure 3.3.

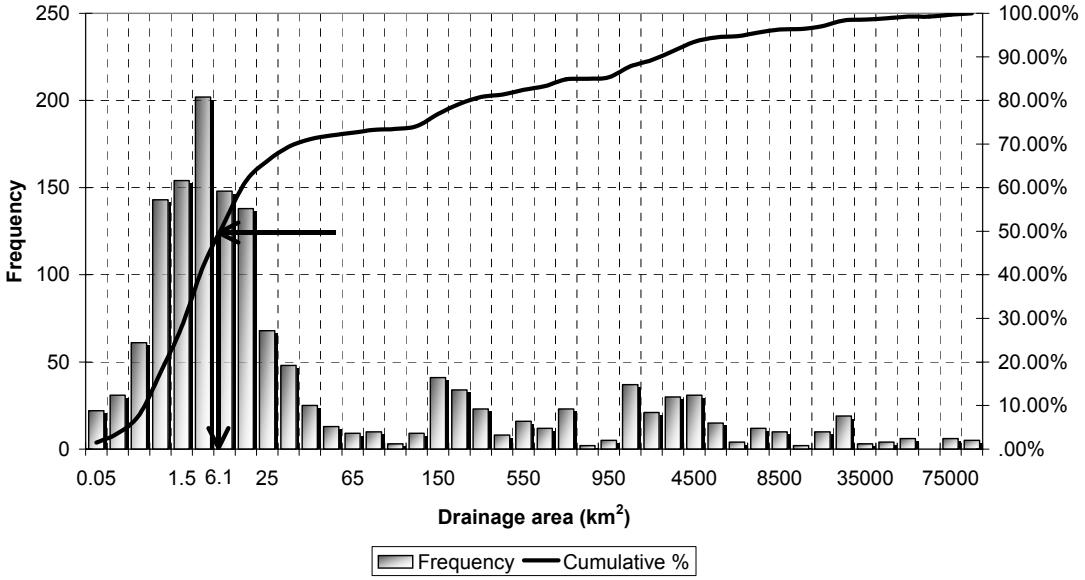


Figure 3.3: Distribution of A

3.4. Distribution of the mean annual rainfall

All different climatic regions in continental United States are represented in the database. Mean annual rainfall varies from a minimum of 167.64 mm to a maximum of 2242.82 mm with a median of 807.72 mm as shown of figure 3.4.

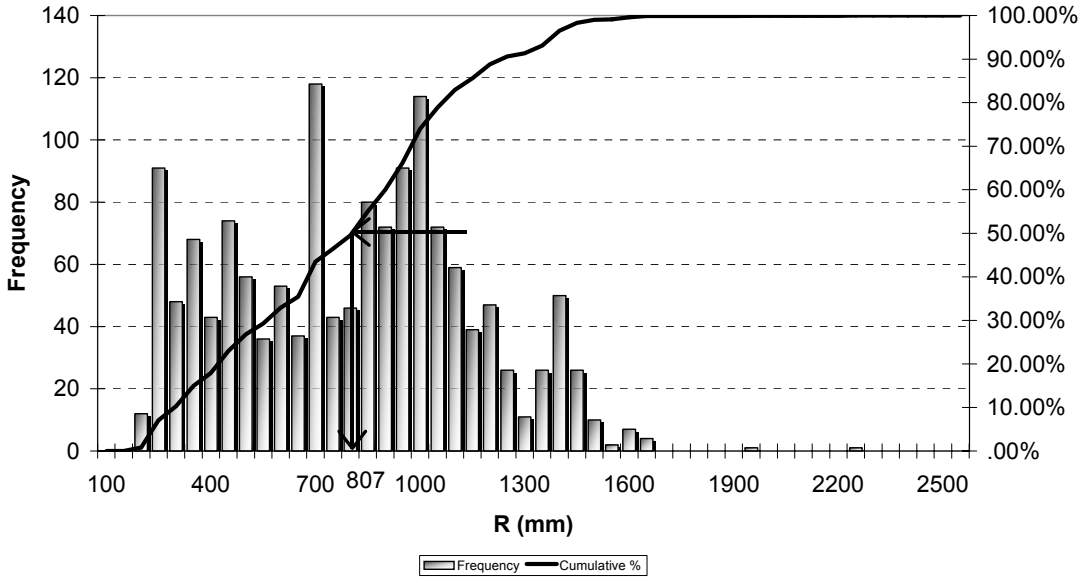


Figure 3.4: Distribution of R

Table 3.1: Sample of the two-parameter database

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Data #	**Basin ID**	**Reservoir**	**Stream**	**Nearest town**	**R (in)**	**R (mm)**	**A (mi^2)**	**A (km^2)**	**Start survey data**	**End survey date**	**Per. of survey**	**Spec. weight (lb/ft^3)**	**SD ($AF/mi^2/yr$)**	**SD ($AF/km^2/yr$)**	**SD ($t/km^2/yr$)**	**Agency suppl data**
1	15-17	Ben 0. Pettis Pond	Trib. of Toby Tubby Cr.	Oxford, Miss	54	1371,60	0,0067	0,017353	janv 1912	janv 1947	35,0	58,72	2,39	3 060	1071	SCS
2	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Nov. 1968	Nov. 1969	1,0	90	2,25	4410	1544	GS
3	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Nov. 1969	Nov. 1970	1,0	90	0,75	1470	515	GS
4	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Nov. 1970	Oct. 1971	1,0	90	2,38	4665	1633	GS
5	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Oct. 1966	Nov. 1967	1,0	90	2,13	4165	1458	GS
6	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	sept-62	Nov: 1967	1,0	90	0,73	142	50	GS
7	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Nov. 1968	Nov. 1969	1,0	90	0,09	178	62	GS
8	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Nov. 1969	Nov. 1970	1,0	90	0,36	710	249	GS
9	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Nov. 1970	Oct. 1971	1,0	90	0,52	1019	357	GS
10	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Nov: 1967	Nov. 1968	1,0	90	0,91	1780	623	GS
11	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Oct. 1971	Nov. 1972	1,0	90	0,43	843	295	GS
12	76-11	Johanna Nelson Pd	Palouse R	Deary, ID	25,3	642,62	0,01	0,03108	sept-39	sept-47	8,0	70,0	2,0000	3050	1068	SCS
13	22-7	Batt Pond	Unnamed	Defiance Ohio	32,6	828,04	0,012	0,03108	mars-43	juin-47	4,3	73,4	2,75	4396	1539	ODW
14	76-13	A. K. Tweedy Pd	Palouse R	Deary, ID	25,3	642,62	0,01	0,03626	sept-27	sept-47	20,0	70,0	0,6400	976	342	SCS
15	76-12	Ed Galloway Pd	Palouse R	Deary, ID	25,3	642,62	0,01	0,03626	sept-40	sept-47	7,0	70,0	0,6400	976	342	SCS
16	76-8	Weldon Wassem Pd	Clearwater R	Nez Pierce, ID	21,2	538,99	0,01	0,03626	sept-41	sept-47	6,0	70,0	2,1400	3263	1142	SCS
17	22-14	Kohart Pond	Unnamed	Grover Hill Ohio	33,8	858,52	0,019	0,04921	août-1939	juin-1947	7,8	26,1	0,53	301	105	ODW
18	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Nov. 1958	Nov. 1959	1,0	90	1,58	3095	1083	GS
19	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Nov. 1959	Nov. 1961	2,0	90	0,53	1032	361	GS
20	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Nov. 1961	Nov. 1963	2,0	90	0,53	1032	361	GS
21	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Nov. 1972	sept-69	1,0	90	0,53	39	14	GS
22	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Oct. 1971	Nov. 1972	1,0	90	0,53	1039	364	GS
23	21-28 B	Babb Pond	Unnamed	Richfield Ohio	32,4	822,96	0,02	0,0518	avr-1905	Apr.1951	19,0	60	0,15	196	69	SCS
24	76-9	Henry Kortemeier Pd	Palouse R	Potlatch, ID	25,3	642,62	0,02	0,0518	sept-39	sept-47	8,0	70,0	1,2000	1830	641	SCS
25	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	June. 1970	Oct. 1970	0,4	90	2,27	4 455	1559	GS
26	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	Nov. 1958	Nov. 1959	1,0	90	2,73	5 346	1871	GS

3.5. Regression analysis

The 2-parameter database relates specific degradation values (SD) with mean annual rainfall (R) and drainage area (A). We will first proceed by analyzing specific degradation data with respect to mean annual rainfall and then with respect to drainage area. Regression equations of specific degradation (SD) as a function of (i) mean annual rainfall (R), and (ii) drainage area (A) will be derived within a 95% confidence interval as stated in the objectives. The confidence interval is an interval around the computed parameter within which a given percentage of values from a large sample is expected to be found. Hence, the confidence interval at the 95% means that, out of 100 samples of equal size, it is expected that 95 values of the considered parameter would be inside that interval. For the normal distribution, approximately two-third of the observations fall between the limits of +1 and –1 standard deviation and 1.96 standard deviations above and 1.96 standard deviations below the mean mark the points within which 95% of the points lie. Thus the confidence limits for each sample will be the mean value plus or minus 1.96 standard deviations.

If the computed parameter falls within the confidence limits, it is considered to be significant or insignificant depending on the problem. In our case, if the computed specific degradation falls between the 95% confidence interval, it is considered as significant.

3.5.1. Specific degradation as a function of mean annual rainfall

If we plot the raw specific degradation data with respect to mean annual rainfall, we obtain the graph shown in figure 3.5. The data points are very scattered on the graph and the obtained regression equation has a very poor coefficient of correlation:

$$SD = 30.6R^{0.46}e^{-0.00053R} \tag{3.1}$$

with $R^2 = 0.005$

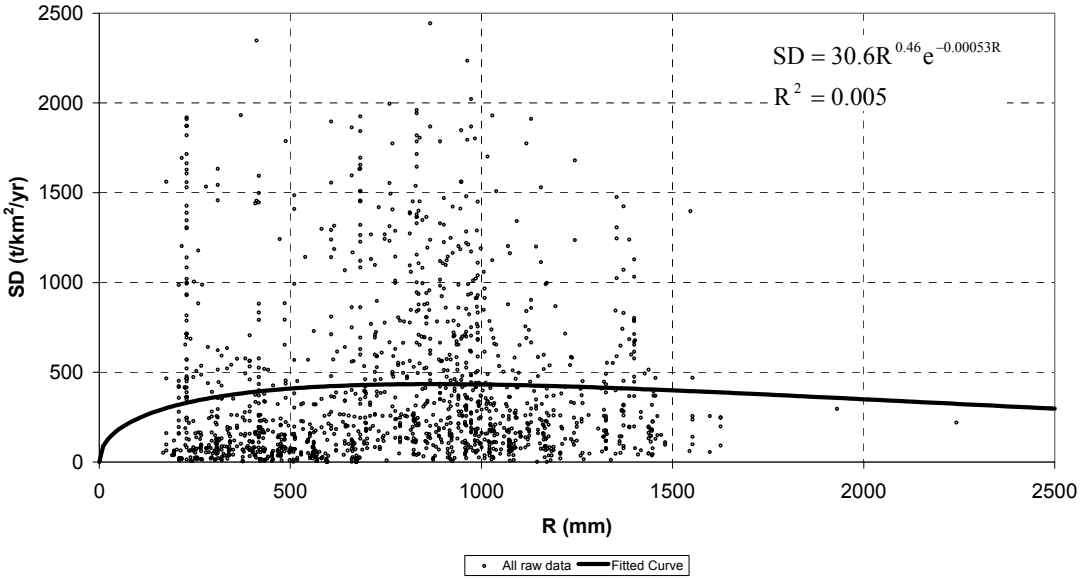


Figure 3.5: SD as function of R. Plot of all raw data

Due to the great level of scattering of the data, an analysis of the mean SD values was performed. The data were divided into 29 classes of rainfall containing 50 data points each, and the mean value for each class was computed and then plotted against R. Since more consistent results are obtained with observations made over a long period of time, therefore, in order to give more weight to those observations, the mean value is computed by taking a

weighted average in which each specific degradation value is multiplied by its number of years of observations, i.e.: $\overline{SD} = \frac{\sum_{i=1}^{N} Yr_i SD_i}{\sum_{i=1}^{N} Yr_i}$, where $\overline{SD}$ is the weighted average specific degradation, Yr_i is the number of years during which the measurements have been for i^{th} SD, and N is the total number of observations in any class.

The results are shown in table 3.2 and figure 3.6. The obtained regression equation that fits the mean value is as follows:

$$SD = 0.02R^{1.7}e^{-0.0017R} \qquad (3.2)$$

with $R^2 = 0.53$.

When applied to all raw data, Eq. (3.2) yields $R^2 = 0.06$.

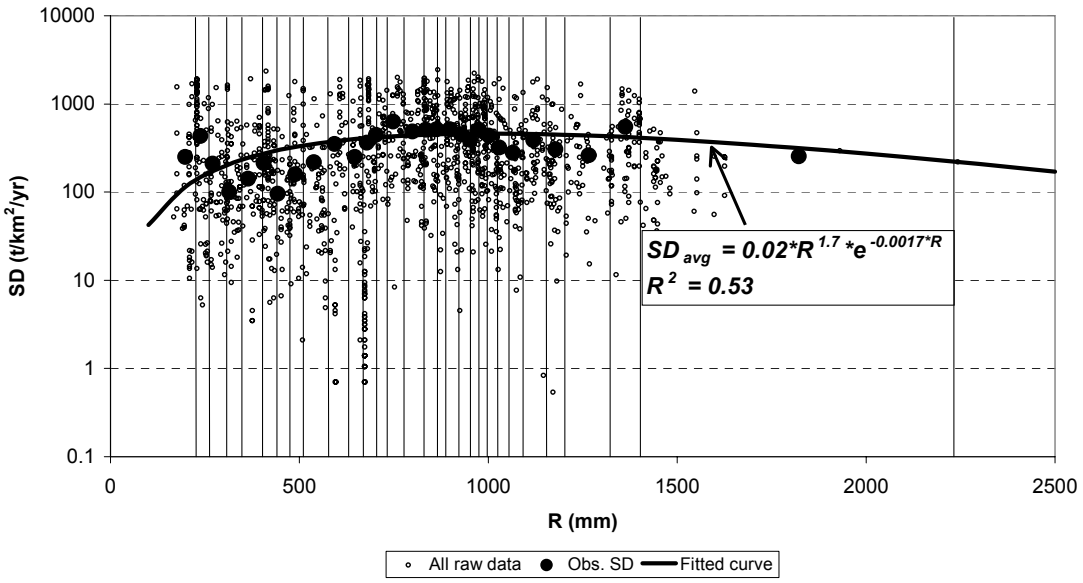


Figure 3.6: Weighted average SD as function of R

Table 3.2: Weight-averaged SD as function of R

Class	R (mm)	Number of points	$\overline{SD}$
1	198.12	50	114.69
2	237.49	50	145.98
3	270.64	50	172.30
4	314.58	50	206.50
5	363.98	50	243.30
6	405.64	50	272.51
7	442.47	50	296.73
8	488.95	50	324.93
9	538.48	50	351.93
10	593.09	50	377.97
11	646.43	50	399.63
12	678.18	50	410.79
13	702.31	50	418.42
14	748.03	50	430.94
15	798.83	50	442.00
16	834.39	50	448.05
17	863.60	50	452.03
18	897.89	50	455.61
19	927.10	50	457.79
20	951.23	50	459.01
21	975.36	50	459.73
22	1002.03	50	459.97
23	1028.70	50	459.65
24	1065.40	50	458.37
25	1118.74	50	454.89
26	1177.29	50	449.09
27	1266.19	50	436.97
28	1362.71	50	420.17
29	1821.18	63	315.54
Total		1463	

To obtain the 95% confidence interval, the data were analyzed to determine the nature of its distribution.

Most hydrological variables exhibit a right skewness, partly due to the influence of natural phenomena having values greater than zero, or some other lower limit, and being theoretically unconstrained in the upper range (Viessman et al, 1977). Such variables do not follow a normal distribution, but their logarithms do and their distribution is said to be lognormal. The Lognormal Distribution is a transformed Normal Distribution in which the variate is replaced by its logarithmic value, i.e. y=log x, where x is the untransformed variate and y is the transformed variate. Its probability distribution function is represented by:

$$f(y) = \frac{1}{\sigma_y \sqrt{2\pi}} \exp\left[-\left(y - \mu_y\right)^2\right] / 2\sigma_y^2 \qquad (3.3)$$

where,

μ_y = mean of y, and

σ_y = standard deviation of y

Dividing the dataset by classes of mean annual rainfall with each class containing 50 points, it is observed that the dataset follows a lognormal distribution as shown in figures 3.7a, 3.7b, 3.7c, 3.7d, 3.7e).

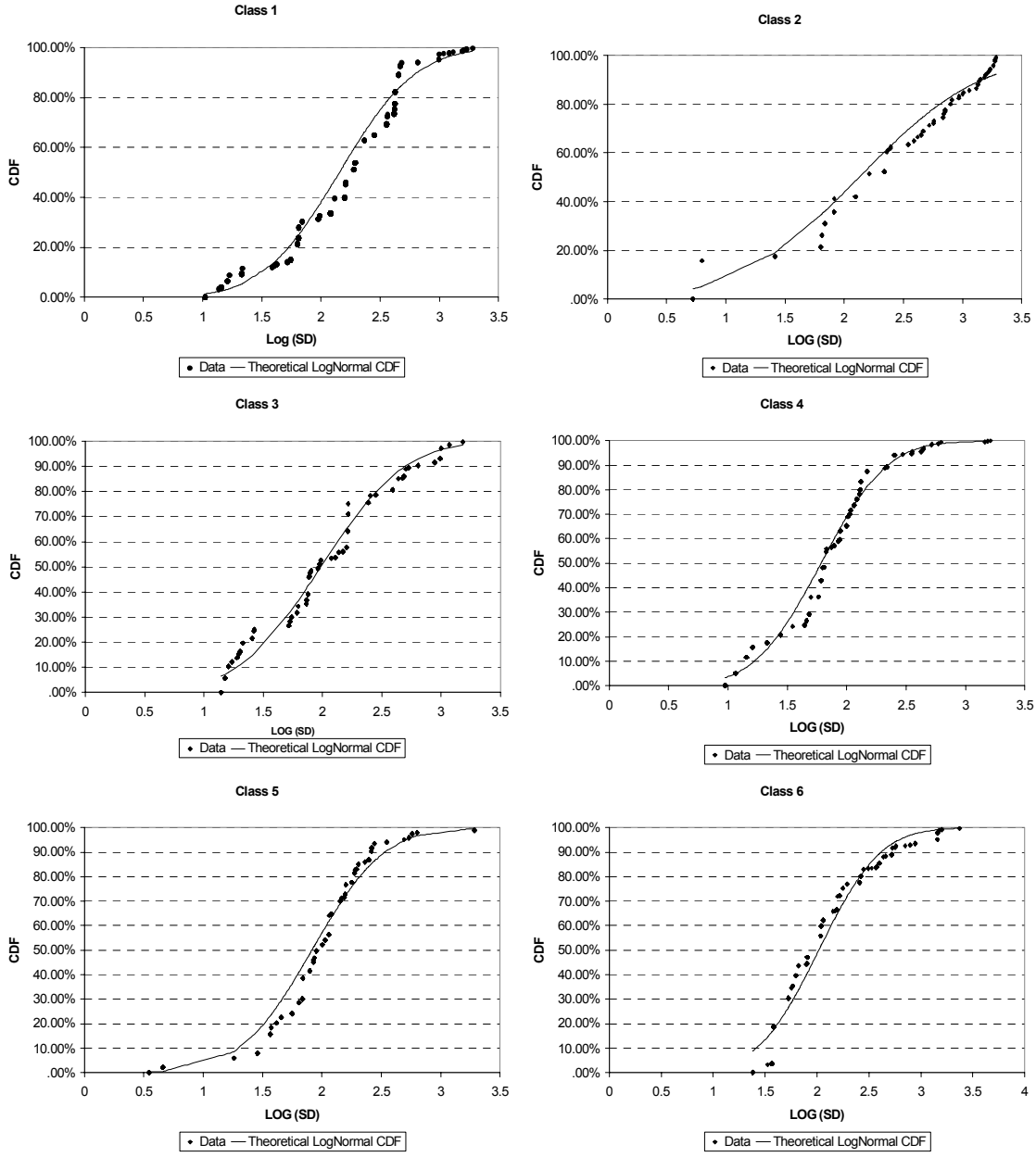


Figure 3.7a: Log normal distribution of SD with respect to R (class 1 through 6)

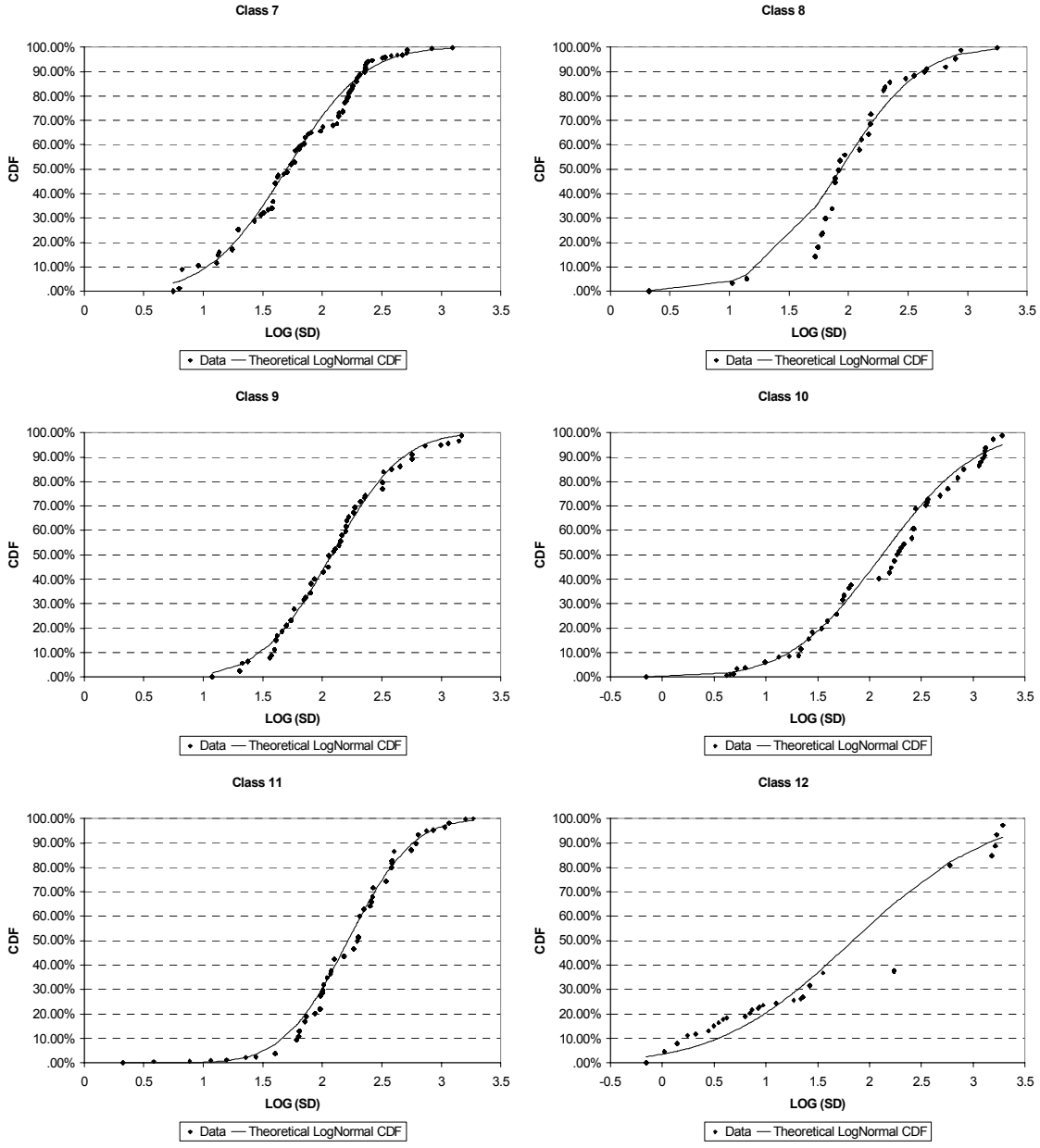


Figure 3.7b: Log normal distribution of SD with respect to R (class 7 through 12)

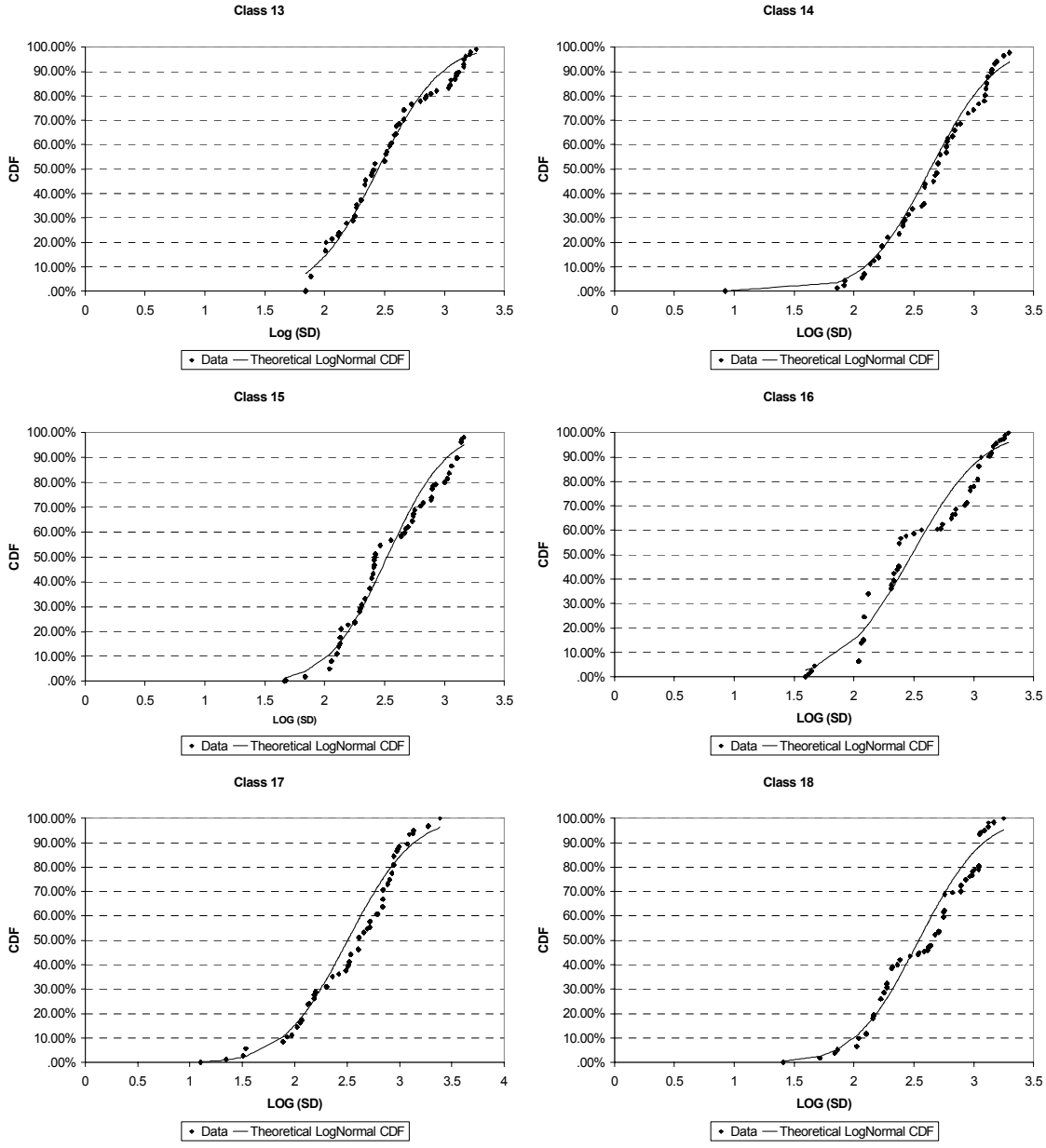


Figure 3.7c: Log normal distribution of SD with respect to R (class 13 through 18)

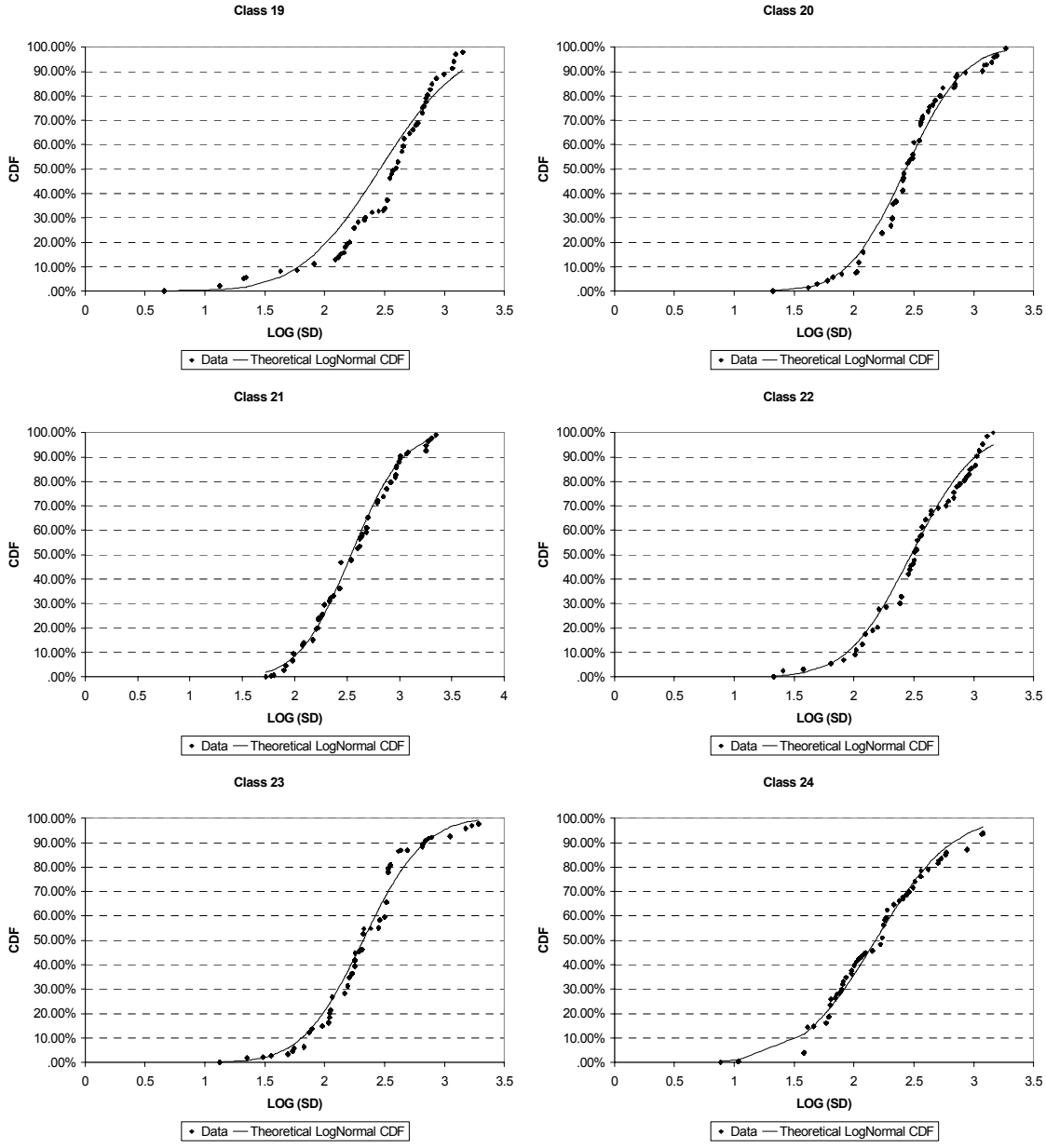


Figure 3.7d: Log normal distribution of SD with respect to R (class 19 through 24)

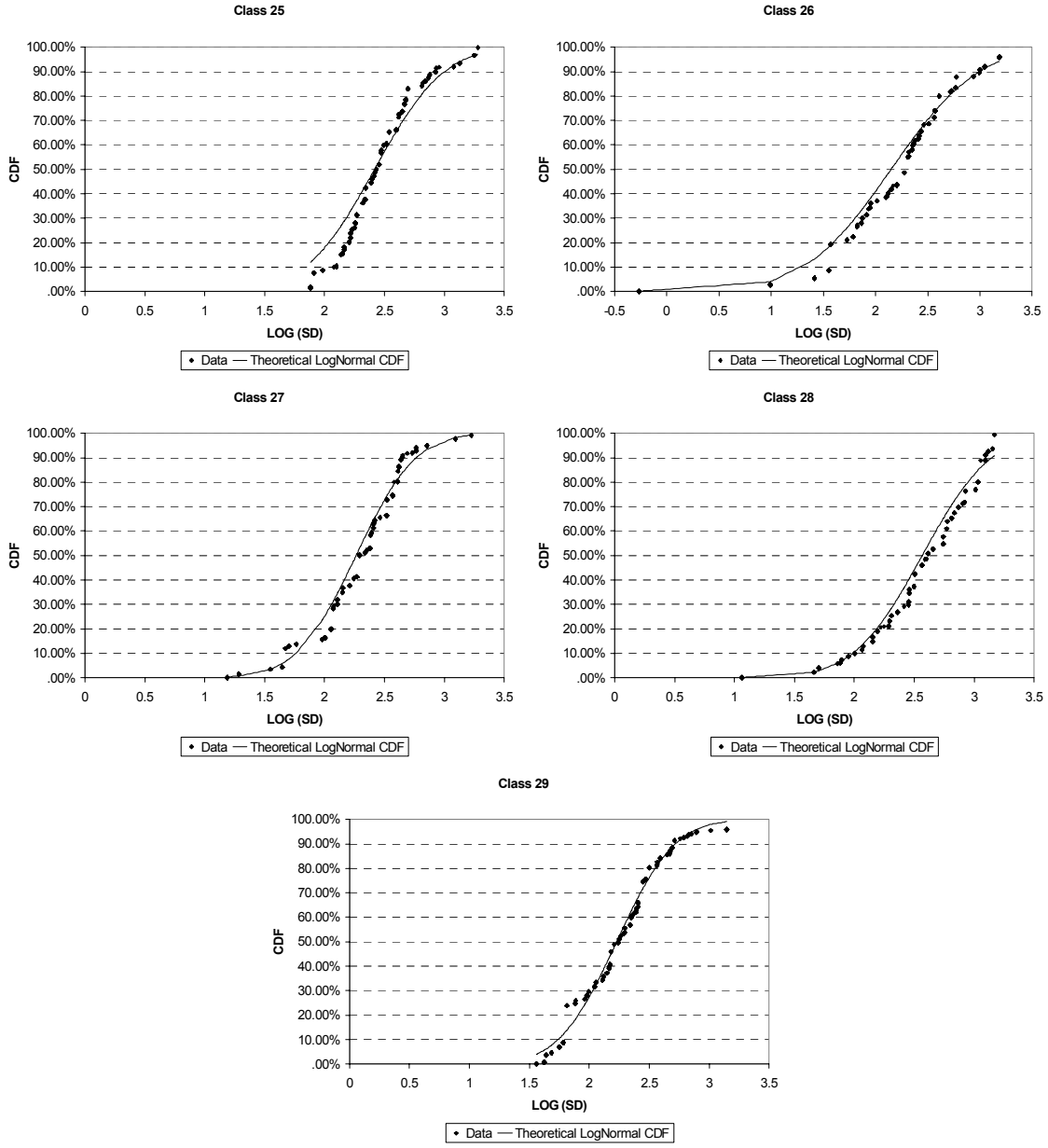


Figure 3.7e: Log normal distribution of SD with respect to R (class 25 through 29)

Table 3.3 shows the class number, the mean annual rainfall, the log transformed mean SD ($\bar{y}$), the log transformed standard deviation, σ_y, and the 95% confidence limits for the mean of the log transformed value.

Figures 3.8, 3.9, and 3.10 illustrate the bar chart representing log(SD) +/- 1.96 standard deviations and the fitted curves of $\bar{y}$ vs. R and σ_y vs. R. The resulting regression equations are:

$$\bar{y} = 0.22R^{0.4}e^{-0.00037R} \quad (3.4)$$

$$\sigma_y = 1.362R^{-0.1584} \quad (3.5)$$

where

$\bar{y} = \overline{\log(SD)}$ in t/km^2/yr

σ_y = standard deviation of log (SD)

R = mean annual rainfall in mm

Table 3.3: Analysis of log transformed SD with respect to R

Class	R (mm)	Number of points	$\bar{y}$	σ_y	$\bar{y}-1.96\sigma_y$	$\bar{y}+1.96\sigma_y$
1	198.12	50	1.83	0.59	2.98	0.67
2	237.49	50	1.90	0.57	3.02	0.77
3	270.64	50	1.95	0.56	3.05	0.85
4	314.58	50	2.00	0.55	3.08	0.93
5	363.98	50	2.06	0.54	3.11	1.01
6	405.64	50	2.10	0.53	3.13	1.07
7	442.47	50	2.13	0.52	3.15	1.11
8	488.95	50	2.17	0.51	3.17	1.17
9	538.48	50	2.20	0.50	3.19	1.21
10	593.09	50	2.23	0.50	3.20	1.26
11	646.43	50	2.26	0.49	3.22	1.30
12	678.18	50	2.27	0.48	3.22	1.32
13	702.31	50	2.28	0.48	3.23	1.34
14	748.03	50	2.30	0.48	3.24	1.37
15	798.83	50	2.32	0.47	3.25	1.39
16	834.39	50	2.33	0.47	3.25	1.41
17	863.60	50	2.34	0.47	3.25	1.42
18	897.89	50	2.35	0.46	3.26	1.44
19	927.10	50	2.35	0.46	3.26	1.45
20	951.23	50	2.36	0.46	3.26	1.46
21	975.36	50	2.37	0.46	3.26	1.47
22	1002.03	50	2.37	0.46	3.26	1.48
23	1028.70	50	2.38	0.45	3.27	1.49
24	1065.40	50	2.38	0.45	3.27	1.50
25	1118.74	50	2.39	0.45	3.27	1.51
26	1177.29	50	2.40	0.44	3.27	1.52
27	1266.19	50	2.40	0.44	3.26	1.54
28	1362.71	50	2.41	0.43	3.26	1.56
29	1821.18	63	2.40	0.41	3.21	1.59
Total		1463				

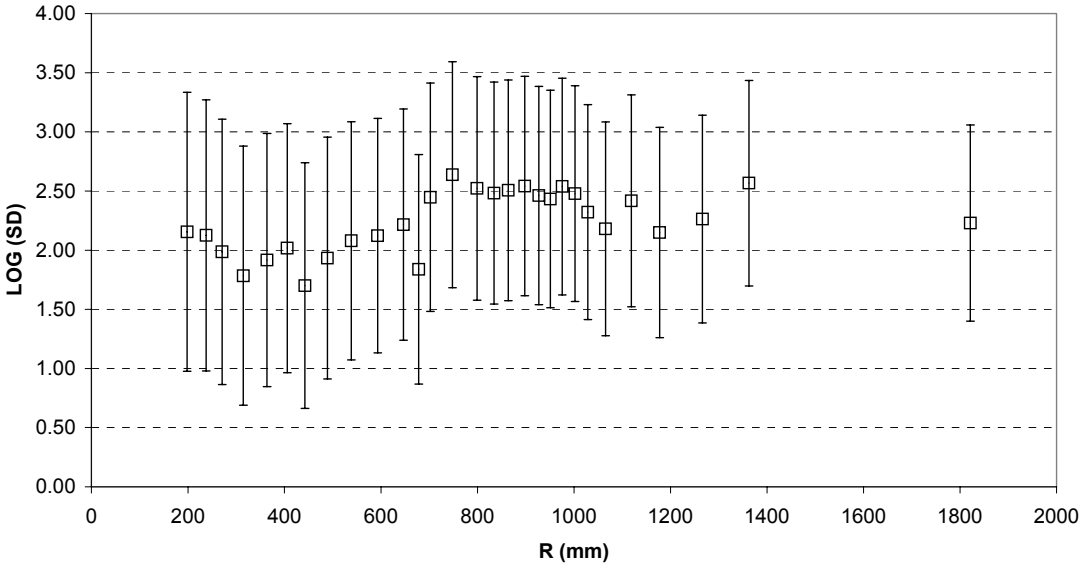


Figure 3.8: Log transformed SD and 95% confidence interval with respect to R

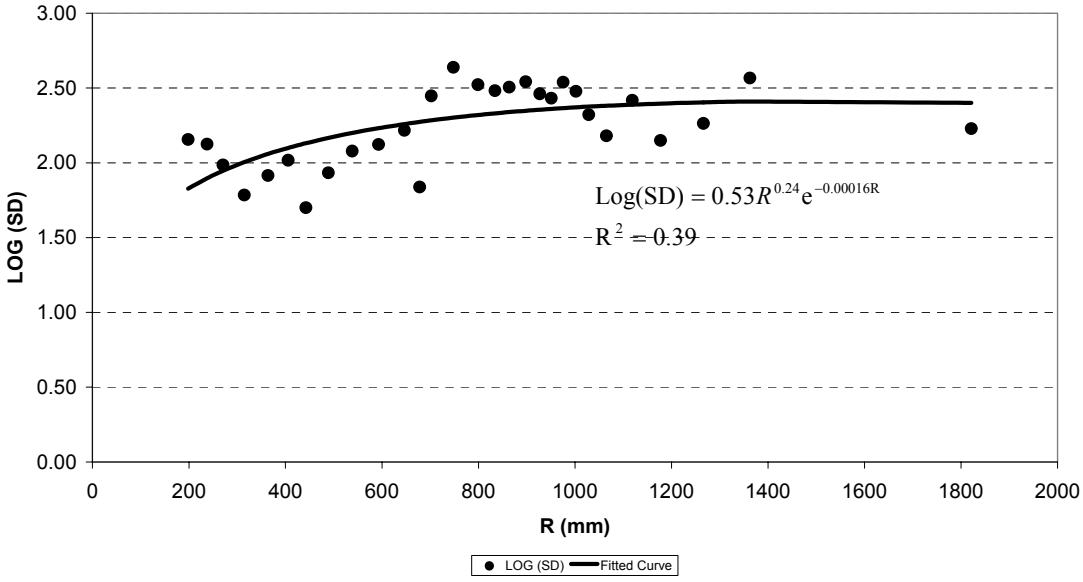


Figure 3.9: Log transformed SD with respect to R

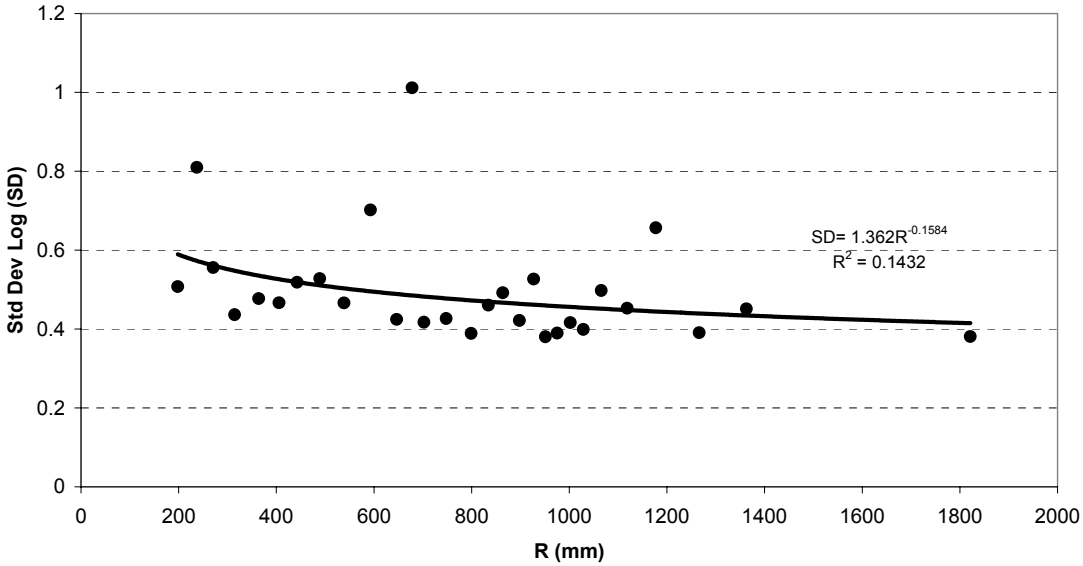


Figure 3.10: Standard deviation of log(SD) with respect to R

The 95% untransformed confidence limits are obtained by taking the anti-log of $\bar{y} - 1.96\sigma_y$ and $\bar{y} + 1.96\sigma_y$ respectively as shown on figure 3.11 and table 3.4.

It then becomes possible to estimate the specific degradation that is obtained on any drainage basin knowing its mean annual rainfall at a 95% confidence level with the following relationship:

$$SD_{95} = 0.02R^{1.7}e^{-0.0017R} \pm 1.96\sigma \qquad (3.6)$$

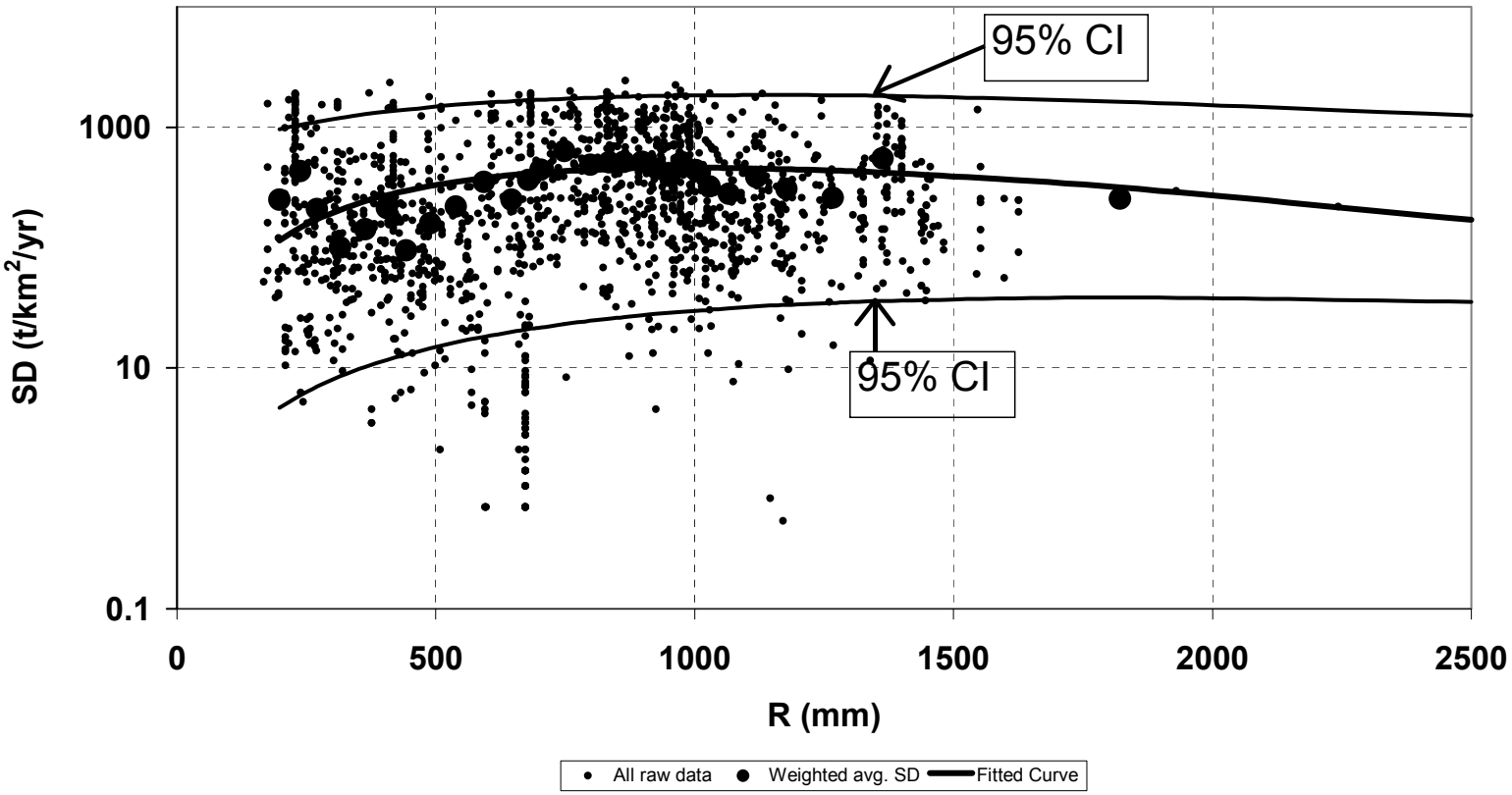


Figure 3.11: SD as function of R at a 95% confidence interval

Table 3.4: Analysis of the mean SD with respect to R at 95% CI

Class	R (mm)	Number of points	$\overline{SD}$	$\overline{SD}-1.96\sigma$	$\overline{SD}+1.96\sigma$
1	198.12	50	114.69	4.70	959.81
2	237.49	50	145.98	5.94	1044.12
3	270.64	50	172.30	7.03	1111.26
4	314.58	50	206.50	8.52	1194.97
5	363.98	50	243.30	10.23	1282.02
6	405.64	50	272.51	11.70	1349.75
7	442.47	50	296.73	13.00	1405.42
8	488.95	50	324.93	14.63	1470.18
9	538.48	50	351.93	16.36	1532.63
10	593.09	50	377.97	18.23	1593.94
11	646.43	50	399.63	20.00	1646.50
12	678.18	50	410.79	21.03	1674.48
13	702.31	50	418.42	21.80	1694.16
14	748.03	50	430.94	23.22	1727.78
15	798.83	50	442.00	24.73	1759.76
16	834.39	50	448.05	25.74	1778.94
17	863.60	50	452.03	26.54	1792.79
18	897.89	50	455.61	27.45	1806.95
19	927.10	50	457.79	28.20	1817.29
20	951.23	50	459.01	28.80	1824.68
21	975.36	50	459.73	29.38	1831.06
22	1002.03	50	459.97	30.00	1836.97
23	1028.70	50	459.65	30.59	1841.73
24	1065.40	50	458.37	31.38	1846.48
25	1118.74	50	454.89	32.44	1849.83
26	1177.29	50	449.09	33.50	1849.03
27	1266.19	50	436.97	34.90	1839.72
28	1362.71	50	420.17	36.14	1819.94
29	1821.18	63	315.54	38.65	1632.38
Total		1463			

To determine how accurately Eq. 3.6 predicts SD, we will calculate the ratio of predicted SD values (SD_{calc}) over observed (or measured) SD values (SD_{obs}) for all the 1463 data points and analyze its distribution. The ratio of predicted to measured SD will be symbolized by R. A lognormal distribution of log(R) is obtained as shown on figure 3.12. The mean and standard deviation of the log values of R are:

$\overline{Log_R} = 0.31$

$\sigma_{LogR} = 0.52.$

Thus $\overline{Log_R} - 1.96\,\sigma_{LogR} = -0.71$ and $\overline{Log_R} + 1.96\,\sigma_{LogR} = 1.33$. It results that 95% of the values of log (R) are between –0.71 and 1.33.

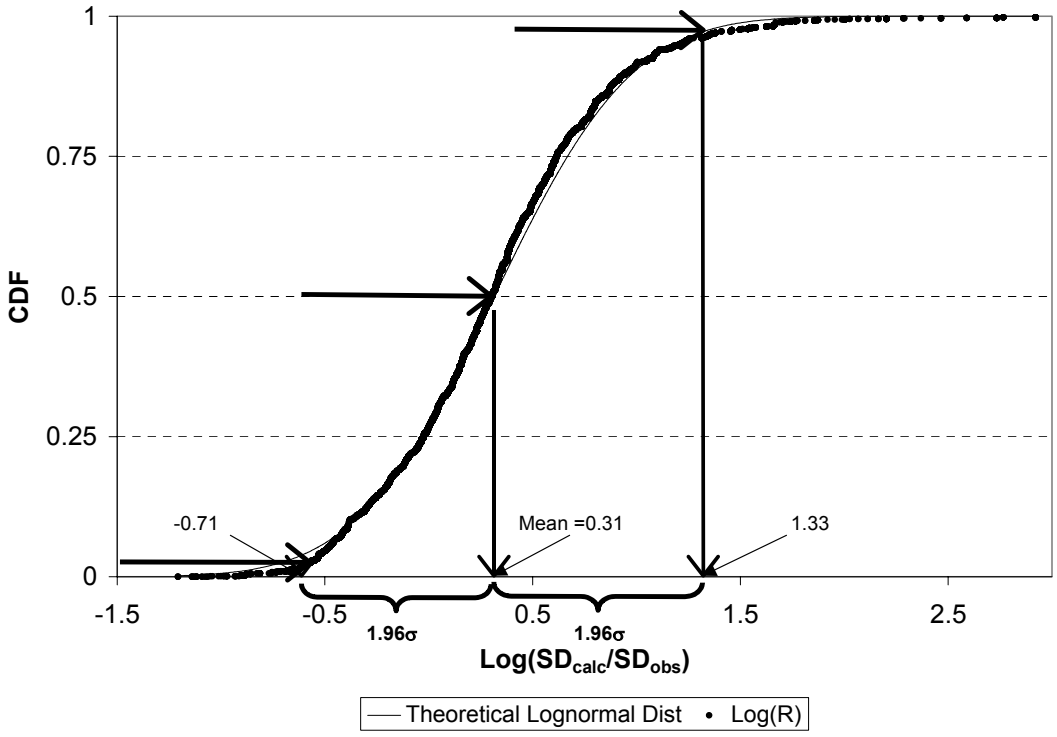


Figure 3.12: Distribution of the ratios of Log (SD_{calc}/SD_{obs}) using the equation with R

3.5.2. Specific degradation as a function of drainage area

Plotting the raw specific degradation data with respect to drainage area yields the graph shown in figure 3.13. As in the previous sections, the data points are very scattered on the graph. Fitting a regression equation to the data yields the following equation, which also has a very poor coefficient of correlation, i.e. $R^2 = 0.02$:

$$SD = 299.94A^{-0.07} \tag{3.7}$$

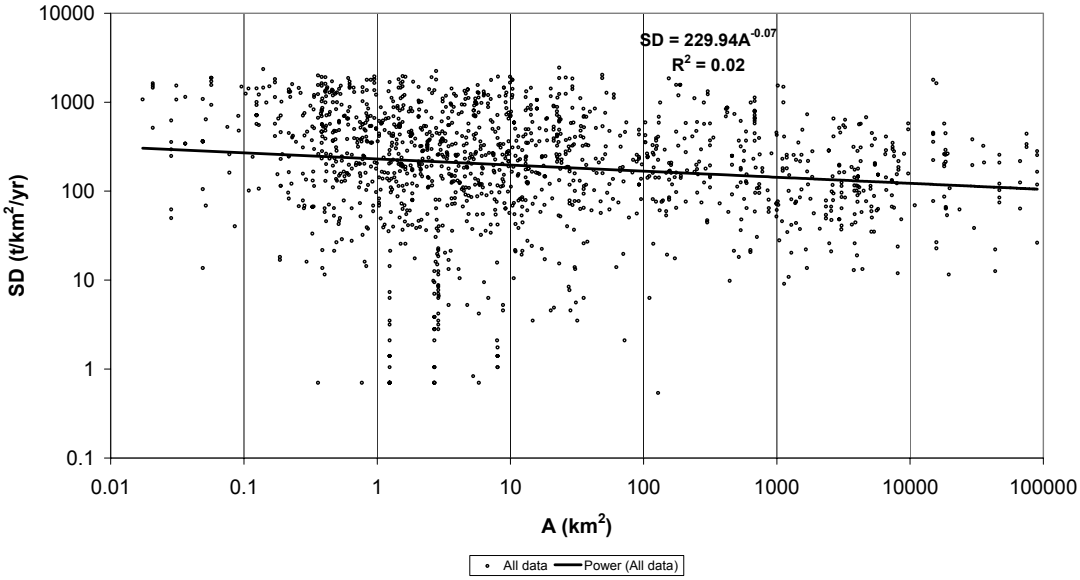


Figure 3.13: SD as function of A. Plot of all raw data

The analysis of the mean SD values is shown in table 3.5 and the resulting graph in figure 3.14. The obtained regression equation that fits the mean value is given by the following:

$$\overline{SD} = 410.44A^{-0.09} \tag{3.8}$$

with $R^2 = 0.66$. When applied to all the raw data, Eq. (3.8) yield a correlation coefficient of $R^2 = 0.06$.

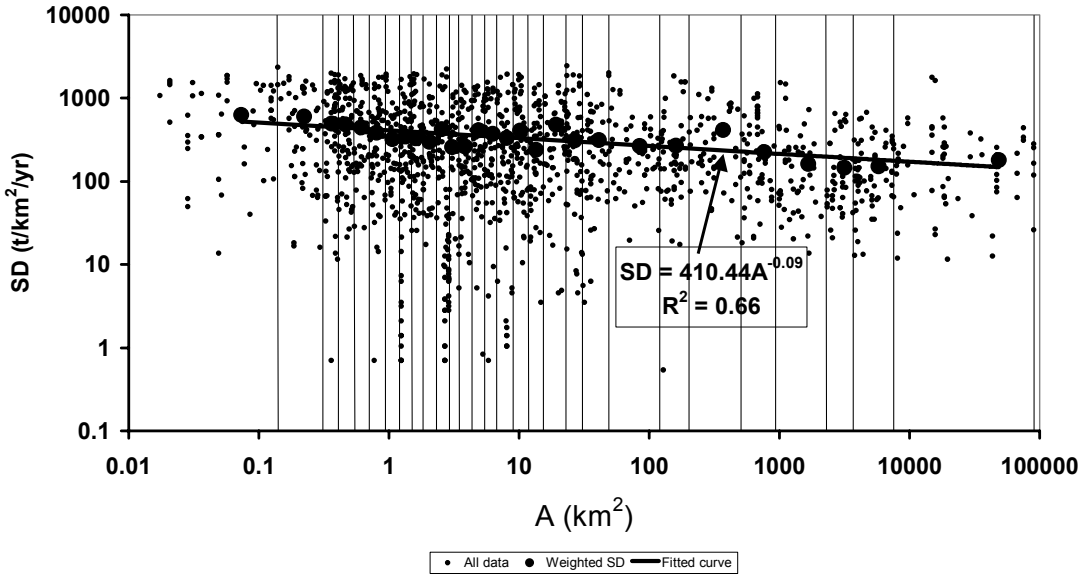


Figure 3.14: Weighted average SD as function of A

Table 3.5: Weight-averaged SD as function of A

Class	A (km^2)	Number of points	$\overline{SD}$
1	0.07	50	519.19
2	0.22	50	469.84
3	0.36	50	449.68
4	0.46	50	439.95
5	0.61	50	428.95
6	0.80	50	418.63
7	1.07	50	408.09
8	1.34	50	399.69
9	1.61	50	393.31
10	2.05	50	384.83
11	2.55	50	377.26
12	3.06	50	371.18
13	3.83	50	363.69
14	4.88	50	355.86
15	6.28	50	347.88
16	8.04	50	340.23
17	10.22	50	332.97
18	13.44	50	324.85
19	19.22	50	314.57
20	26.69	50	305.41
21	40.95	50	293.87
22	84.50	50	275.32
23	160.39	50	259.89
24	369.72	50	241.07
25	764.70	50	225.81
26	1664.72	50	210.54
27	3164.98	50	198.71
28	5784.77	50	188.21
29	48714.02	63	155.37
Total		1463	

Dividing the dataset by classes of drainage area with each class containing 50 points, the same lognormal distribution is obtained as shown in figures 3.15a, 3.15b, 3.15c, 3.15d, 3.15e).

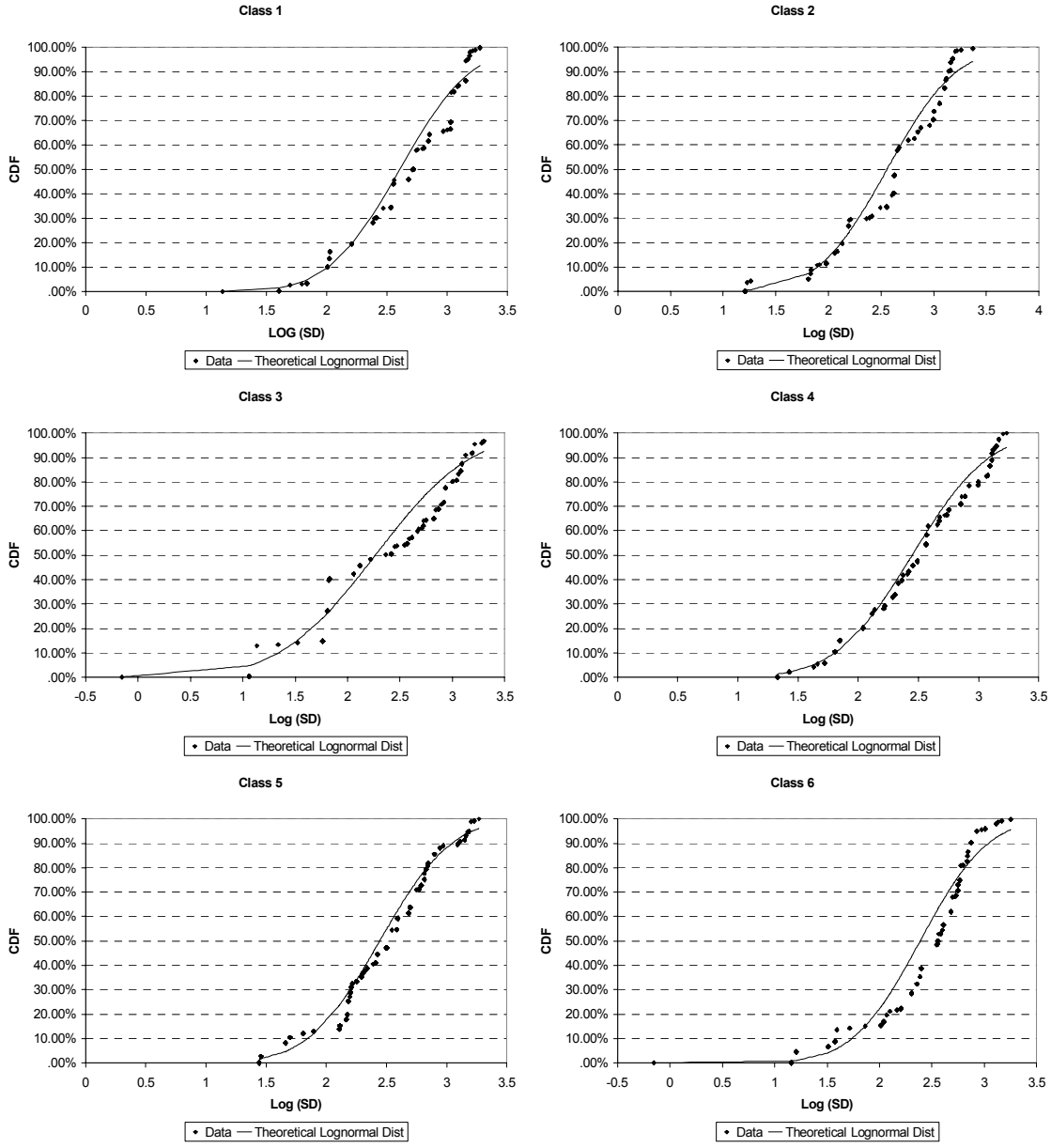


Figure 3.15a: Log normal distribution of SD with respect to A (class 1 through 6)

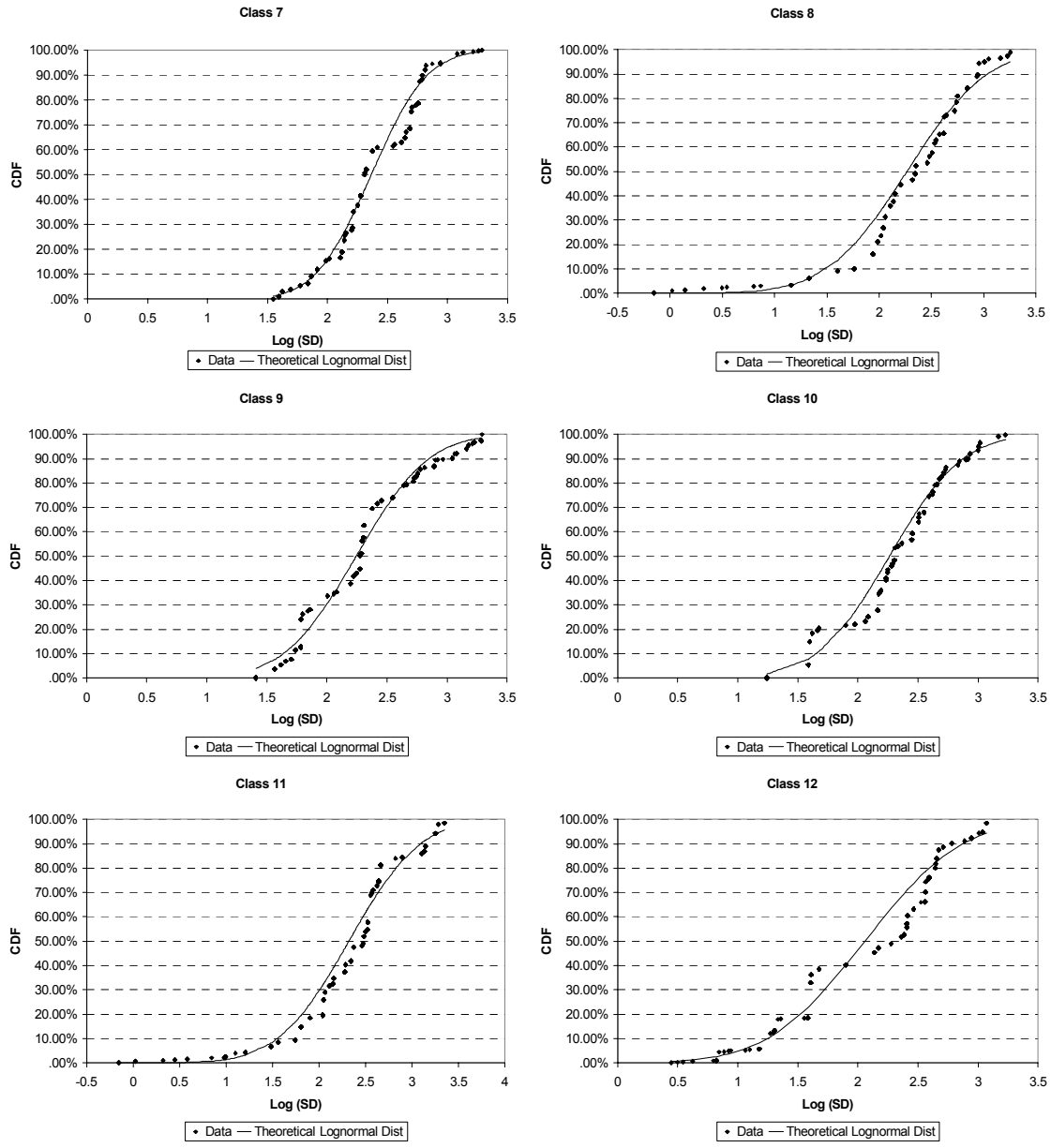


Figure 3.15b: Log normal distribution of SD with respect to A (class 7 through 12)

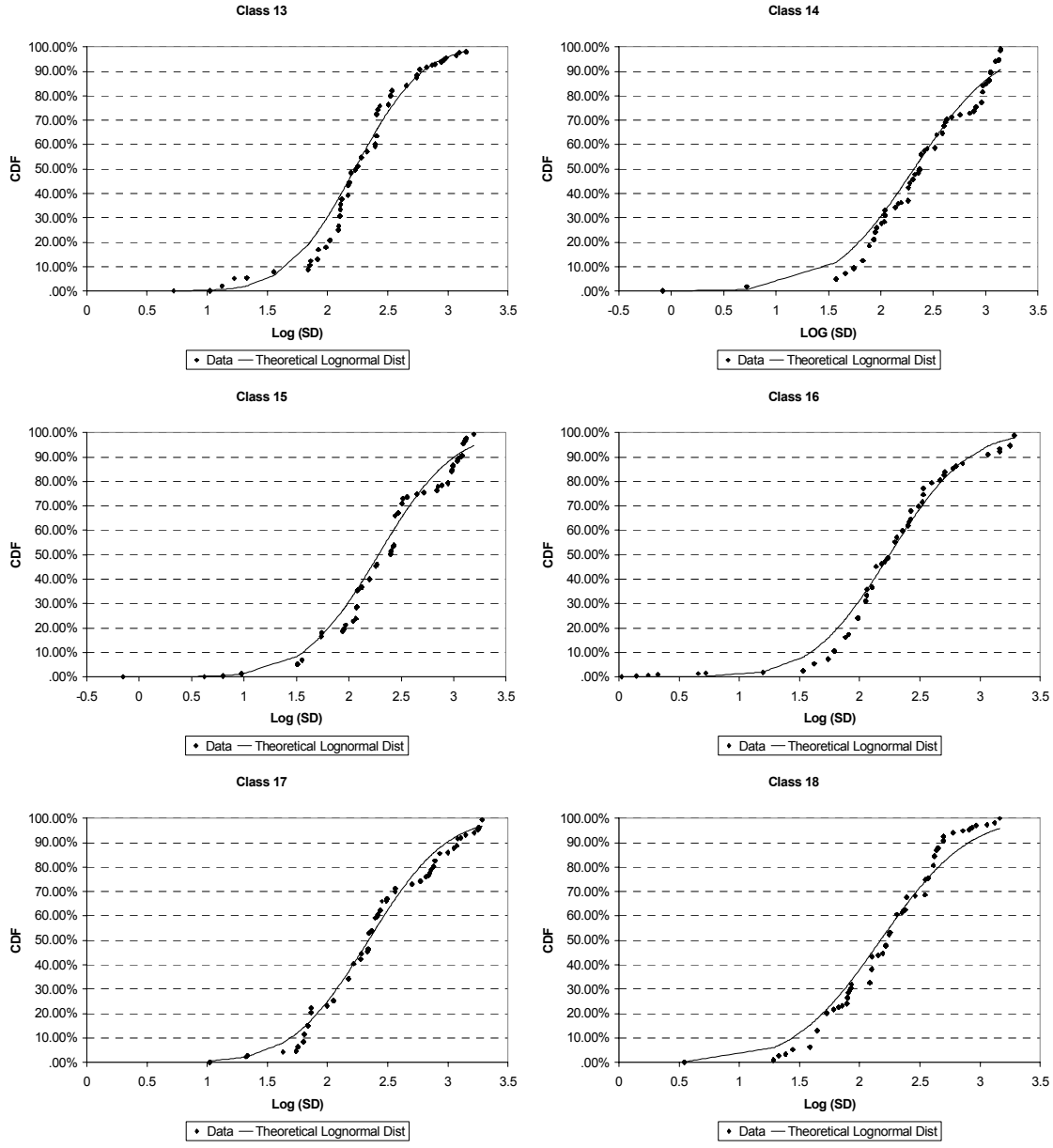


Figure 3.15c: Log normal distribution of SD with respect to A (class 13 through 18)

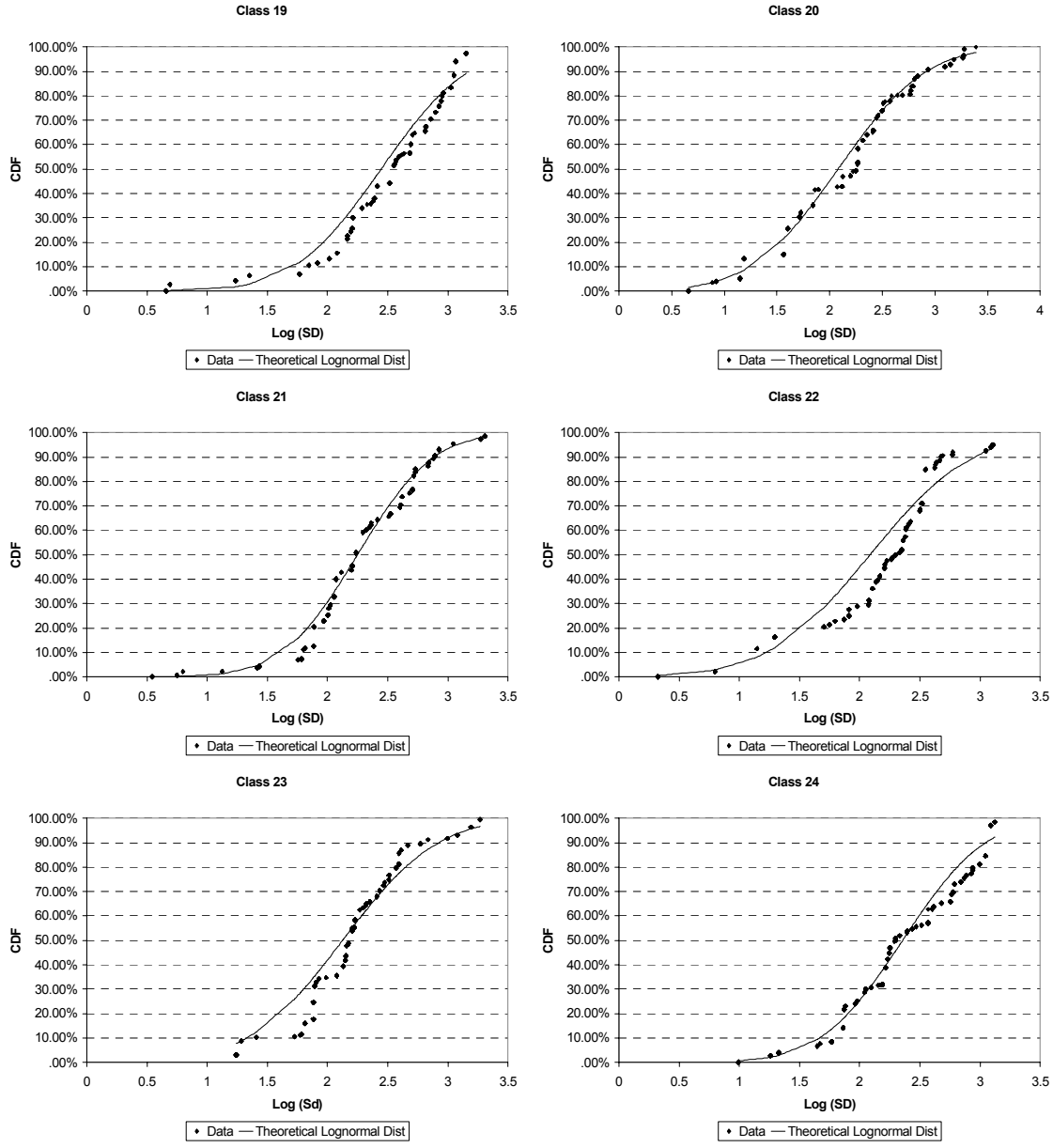


Figure 3.15d: Log normal distribution of SD with respect to A (class 19 through 24)

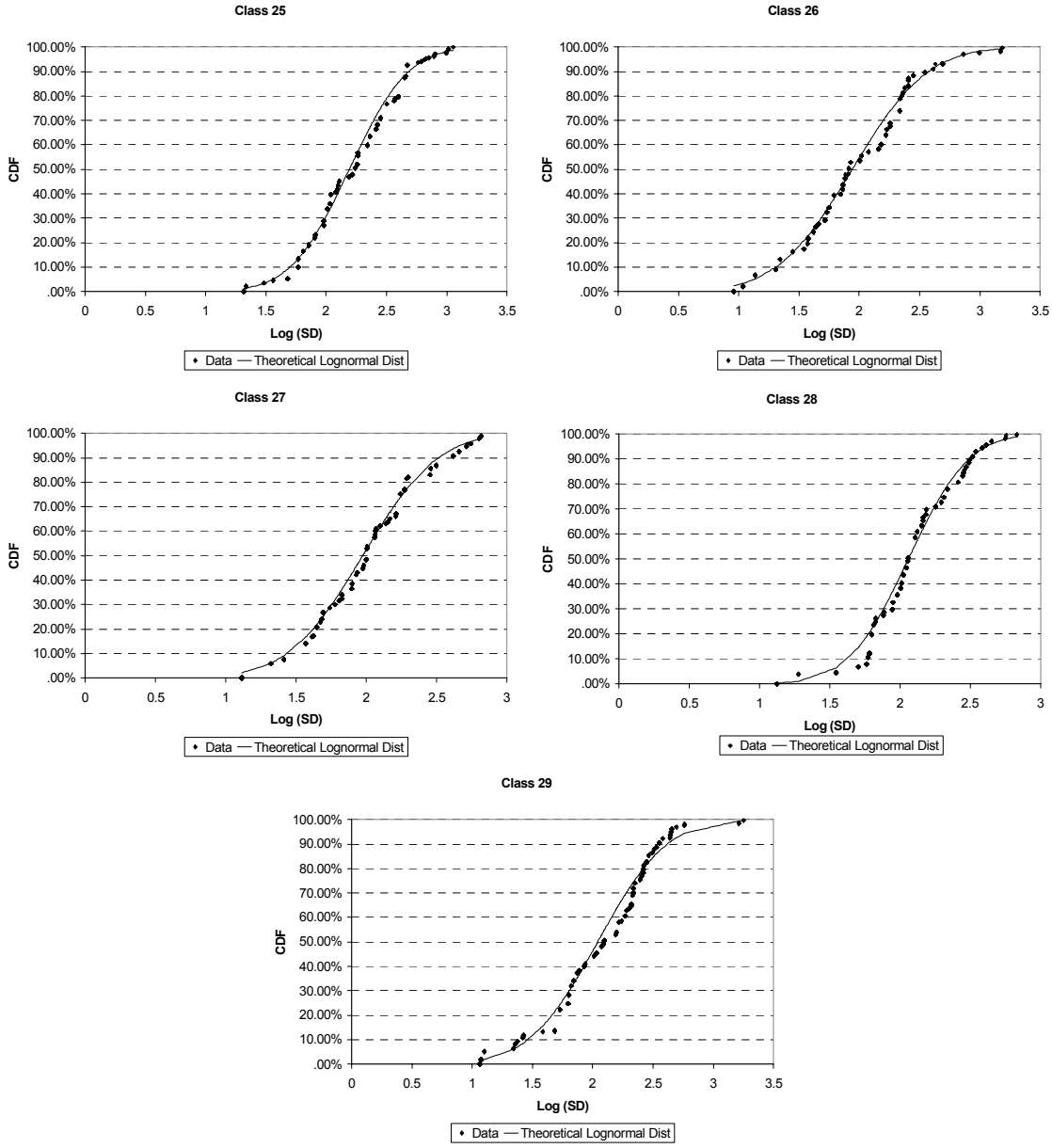


Figure 3.15e: Log normal distribution of SD with respect to A (class 25 through 29)

The log transformed specific degradation values are computed by $\bar{y} = \overline{\log(SD)}$.

Table 3.6 shows the class number, the average drainage area, the log transformed mean specific degradation ($\bar{y}$), the log transformed standard deviation, σ_y, and the 95% confidence limits for the mean of the log transformed value.

Figures 3.16, 3.17, and 3.18 illustrate the bar chart representing log(SD) +/- 1.96 standard deviations and the fitted curves of $\bar{y}$ vs. A and σ_y vs. A. The resulting regression equations are:

$$\bar{y} = 2.35A^{-0.0166} \quad (3.9)$$

$$\sigma_y = 0.53A^{-0.0161} \quad (3.10)$$

where

$\bar{y} = \overline{\log(SD)}$ in t/km^2/yr

σ_y = standard deviation of log (SD)

A = drainage area in km^2

Table 3.6: Analysis of log transformed SD with respect to A

Class	A (km^2)	Number of points	$\bar{y}$	σ_y	$\bar{y}-1.96\sigma_y$	$\bar{y}+1.96\sigma_y$
1	0.07	50	2.45	0.55	1.34	3.56
2	0.22	50	2.41	0.54	1.32	3.50
3	0.36	50	2.39	0.54	1.31	3.47
4	0.46	50	2.38	0.54	1.30	3.46
5	0.61	50	2.37	0.54	1.29	3.44
6	0.80	50	2.36	0.53	1.29	3.42
7	1.07	50	2.35	0.53	1.28	3.41
8	1.34	50	2.34	0.53	1.28	3.40
9	1.61	50	2.33	0.53	1.27	3.39
10	2.05	50	2.32	0.53	1.27	3.37
11	2.55	50	2.31	0.52	1.26	3.36
12	3.06	50	2.30	0.52	1.26	3.35
13	3.83	50	2.30	0.52	1.25	3.34
14	4.88	50	2.29	0.52	1.25	3.32
15	6.28	50	2.28	0.52	1.24	3.31
16	8.04	50	2.27	0.51	1.24	3.30
17	10.22	50	2.26	0.51	1.23	3.28
18	13.44	50	2.25	0.51	1.23	3.27
19	19.22	50	2.24	0.51	1.22	3.25
20	26.69	50	2.22	0.50	1.21	3.23
21	40.95	50	2.21	0.50	1.21	3.21
22	84.50	50	2.18	0.50	1.19	3.17
23	160.39	50	2.16	0.49	1.18	3.14
24	369.72	50	2.13	0.48	1.16	3.10
25	764.70	50	2.10	0.48	1.15	3.06
26	1664.72	50	2.08	0.47	1.13	3.02
27	3164.98	50	2.05	0.47	1.12	2.99
28	5784.77	50	2.03	0.46	1.11	2.96
29	48714.02	63	1.96	0.45	1.07	2.86
Total		1463				

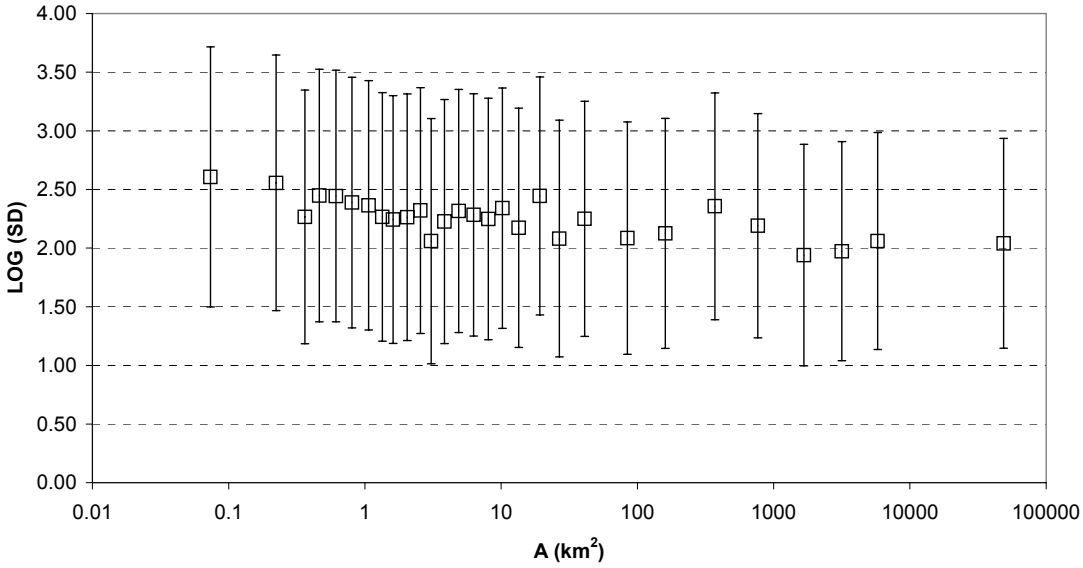


Figure 3.16: Log transformed SD and 95% confidence interval with respect to A

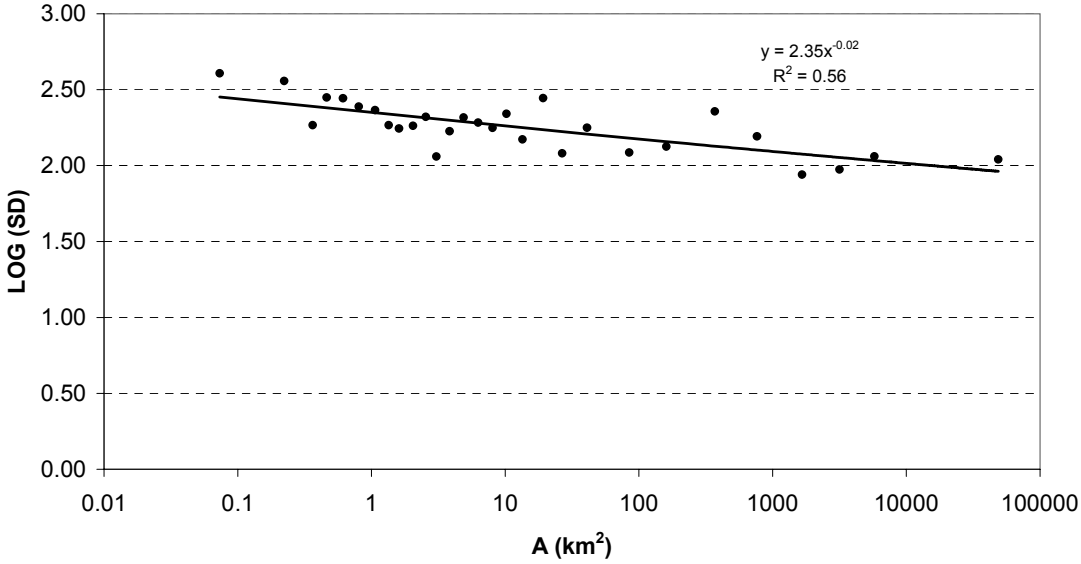


Figure 3.17: Log transformed SD with respect to A

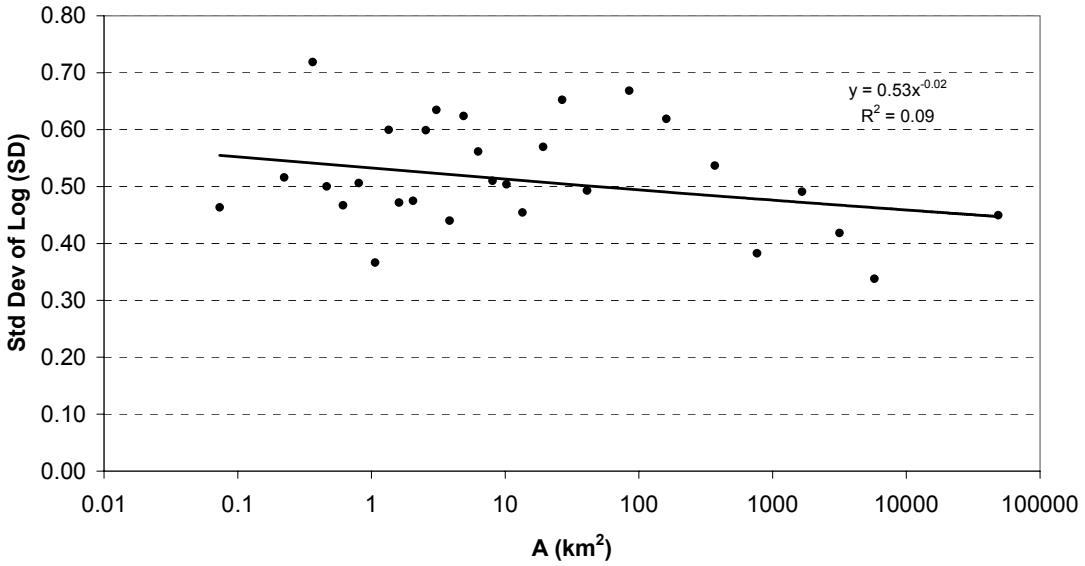


Figure 3.18: Standard deviation of log(SD) with respect to A

To obtain the relationship between the untransformed specific degradation with respect to drainage area and at a 95% confidence interval, the mean specific degradation value for each class sample is computed and the equivalent 95% limits are added (or subtracted) to each mean value. The log values of the standard deviations are added or subtracted to the mean log value before addition or subtraction to the untransformed specific degradation value as shown on figure 3.19. Table 3.7 shows the untransformed specific degradation values and the 95% confidence limits.

It then becomes possible to estimate the specific degradation that is obtained on any drainage basin knowing its drainage area at a 95% confidence level with the following relationship:

$$SD_{95} = 410.44A^{-0.09} \pm 1.96\sigma \qquad (3.11)$$

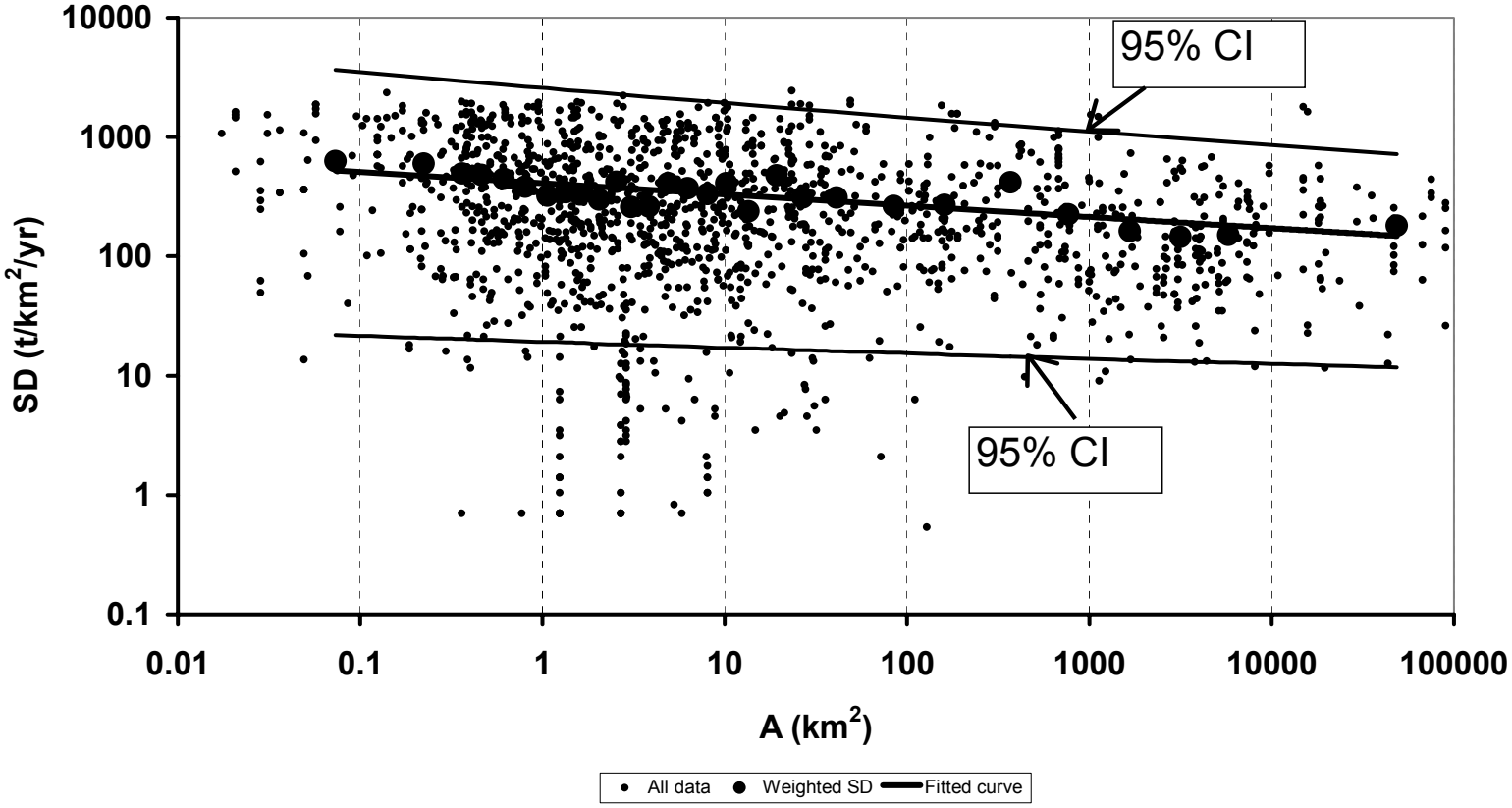


Figure 3.19: SD as function of A at 95% confidence interval

Table 3.7: Analysis of the mean SD with respect to A

Class	A (km^2)	Number of points	$\overline{SD}$	$\overline{SD}-1.96\sigma$	$\overline{SD}+1.96\sigma$
1	0.07	50	519.19	22.00	3641.64
2	0.22	50	469.84	20.76	3139.77
3	0.36	50	449.68	20.25	2944.35
4	0.46	50	439.95	20.00	2852.06
5	0.61	50	428.95	19.71	2749.22
6	0.80	50	418.63	19.44	2654.23
7	1.07	50	408.09	19.17	2558.75
8	1.34	50	399.69	18.95	2483.70
9	1.61	50	393.31	18.78	2427.35
10	2.05	50	384.83	18.55	2353.27
11	2.55	50	377.26	18.35	2288.03
12	3.06	50	371.18	18.19	2236.14
13	3.83	50	363.69	17.99	2172.92
14	4.88	50	355.86	17.78	2107.64
15	6.28	50	347.88	17.56	2042.01
16	8.04	50	340.23	17.35	1979.84
17	10.22	50	332.97	17.15	1921.66
18	13.44	50	324.85	16.92	1857.37
19	19.22	50	314.57	16.63	1777.22
20	26.69	50	305.41	16.38	1707.01
21	40.95	50	293.87	16.05	1620.20
22	84.50	50	275.32	15.51	1484.43
23	160.39	50	259.89	15.06	1375.04
24	369.72	50	241.07	14.49	1245.98
25	764.70	50	225.81	14.02	1144.82
26	1664.72	50	210.54	13.54	1046.79
27	3164.98	50	198.71	13.17	973.02
28	5784.77	50	188.21	12.82	909.15
29	48714.02	63	155.37	11.71	719.07
Total		1463			

The distribution log(R), where R = SDcalc/SDobs using Eq. 3.11 yields the lognormal distribution shown on figure 3.20. The mean and standard deviation of the log (R) are:

$\overline{Log_R} = 0.26$

$\sigma_{LogR} = 0.54$

Thus $\overline{Log_R}$ -1.96 σ_{LogR} = -0.80 and $\overline{Log_R}$ +1.96 σ_{LogR} = 1.32. It results that 95% of the values of log (R) are between –0.80 and 1.32.

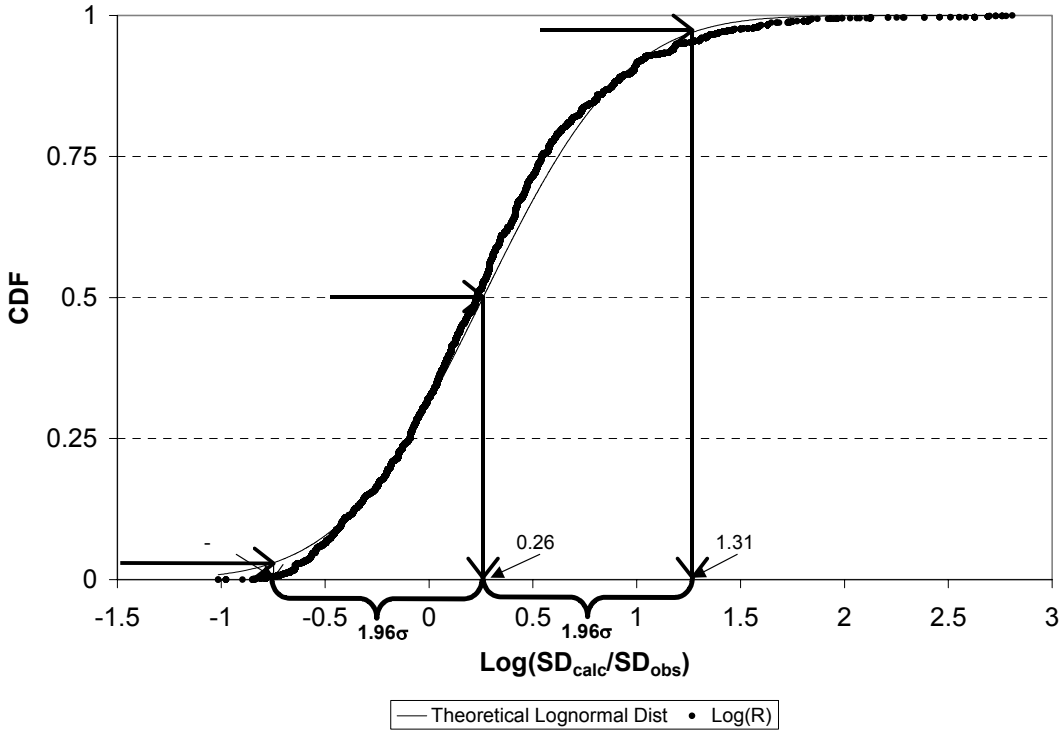


Figure 3.20: Distribution of the ratios of Log (SD_{calc}/SD_{obs}) using the equation with A

3.5.3. Specific degradation as a function of mean annual rainfall and drainage area

In this section, we will combine Eq. (3.6) and (3.11) to obtain a regression equation of specific degradation as a function of both mean annual rainfall and drainage area as independent variables.

Maintaining the form of the already obtained equations for mean annual rainfall and drainage area, the obtained expression is as follows:

$$SD_{95} = 0.026A^{-0.09}R^{1.7}e^{-0.0017R} \pm 1.96\sigma \qquad (3.12)$$

$R^2 = 0.16$

where,

SD = specific degradation in metric tons/km^2/year

A = drainage area in km^2

R = mean annual rainfall in mm

The distribution of log(R), where R = SD_{calc}/SD_{obs} using Eq. 3.12 yields a lognormal distribution as shown on figure 3.21. It is found that:

$\overline{Log_R} = 0.32$

$\sigma_{LogR} = 0.51$

Thus $\overline{Log_R}$ -1.96 σ_{LogR} = -0.68 and $\overline{Log_R}$ +1.96 σ_{LogR} = 1.32. Therefore 95% of the values of log (R) are between –0.68 and 1.32.

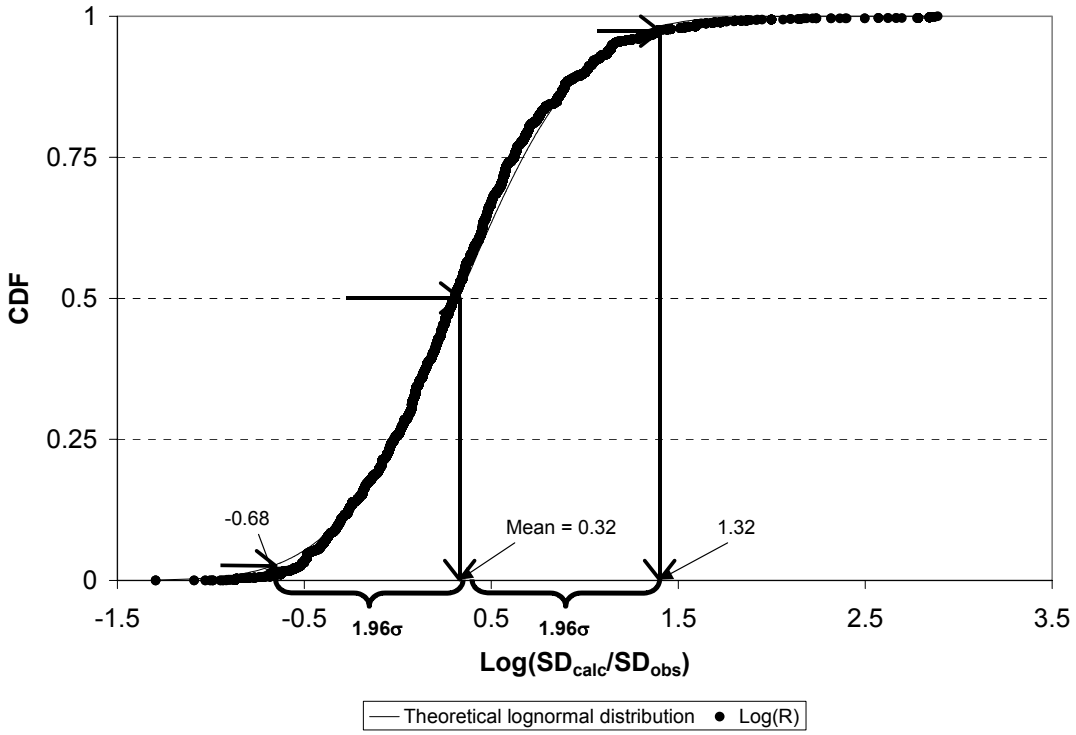


Figure 3.21: Distribution of ratio of Log (SD_{calc}/SD_{obs}) using the equation with A& R.

Summary and conclusions:

The following observations can be made regarding chapter 3:

- A fair correlation with a coefficient of correlation of 53% is obtained between weighted average SD and mean annual R. The resulting equation is a Gamma type function, i.e. $SD = aR^b e^{-cR}$ with a peak SD value of approximately 450 metric tons per square kilometer per year at a mean annual R of 900 mm.
- SD can also be correlated with A with a good R^2 of 0.66.
- SD decreases with A.
- From table 3.8 shown below, it can be concluded that the equation resulting from the combination of A and R yields the best results with a σ_y of 0.51, followed by the

equation with R, which has a σ_{LogR} of 0.52. The equation with A yields a less accurate predictions with σ_{LogR} of 0.54. Therefore, incorporating more variables improves the accuracy of the predictions.

Table 3.8: Summary of SD equations and 95% confidence intervals

Parameter used	Equation	R^2 using mean SD values	R^2 using all raw data	$\overline{Log_R}$	σ_{LogR}	95% CI	
						Lower limit	Upper limit
R	$SD = 0.02R^{1.7}e^{-0.0017R}$	0.53	0.06	0.31	0.52	-0.71	1.33
A	$SD = 410A^{-0.09}$	0.66	0.06	0.26	0.54	-0.80	1.32
AR	$SD = 0.026A^{-0.09}R^{1.7}e^{-0.0017R}$	N/A	0.16	0.32	0.51	-0.68	1.32

CHAPTER IV

ANALYSIS OF FOUR-PARAMETER DATABASE

The four-parameter database consists of 551 data points extracted from the two-parameter dataset and for which slope and vegetation type data have been added. Slope values were obtained using USGS HYDRO1k data as illustrated in figure 4.1. USGS HYDRO1k was developed at the U.S. Geological Survey's (USGS) EROS Data Center. USGS HYDRO1k is a geographic database of topographically derived data sets based on USGS 30 arc-second digital elevation model (DEM) of the world (GTOPO30), which provides a standard suite of geo-referenced data sets (at a resolution of 1 km).

The land cover data set is an Arc/INFO grid map of land cover characteristics for North America as shown in figure 4.2. The nominal spatial resolution is 1 km and the data set is based on 1-km AVHRR data.

Figure 4.1: Average basin slopes

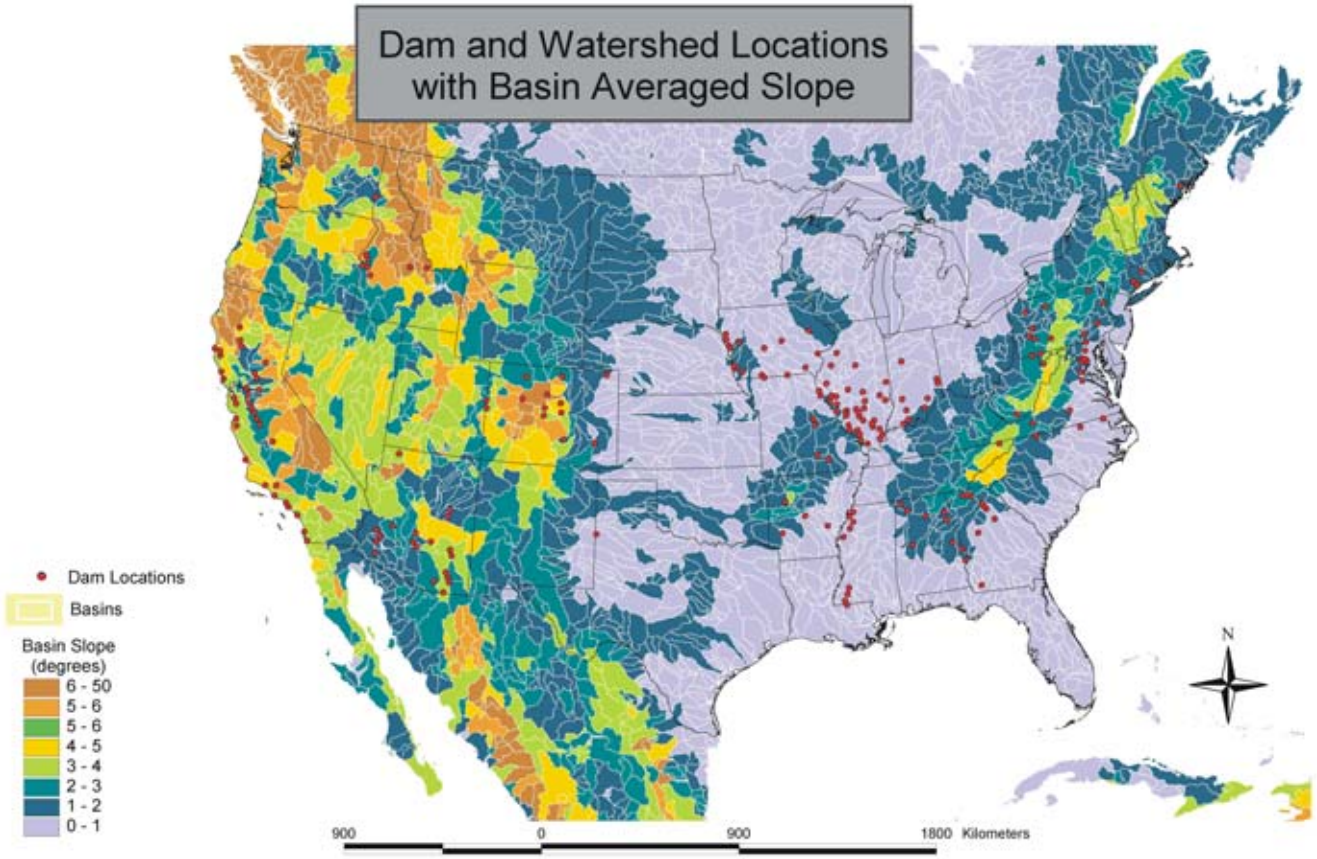
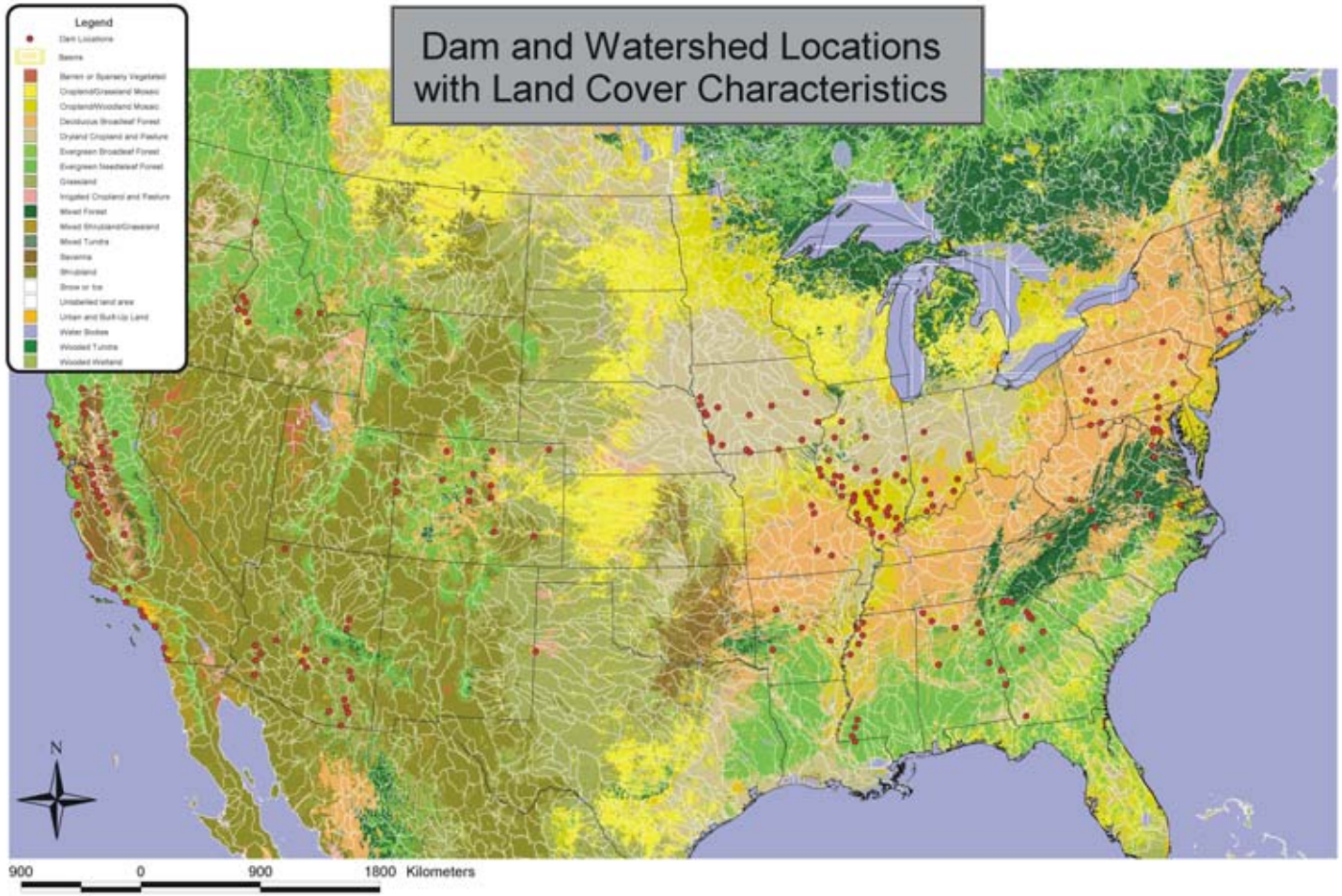


Fig. 4.2: Land cover characteristics of the basins



The following table describes the display of land cover characteristics classes:

1	Urban and Built-Up Land
2	Dryland Cropland and Pasture
3	Irrigated Cropland and Pasture
4	Mixed Dryland/Irrigated Cropland and Pasture
5	Cropland/Grassland Mosaic
6	Cropland/Woodland Mosaic
7	Grassland
8	Shrubland
9	Mixed Shrubland/Grassland
10	Savanna
11	Deciduous Broadleaf Forest
12	Deciduous Needleleaf Forest
13	Evergreen Broadleaf Forest
14	Evergreen Needleleaf Forest
15	Mixed Forest
16	Water Bodies
17	Herbaceous Wetland
18	Wooded Wetland
19	Barren or Sparsely Vegetated
20	Herbaceous Tundra
21	Wooded Tundra

22 Mixed Tundra

23 Bare Ground Tundra

24 Snow or Ice

255 Unlabelled land area

Thus, in addition to the specific degradation value (SD), we have drainage area (A), rainfall (R), slope (S) and vegetation index (V).

A sample of the four-parameter database can be seen on Table 4.1. The entire database is in Appendix B.

4.1. Location of the drainage basins

The 551 data points are those of the basins represented in USGS HYDRO1k map as seen on figure 4.3. The basins, which are part of the original dataset, also include slope and vegetation type data.

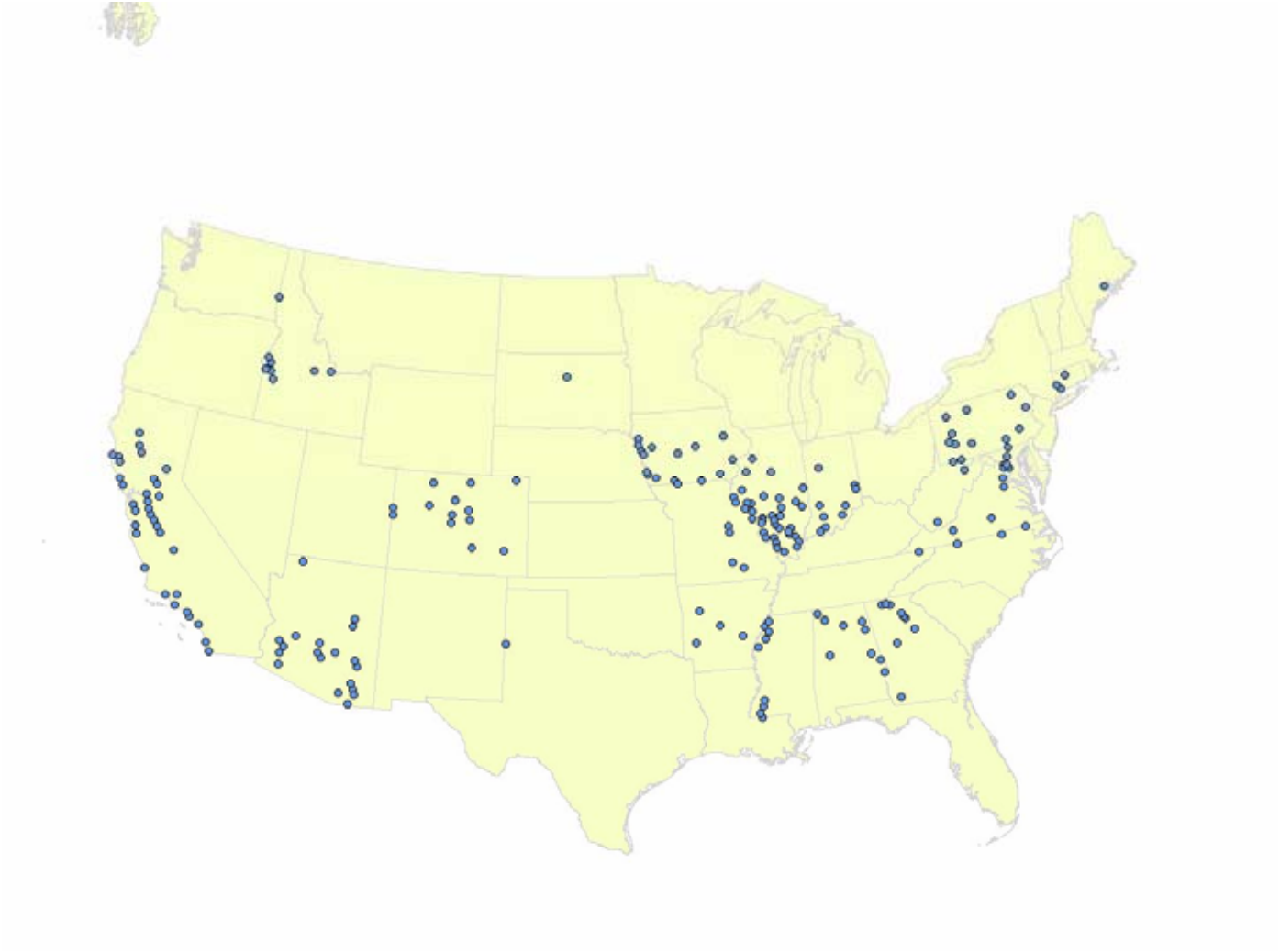


Fig 4.3: Locations of the basins

Table 4.1: Sample of the four-parameter database

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
No.	**Res. ID**	**Reservoir**	**Stream**	**Nearest town**	**Annual Rainfall**		**Dr Area**		**Land cover type**	**V factor**	**Slope**		**Date of survey**		**Surv. Per. (yrs)**	**Spec. Wt (lb/ft^3)**	**Specific degradation**			**Agcy suppl. data**
					(in)	**(mm)**	**(mi^2)**	**(km^2)**			**degree**	**(%)**	**Starts**	**Ends**			**(AF/mi^2 yr)**	**(T/mi^2 yr)**	**(T/km^2 yr)**	
1	15-31	Enid Reservoir	Yocona River	Enid Miss	52,2	1325,88	516	1336	Cropland/Pasture	0,023	0,029	0,05	1951	avr-57	9,8	60	0,558	729	255	CE
2	15-32	Grenada Reservoir	Yalobusha River	Grenada Miss	52,9	1343,66	1219	3157	Cropland/Pasture	0,023	0,029	0,05	juin-49	avr-61	11,8	60	1,205	1575	551	CE
3	71-7	Davis	Shaw Creek	Stockton, Calif	13,9	353,06	7,62	19,74	Cropland/Pasture	0,023	0,05	0,09	1917	Sept. 1945	28,0	63	0,251	344	120	SCS
4	17-3	Shafar Lake	Tippecanoe River	Monticello Ind.	36,2	919,48	1698	4398	Cropland/Pasture	0,023	0,14	0,24	mai-19	Aug. 1940	17,2	75	0,023	38	13	SCS
5	24-27	Schmidt Pond	Unnamed	Chatham, Ill	35	889,00	1,3	3,367	Cropland/Pasture	0,023	0,167	0,29	1943	Aug. 1952	9,0	41,2	0,022	197	69	IWs
6	24-4a	Lake Decatur	Sangamon River	Decatur, Ill.	40,2	1021,08	902	2336	Cropland/Pasture	0,023	0,167	0,29	July. 1936	June. 1946	10,0	51,7	0,26	224	78	SCS
7	24-4a	Lake Decatur	Sangamon River	Decatur, Ill.	40,2	1021,08	902	2336	Cropland/Pasture	0,023	0,167	0,29	1956	1966	10,0		0,11	154	54	SCS
8	24-26	Aschauer Pond	Unnamed	Riverton, Ill	35,2	894,08	0,518	1,342	Cropland/Pasture	0,023	0,167	0,29	1939	Aug. 1952	13,0	56,2	1,31	1 603	561	IWS
9	24-6	Lake Springfield	Sugar and Lick Creeks	Springfield, Ill.	35,2	894,08	258	668,2	Cropland/Pasture	0,023	0,167	0,29	Jan. 1934	Aug. 1948	14,6	73	0,705	660	231	IWS
10	24-21	Woodbine Country Club L.	Unnamed	Greenfield, Ill	38,3	972,82	0,32	0,829	Cropland/Pasture	0,023	0,167	0,29	1926	July. 1952	26,0	54,4	1,81	2 144	750	IWS
11	24-22	Dale Cole Pond	Unnamed	Greenfield, Ill	38,3	972,82	0,221	0,572	Cropland/Pasture	0,023	0,167	0,29	1924	July. 1952	28,0	53,7	1,72	2 012	704	IWS
12	24-25	Knapp	Unnamed	Springfield, Ill	35,2	894,08	3,43	8,884	Cropland/Pasture	0,023	0,167	0,29	1907	Aug. 1952	45,0	38,7	0,431	363	127	IWS
13	24-30	C B & Q R. R. Lake	Trib. of Sangamon River	Tallula, Ill	35	889,00	0,84	2,176	Cropland/Pasture	0,023	0,167	0,29	1902	July. 1952	50,0	49,3	0,09	419	147	IWS
14	17-6	Ridge Lake	Trib. of Embarrass R.	Charleston Ill.	39,7	1008,38	1,38	3,574	Cropland/Pasture	0,023	0,182	0,32	Apr. 1941	août-43	6,4	72,4	1,75	2760	966	IWS
15	17-19	Stevenson's Lake	Trib. of Kettering Br.	Martinsville Ill.	40,6	1031,24	0,327	0,847	Cropland/Pasture	0,023	0,182	0,32	1950	mai-55	9,0	48	1,89	1975	691	IWS
16	17-9	Craig & Davidson's Lake	Trib. of Raccoon Creek	Martinsville Ill	38,2	970,28	0,427	1,106	Cropland/Pasture	0,023	0,182	0,32	1947	mai-55	12,0	33,14	2,46	1775	621	IWS
17	24-18	Waverly City	Unnamed	Waverly, Ill	35	889,00	9,16	23,72	Cropland/Pasture	0,023	0,196	0,34	Oct. 1938	July. 1952	13,8	42,4	0,551	509	178	IWS
18	24-32	Ethcheson's Lake	Trib. Kaskaskia River	Vandalia, Ill	36,6	929,64	0,26	0,673	Cropland/Pasture	0,023	0,196	0,34	1943	Aug. 1958	15,0	55,66	0,93	1 127	394	IWS
19	16-18	Marion	Limb Branch	Marion Ill	45,2	1148,08	0,316	0,818	Cropland/Pasture	0,023	0,196	0,34	1919	1951	32,0	56,6	0,61	458	160	TWS
20	17-15	Patterson Lake	Trib. of Dismal Creek	Edgewood Ill.	35,1	891,54	0,912	2,362	Cropland/Pasture	0,023	0,196	0,34	1926	juin-55	33,0	48,54	1,18	1247	436	IWS
21	24-19	Whitehall City	Unnamed	White Hall, Ill	36,1	916,94	0,92	2,383	Cropland/Pasture	0,023	0,196	0,34	1897	July. 1952	55,0	43,1	1,02	957	335	IWS
22	24-34	I. C. at Kinmundy	Trib. E. Fk. Kaskaskia R.	Kinmundy,ill	40,3	1023,62	0,581	1,505	Cropland/Pasture	0,023	0,196	0,34	1902	July. 1959	57,0	35,5	0,756	584	204	IWS
23	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,52	0,51	1,321	Cropland/Pasture	0,023	0,199	0,35	1959	1954	5,0	46,24	2,9	2 921	1022	IWS
24	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,52	25,79	66,8	Cropland/Pasture	0,023	0,199	0,35	June. 1949	July. 1954	5,1	65,7	0,365	521	182	IWS
25	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,52	25,79	66,8	Cropland/Pasture	0,023	0,199	0,35	July. 1954	Sept. 1959	5,1	62,4	0,302	480	168	IWS
26	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,52	0,51	1,321	Cropland/Pasture	0,023	0,199	0,35	1954	1961	7,0	46,24	1,25	1 259	441	IWS
27	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,52	25,79	66,8	Cropland/Pasture	0,023	0,199	0,35	June. 1939	June. 1949	10,4	59,1	0,934	1 200	420	IWS

4.2. Distribution of the periods of records

The period of records for individual basins range from 0.4 to 97 years with a median of 7.0 years as shown on figure 4.4.

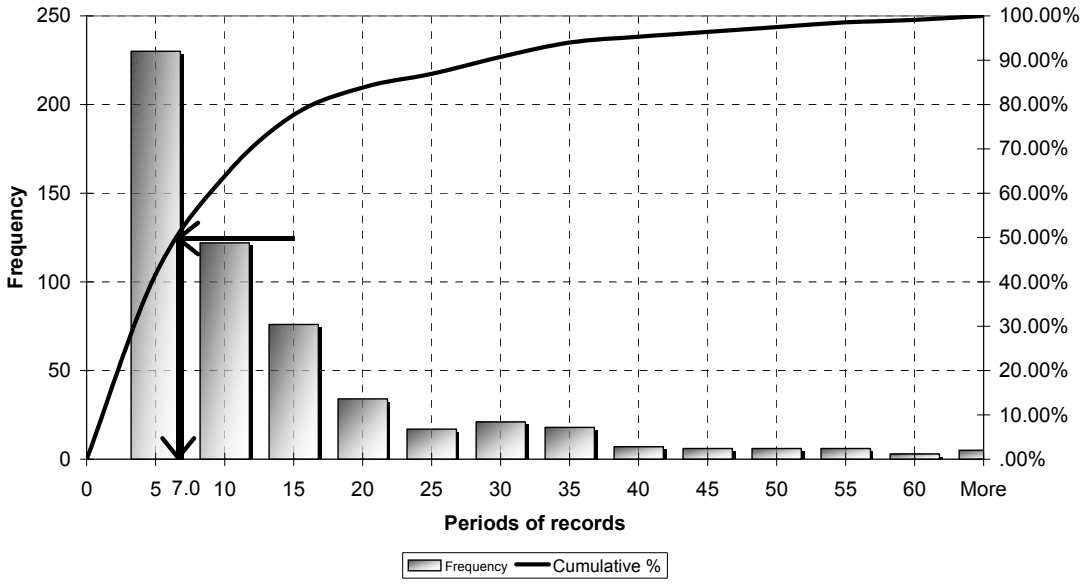


Figure 4.4: Distribution of the periods of records

The four-parameter database and the two-parameter database have the same drainage area distribution as shown on figure 3.3.

4.3. Distribution of the slopes

The slopes of the basins range from 0.05% to 11.52% with a median of 2.62% as shown in figure 4.5.

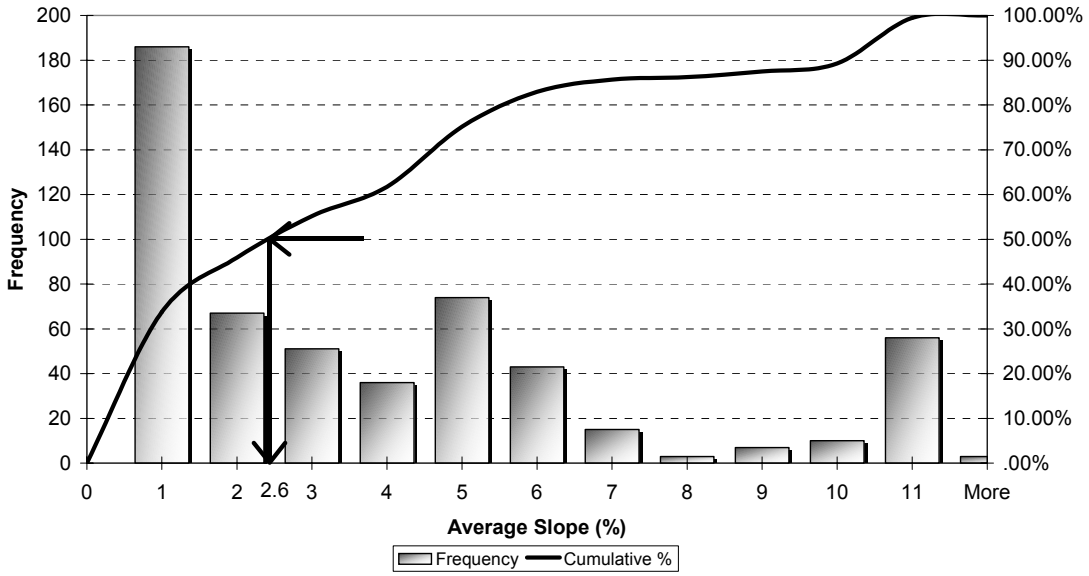


Figure 4.5: Distribution of the slopes

4.4: Regression analysis

4.4.1. Specific degradation as a function of slope

Plotting the raw specific degradation data with respect to slope yields the graph shown in figure 4.6. The fitted regression curve to the raw data is shown on figure 4.6. The regression equation, which has a coefficient of correlation of 0.27 is as follows:

$$SD = 442.72e^{-0.3S} \tag{4.1}$$

The analysis of the mean SD values is shown in table 4.2 and the resulting graph in figure 4.7. The obtained regression equation that fits the mean value is given by the following:

$$\overline{SD} = 402.55e^{-0.13S} \tag{4.2}$$

with $R^2 = 0.53$. When applied to all the data, Eq. 4.2 yields a correlation coefficient of $R^2 = 0.12$.

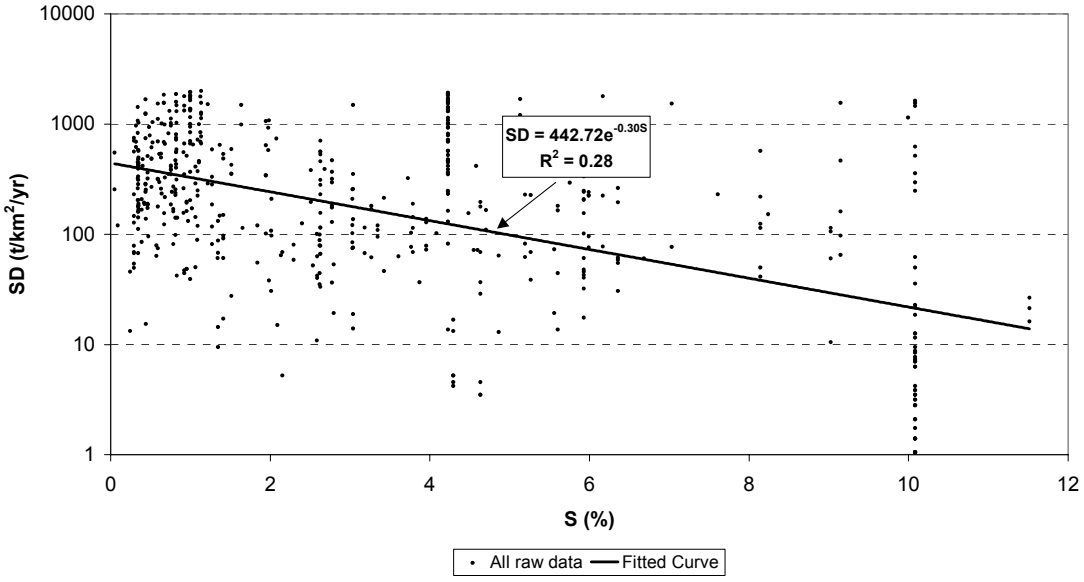


Figure 4.6: SD as a function of S. All raw data

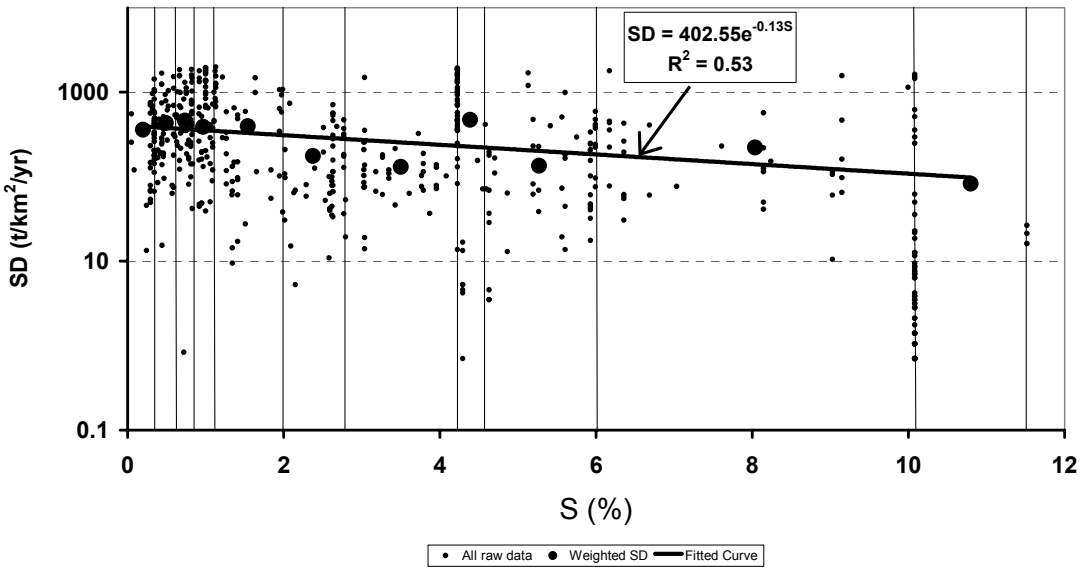


Figure 4.7: Weighted average SD as function of S

Dividing the dataset by classes of slope with each class containing 50 points, lognormal distribution is obtained as shown in figures 4.8a, and 4.8b.

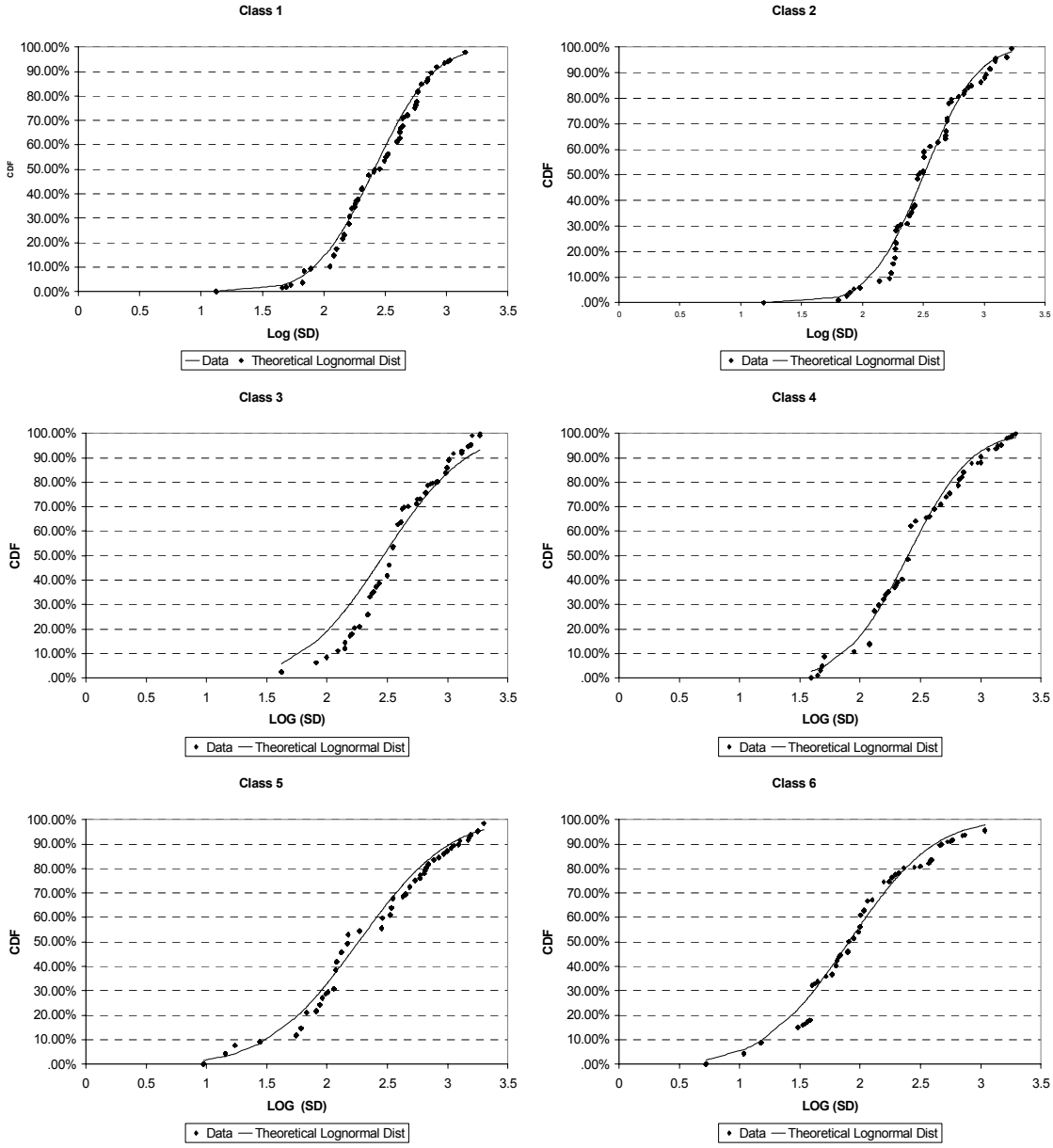


Figure 4.8: Log normal distribution of SD with respect to S (class 1 through 6)

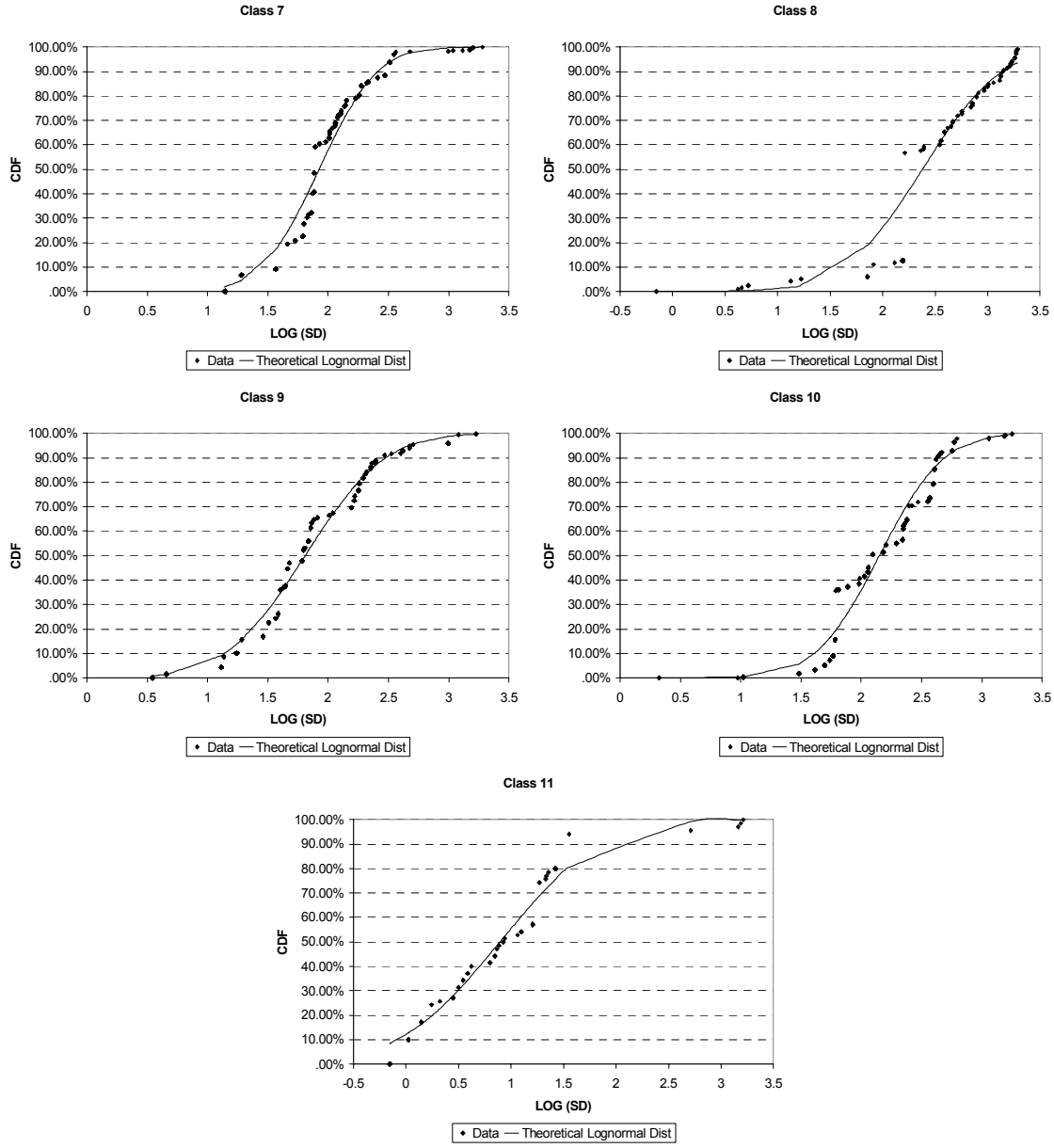


Figure 4.8b: Lognormal distribution of SD with respect to S (class 7 through 11)

The log transformed specific degradation values is computed by $y = \log(SD)$.

Table 4.2 shows the class number, the average slope, the log transformed mean specific degradation ($\bar{y}$), the log transformed standard deviation, σ_y, and the 95% confidence limits for the mean of the log transformed value.

Figures 4.9, 4.10, and 4.11 illustrate the charts representing log(SD) +/- 1.96 standard deviations and the fitted curves of $\bar{y}$ vs. A and σ_y vs. S respectively. The resulting regression equations are:

$$\bar{y} = -0.11S + 2.49 \quad (4.3)$$

$$\sigma_y = 0.02S + 0.43 \quad (4.4)$$

where

$\bar{y} = \overline{\log(SD)}$ in t/km^2/yr

σ_y = standard deviation of log (SD)

S = Slope in %

Table 4.2: Analysis of log transformed SD with respect to S

Class	S (%)	Number of points	$\overline{y}$	σ_y	$\overline{y}-1.96\overline{\sigma_y}$	$\overline{y}+1.96\overline{\sigma_y}$
1	0.20	50	2.47	0.43	1.60	3.33
2	0.49	50	2.44	0.44	1.56	3.31
3	0.73	50	2.41	0.44	1.52	3.30
4	0.97	50	2.38	0.45	1.49	3.28
5	1.54	50	2.32	0.46	1.40	3.24
6	2.37	50	2.23	0.48	1.27	3.18
7	3.50	50	2.11	0.50	1.10	3.11
8	4.39	50	2.01	0.52	0.97	3.04
9	5.27	50	1.91	0.54	0.84	2.98
10	8.04	50	1.61	0.59	0.42	2.79
11	10.80	51	1.30	0.65	0.00	2.60
Total		551				

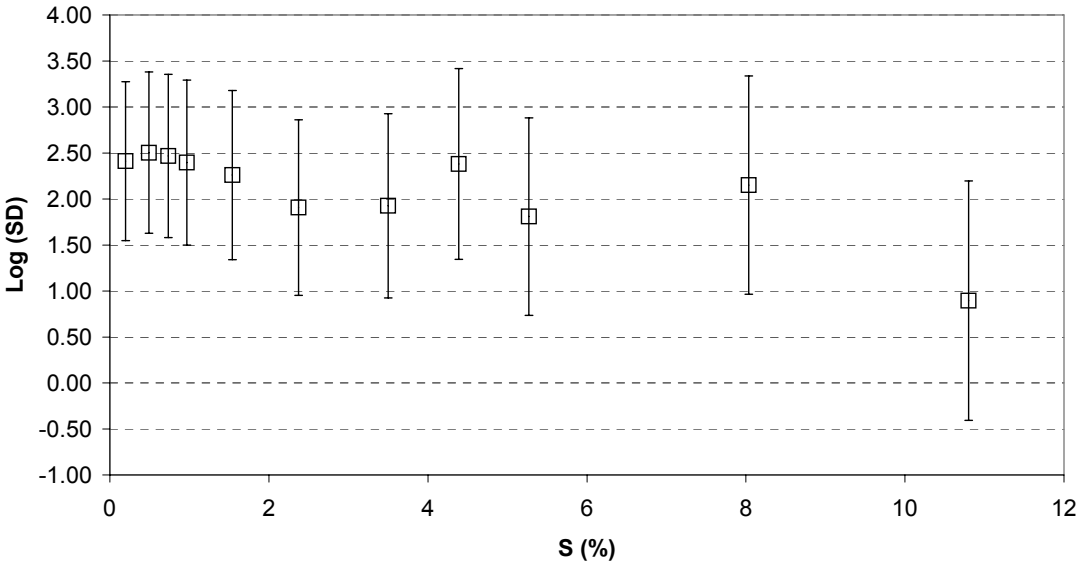


Figure 4.9: Log transformed SD and 95% confidence interval with respect to S

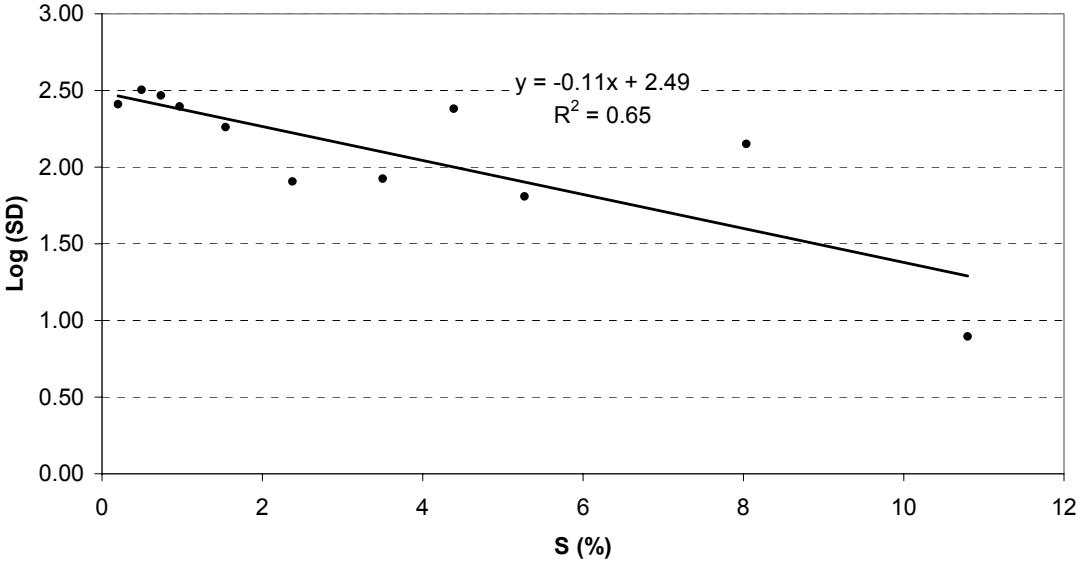


Figure 4.10: Log transformed SD with respect to S

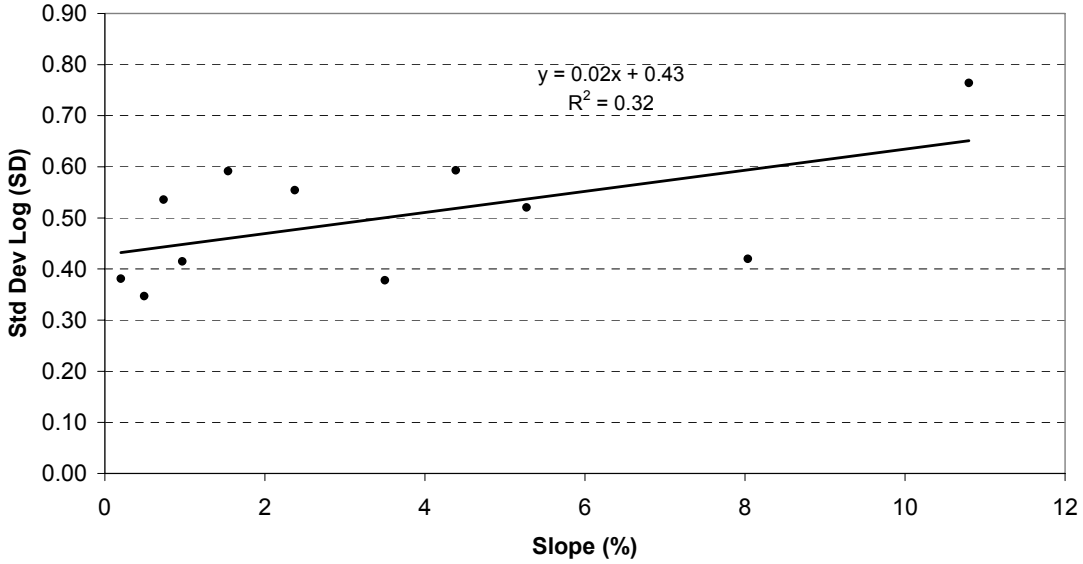


Figure 4.11: Log transformed standard deviation of SD with respect to S

To obtain the relationship between the untransformed DF with respect to S at a 95% confidence interval, the mean SD value for each class sample is computed and the equivalent

95% limits are added (or subtracted) to each mean value. The log values of the standard deviations are added or subtracted to the mean log value before addition or subtraction to the untransformed specific degradation value as shown on figure 4.12. Table 4.3 shows the untransformed specific degradation values and the 95% confidence limits.

Thus, if slope is the only parameter to be used to estimate SD, the following equation can be utilized:

$$SD_{95} = 402.55e^{-0.13S} \pm 1.96\sigma \qquad (4.5)$$

It is observed that specific SD decreases as S increases, which tends to contradict most findings in the literature. Looking at our data, we observe that higher slopes are found in mountainous western states where the vegetation cover is considerable and the sediment production is small. This regional trend is what certainly explains the inverse proportionality between SD and S.

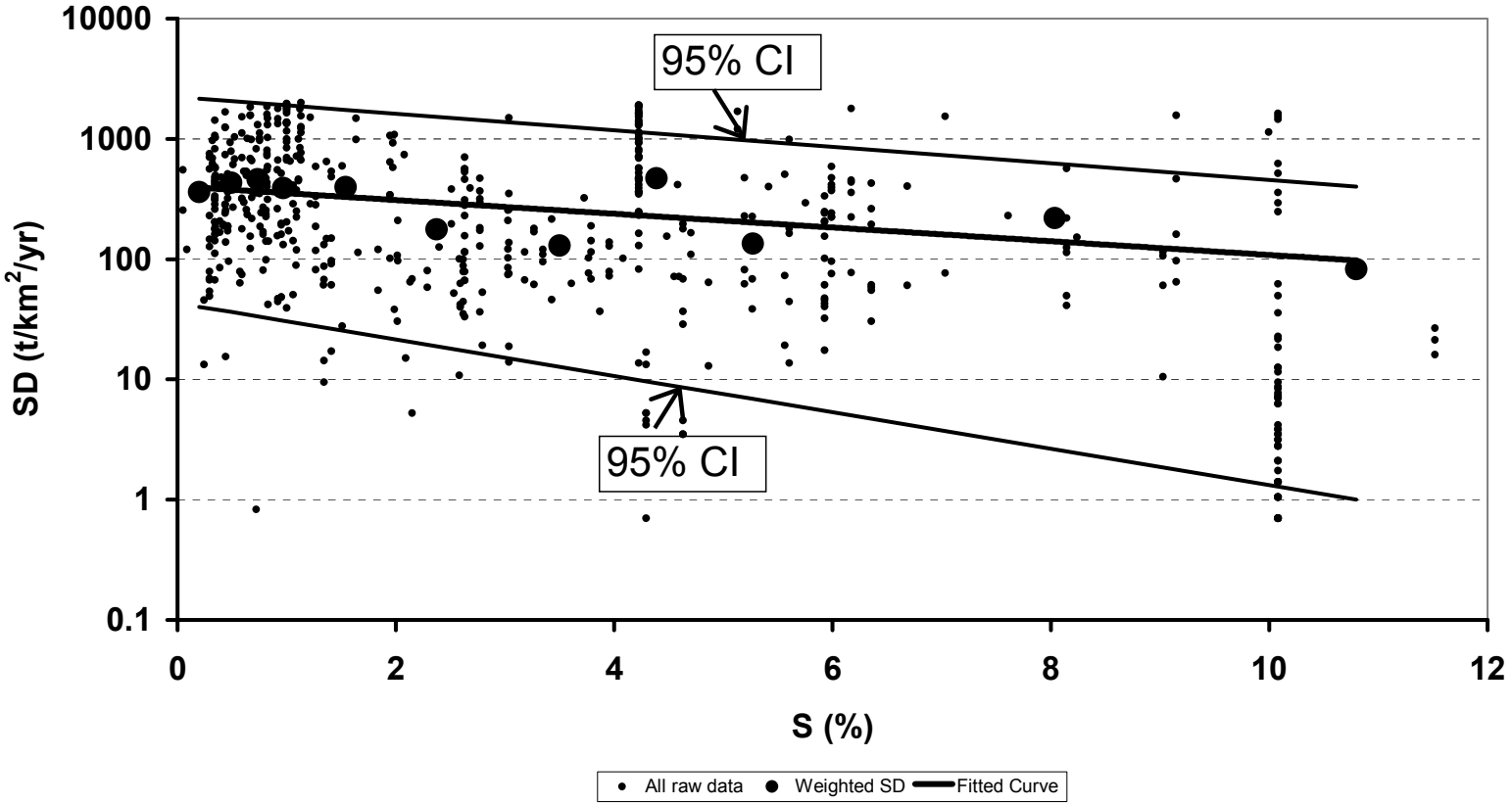


Figure 4.12: SD as a function of S and confidence intervals at 95%

Table 4.3: Analysis of the mean SD with respect to S

Class	S (%)	Number of points	$\overline{SD}$	$\overline{SD}+1.96\sigma$	$\overline{SD}-1.96\sigma$
1	0.20	50	392.27	2150.33	40.15
2	0.49	50	377.56	2052.53	36.25
3	0.73	50	365.88	1975.37	33.32
4	0.97	50	354.91	1903.44	30.71
5	1.54	50	329.49	1738.63	25.17
6	2.37	50	295.67	1523.70	18.83
7	3.50	50	255.42	1274.80	12.73
8	4.39	50	227.55	1107.42	9.34
9	5.27	50	202.91	963.05	6.87
10	8.04	50	141.63	621.38	2.62
11	10.80	51	98.89	401.11	1.00
Total		551			

Using Eq. 4.5, we obtain a lognormal distribution of $\log(SD_{calc}/SD_{obs})$ as shown on figure 4.13. The mean and standard deviation of log (R), where $R = SD_{calc}/SD_{obs}$ are found to be:

$\overline{LogR} = 0.26$

$\sigma_{LogR} = 0.51$

Thus $\overline{Log_R}$ -1.96 σ_{LogR} = -0.74 and $\overline{Log_R}$ +1.96 σ_{LogR} = 1.26. Therefore 95% of the values of log (R) are between –0.74 and 1.26.

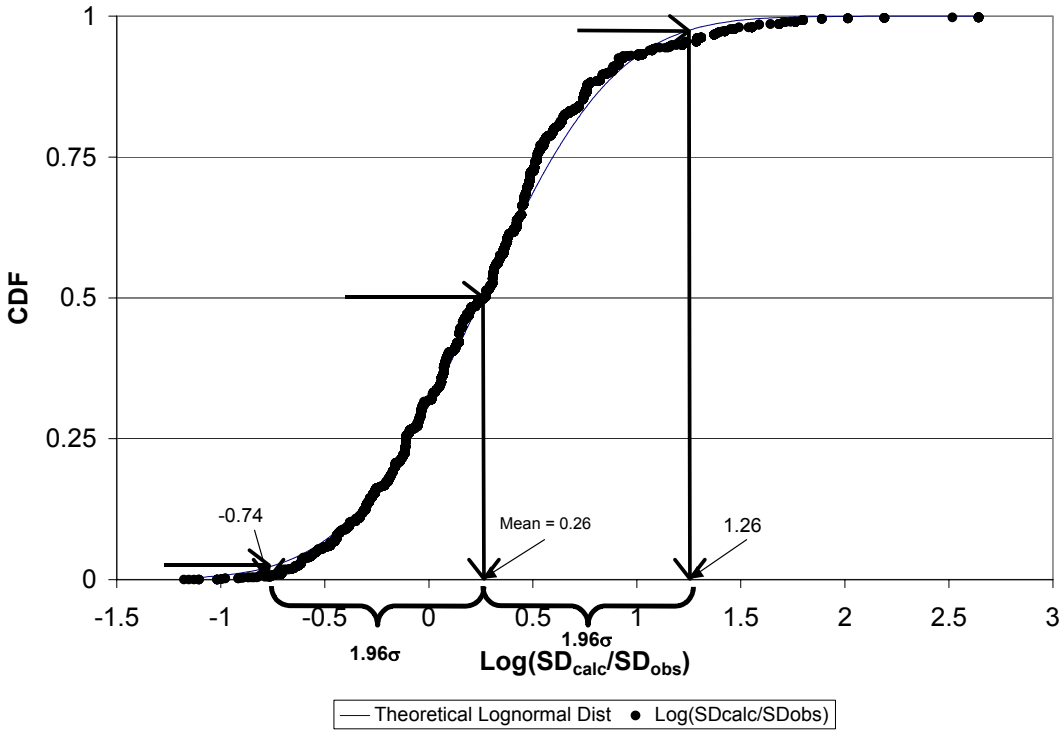


Figure 4.13: Distribution of Log (SD_{calc}/SD_{obs}) using the equation with S

4.4.2. Determination of the vegetation factor

Vegetation was found to play a great role on sediment production (Wischmeier, Bennett, Jansson, etc.). The sediment production is inversely proportional to the density of vegetation, i.e. the denser the vegetal cover, the smaller the sediment transport as canopies intercept part of the rainfall and flow velocity and shear stress are reduced by the surface cover. In dry climates, the proportion of bare soil is higher than in moist and continental climates. But in contrast, the sediment production in dry climates in hindered by the insufficient amount of precipitation compared to moist and continental climates. Land cover types can change over time by the man induced activities. A change in vegetation cover by man's activity may cause great mass movements and thus increase sediment production.

Land under continuous fallow conditions are more likely to produce more sediment compared with other land cover types.

The analysis performed in this section relates the specific degradation (SD) with the combination of the three previous parameters (R, A, S) yielding an expression of the type:

$$SD = VA^{-0.09} R^{1.7} e^{(-0.0036R - 0.13S)} \quad (4.6)$$

where:

V = vegetation factor

A = drainage area in km^2

R = mean annual rainfall in mm

S = slope in %

The V is obtained by dividing the observed SD by the calculated ones using obtained relations with R, A and S and then a mean value is retained as the V factor for each specific land cover type as shown on table 4.4 and represented on figure 4.14.

Replacing V by the values obtained and applying Eq. 4.6 to all the raw data, a coefficient of correlation $R^2 = 0.17$ is obtained.

Table 4.4: V factor for different types of land characteristics

Land cover type	Minimum V	Mean V	Maximum V
Deciduous B Forest	0.00006	0.015	0.06
Savanna	0.00525	0.016	0.06
Evergreen B Forest	0.00007	0.018	0.08
Grassland	0.00380	0.019	0.08
Cropland/Pasture	0.00005	0.023	0.54
Cropland/Woodland	0.00343	0.024	0.19
Mixed Forest	0.00391	0.027	0.05
Evergreen N Forest	0.00384	0.028	0.07
Shrubland	0.00044	0.037	1.01

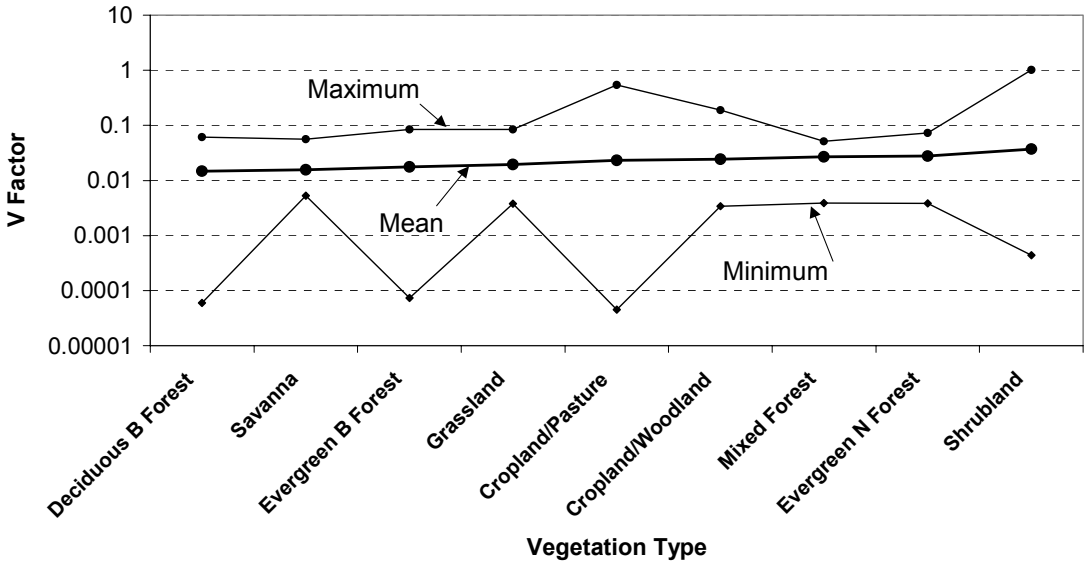


Figure 4.14: V factor for different types of land characteristics

Using Eq. 4.6, a lognormal distribution of $\log(SD_{calc}/SD_{obs})$ is obtained as shown on figure 4.15. The mean and standard deviation of log (R), where $R = SD_{calc}/SD_{obs}$ are found to be:

$\overline{LogR} = 0.21$

$\sigma_{LogR} = 0.49$

Thus $\overline{Log_R}$ -1.96 σ_{LogR} = -0.75 and $\overline{Log_R}$ +1.96 σ_{LogR} = 1.17. Therefore 95% of the values of log (R) are between –0.75 and 1.17.

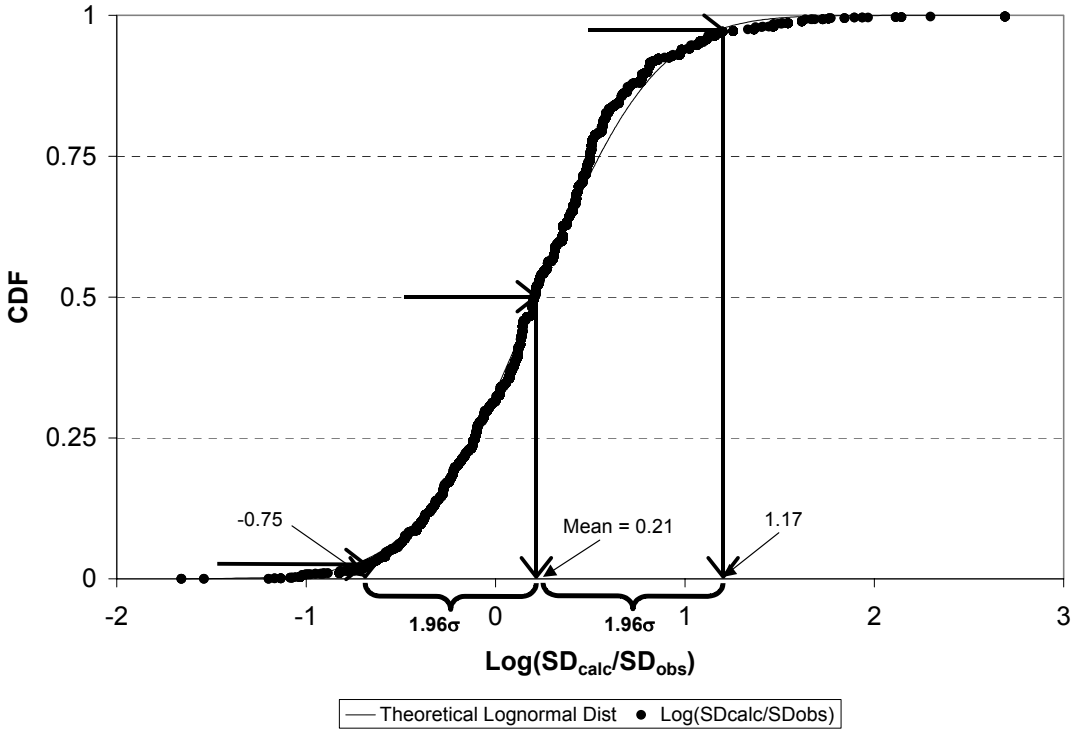


Figure 4.15: Distribution of ratio of Log (SD_{calc}/SD_{obs}) using Eq. 4.6

Summary and conclusion:

The following observations can be made regarding chapter 4:

- A fair correlation with a coefficient of correlation of 53% is obtained between weighted average SD and S. However, it is important to note the decreasing relation

between SD and S due to the regional trend introduced by the western mountainous regions of United States, where small amounts of SD are found on steep vegetated slopes.

- There is no definite trend in the V factor as shown of figure 4.14 where the difference between the minimum and maximum V is more than two orders of magnitude for some land cover characteristics.
- The equation resulting from the combination of A, R, S, and V only yields a slightly better results with a σ_{LogR} of 0.49 as shown on Table 4.5.

Table 4.5: Summary of SD equations and 95% confidence intervals

Parameter used	Equation	R^2 using mean SD values	R^2 using all raw data	$\overline{LogR}$	σ_{LogR}	95% CI	
						Lower limit	Upper limit
S	$SD = 402.55e^{-0.13S}$	0.53	0.06	0.26	0.51	-0.74	1.26
AR,S,V	$SD = VA^{-0.09}R^{1.7}e^{-0.0017R-0.13S}$	N/A	N/A	0.21	0.49	-0.75	1.17

CHAPTER V

TESTING AND VALIDATION

The purpose of this chapter is twofold:

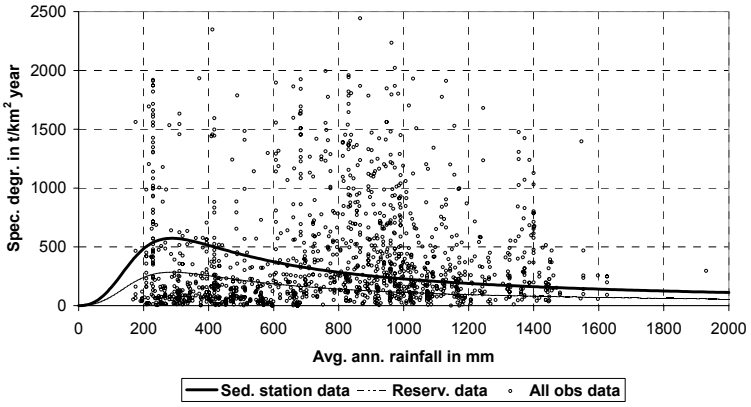
1) Test the accuracy of the existing equations with R and A as independent variables and compared them with the new developed equations using the two-parameter. First, a graphical comparison between the curves and the observed data will be performed and then, a discrepancy ratio calculations will be carried out to determine the equations that best fits the observations.
2) Validate the new proposed equations. The validation of the equations is aimed at testing their predictive capabilities, which requires comparing the predictions with data other than the that used in developing them. An independent data set from USGS, which contains only A, R and SD data will be used to validate the equations expressed in terms of those parameters.

3) A case study of the California Gulch basin in Colorado, which contains all the parameters will be performed using all the new equations developed in chapters 3 and 4.

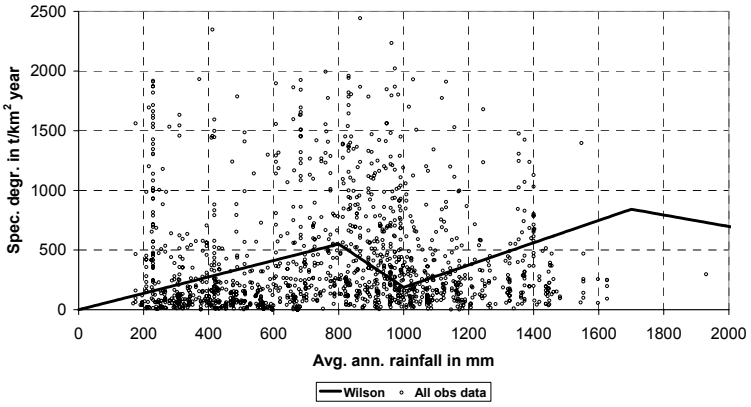
5.1: Test of the accuracy of the existing equations

5.1.1: Equations with R as independent variable

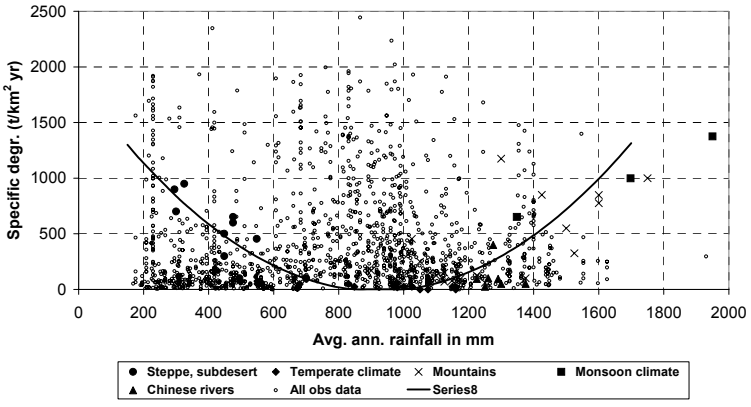
When plotted against the raw specific degradation data, the relationships of Langbein and Schumm, Fournier and Wilson clearly appear not to fit the data very well as shown on figure 5.1.



a) The Langbein and Schumm model



b) The Wilson model



c) The Fournier model

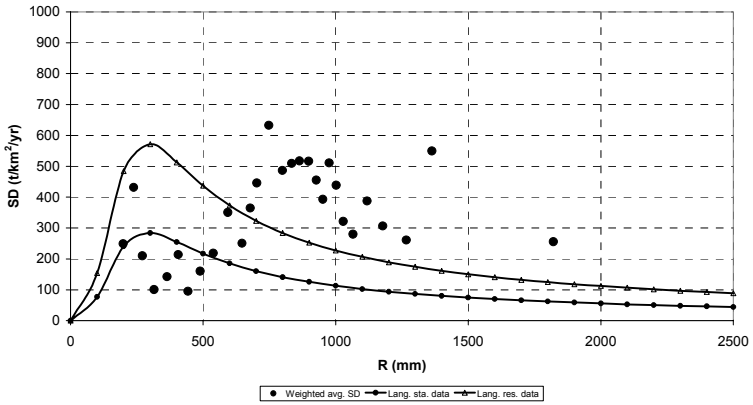
Fig. 5.1: Comparison between all raw SD data and the existing curves

Figure 5.2 shows the graphical comparison of all the curves using the weighted average SD. A visual observation of the below curves reveals that there exist more deviation between the observed data and the existing relationships than there is between the data and the new developed curve.

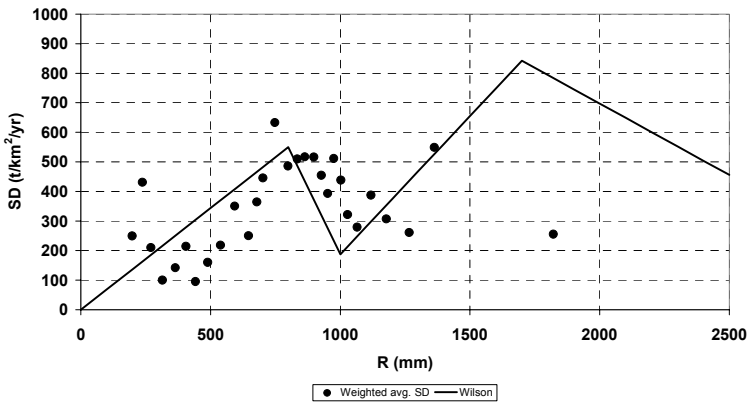
The Langbein and Schumm curve is similar in form to our new curve, but it peaks at a SD value that occurs approximately between 250 mm and 355 mm instead of 900 mm as reflected by the data. But it must be noted that the Langbein and Schumm curve was developed for effective precipitation and not direct precipitation. The effective precipitation was estimated from annual runoff using a conversion chart relating precipitation to runoff at a temperature of 10°C, which makes the curve valid for this range of climate. Schumm (1965) also constructed curves that represents different mean temperatures.

The Wilson curve seems to have a good fit between rainfall values of 300 mm and 1000 mm, but instead of decreasing asymptotically as rainfall increases due to vegetation from its first peak, the model continues to increase until it reaches its maximum peak at R=1700 mm and then starts to fall. The portion of the curve between R=1000 mm and R=1700 mm does not seem to be logical because of the hindering effect of vegetation for these rainfall values.

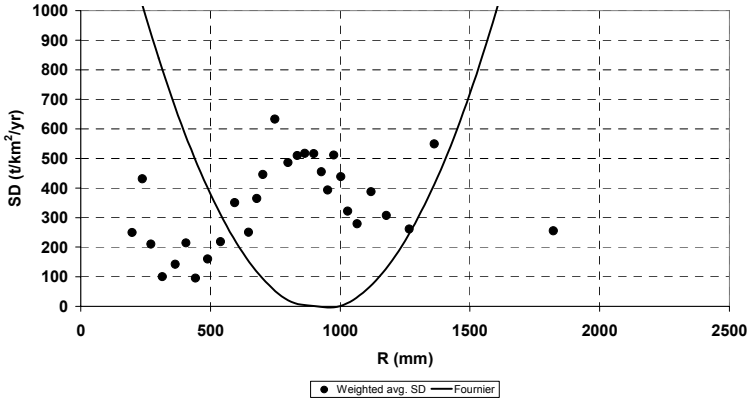
The Fournier curve appears to follow the opposite trend to the data.



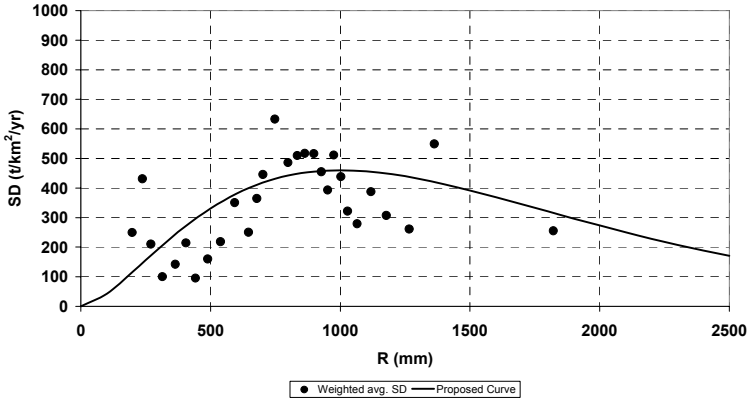
a) Langbein and Schumm



b) Wilson



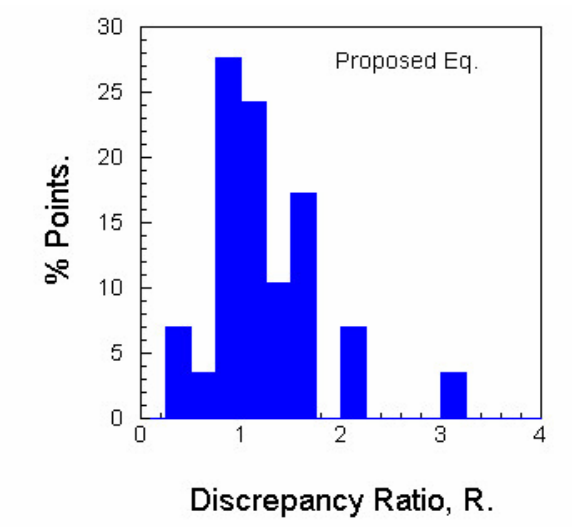
c) Fournier



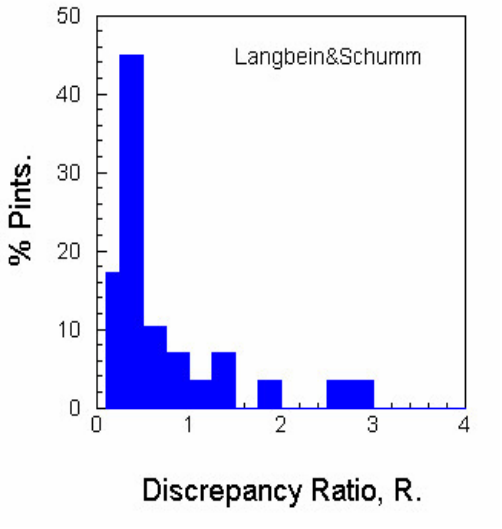
d)Proposed equation

Figure 5.2: Comparison between all curves and the observed weight-averaged SD

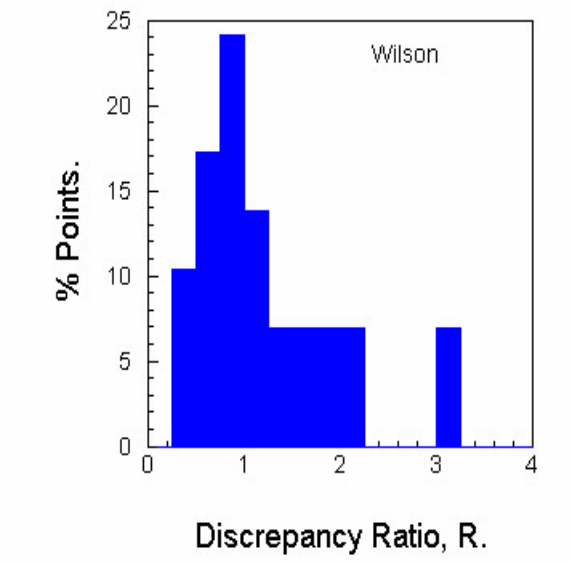
In order to make a quantifiable assessment, discrepancy ratio calculations between the mean observed and calculated SD are performed and the results are shown on figure 5.3. The discrepancy ratio is the ratio, **R** obtained by dividing the predicted SD to the observed SD. A perfect prediction is obtained when **R** = 1. Typically a ratio of 2 or above is used as criterion for a significant discrepancy. The spreadsheet of the calculations is in Appendix E.



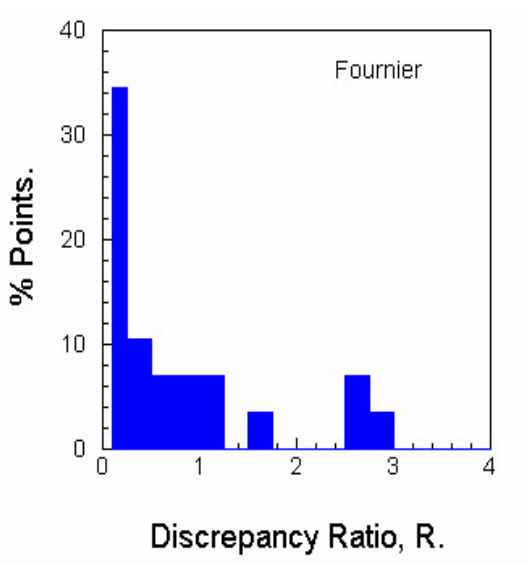
a) Proposed Equation



b) Langbein & Schumm



c) Wilson



d) Fournier

Figure 5.3: Discrepancy ratios predicted to measured SD

Our new equation predicts the specific degradation with an accuracy in which 90% of the calculated values fall between the range of 0.5<**R**<2, followed by Wilson, Langbein and Schumm, station data, Langbein and Schumm, reservoir data and Fournier with 86%, 79%, 76% and 24% respective accuracies.

It follows that the new relationship improves significantly the prediction of specific degradation compared with those of Fournier, Wilson and Langbein and Schumm.

5.1.2: Equations with A as independent variable

The relationships shown in table 5.1, already evoked in the literature review, that have SD as a function of A will be tested against the measured values and compared with the new equation in function of A developed in chapter 3. The relationships which units were in $m^3/km^2/year$ were converted to $tons/km^2/year$ assuming a mass density of soil particles of 2,650 kg/m^3.

Figure 5.4 shows the graphical comparison of all models using the 1463 raw data and the weighted average specific degradation.

It can be observed that, except for Fleming, which underestimates SD, all the remaining six models overestimate the specific degradation by several orders of magnitude with respect to the measured values.

Discrepancy ratios with respect to the weighted average SD are shown on figures 5.5 and 5.6. The spreadsheet of the calculation is in Appendix F.

Table 5.1: Existing equations with A

Author	Place	Basin size km^2	SD (m^3/km^2/yr)	SD (tons/km^2/yr)
Scott et al.	Southern California	8 - 1036	SD=1801*A$^{-0.215}$	SD=4772.65*A$^{-0.215}$
Fleming	Mostly American, African, and UK basins			SD=140*A$^{-0.0424}$
Strand	Southwestern USA		SD=1421*A$^{-0.215}$	SD=3765.65*A$^{-0.229}$
Khosla	Different parts of the world	< 2590	SD=3225*A$^{-0.215}$	SD=8546.25*A$^{-0.28}$
Joglekar	American, Indian, European,Australian, African basins		SD=5982*A$^{-0.215}$	SD=15852.3*A$^{-0.24}$
Lahlou	Morocco, West & East		SD=5248*A$^{-0.215}$	SD=13907.2*A$^{-0.18}$
Lahlou	Morocco, other regions		SD=1048*A$^{-0.215}$	SD=2777.2*A$^{-0.13}$

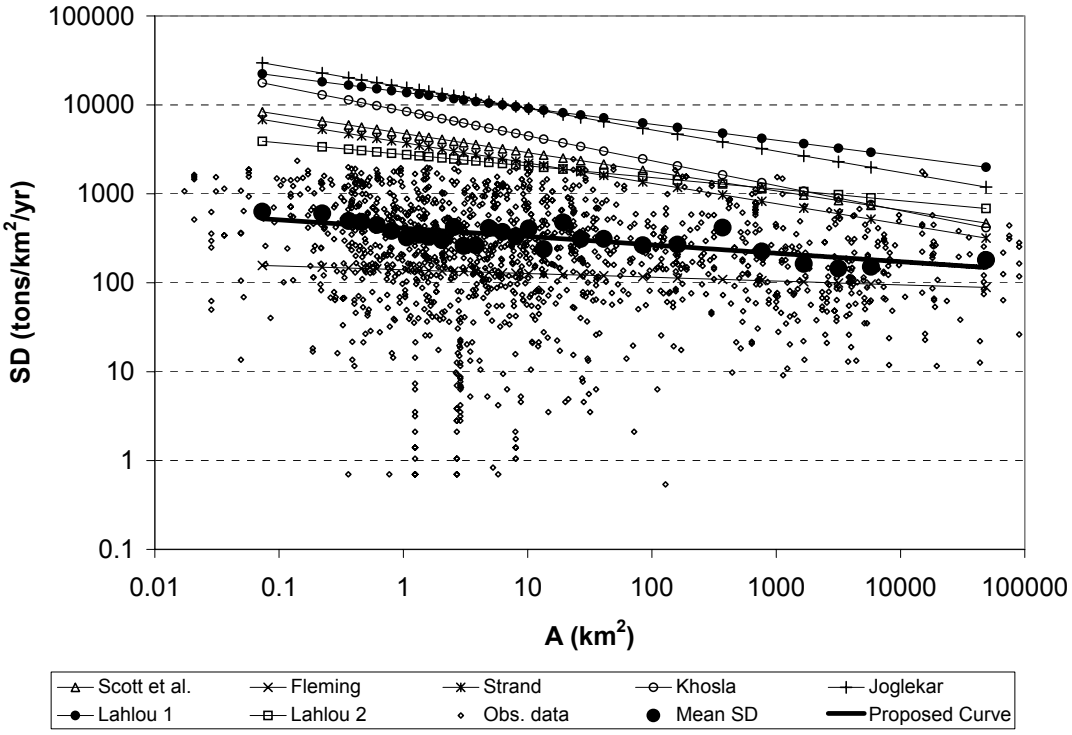
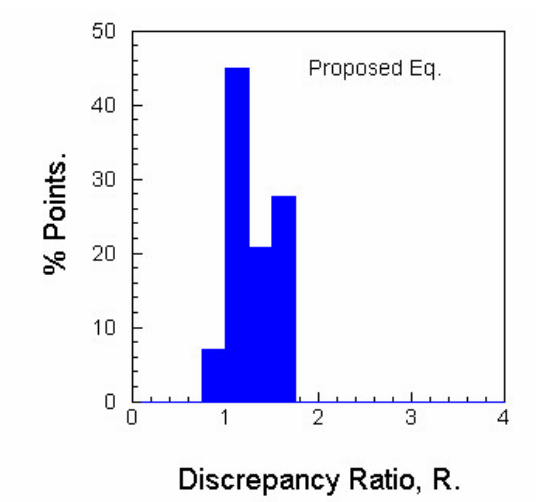
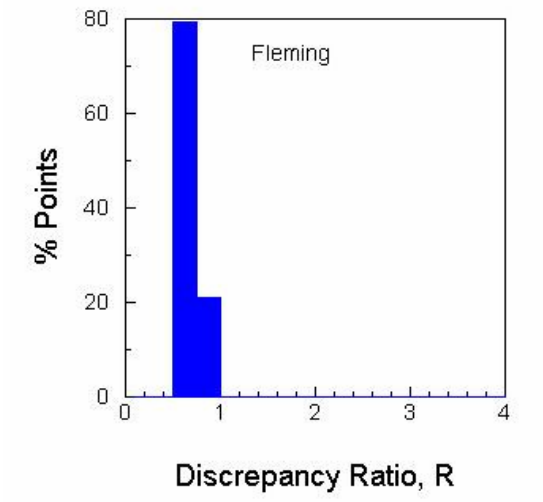


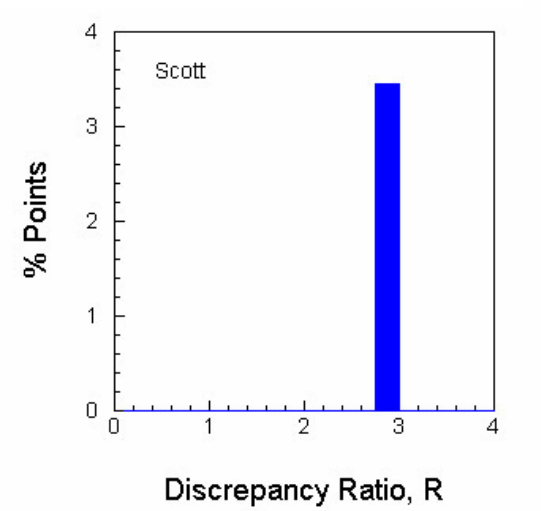
Fig. 5.4: Comparison between measured SD and calculated SD using equations with area



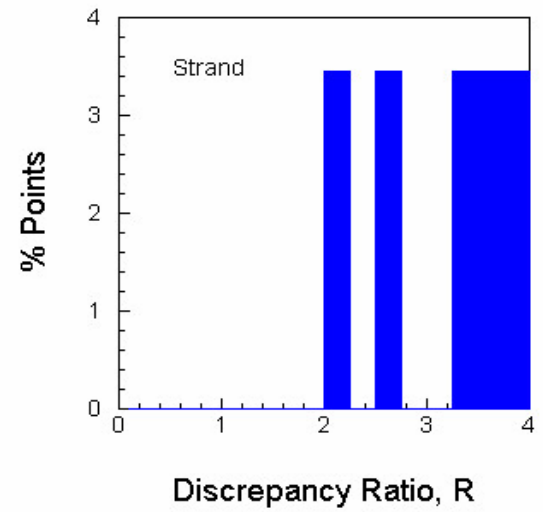
a) Proposed Eq.



b) Fleming

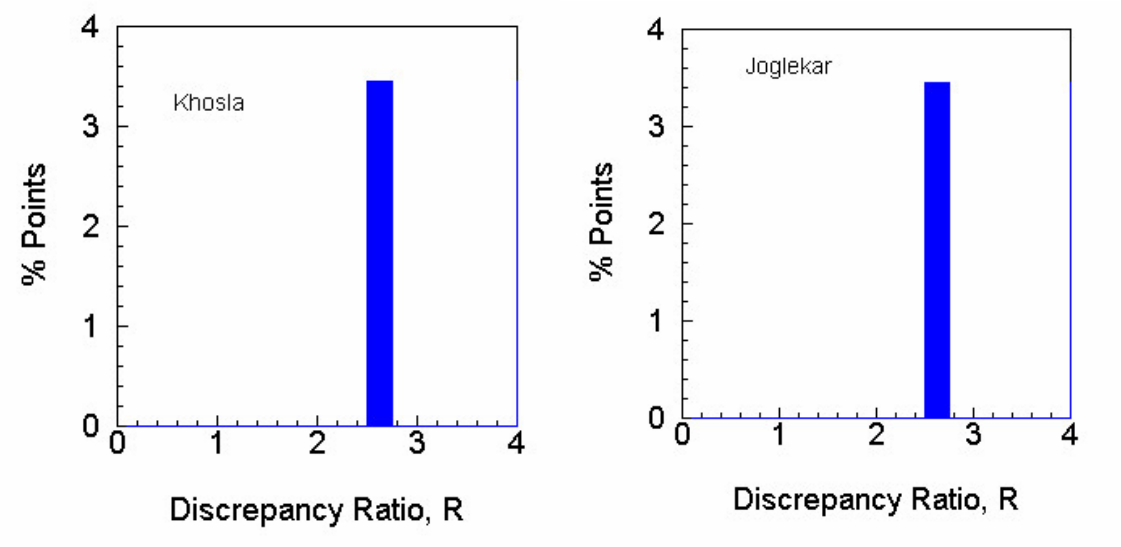


c) Scott et al.

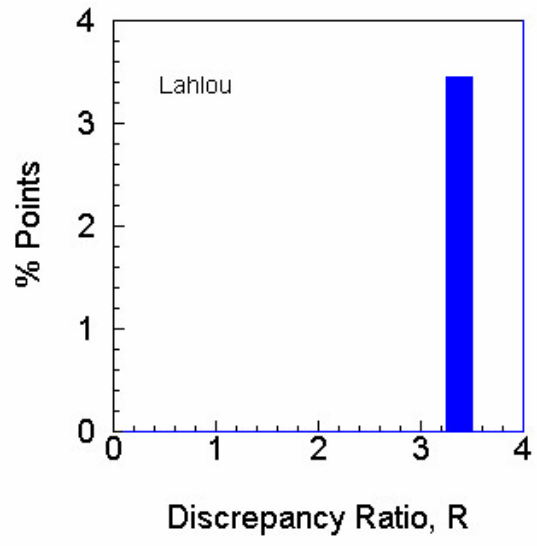


d) Strand

Figure 5.5: Discrepancy ratios predicted to weight-averaged SD



e) Khosla f) Joglekar



g) Lahlou

Figure 5.6: Discrepancy ratios predicted to weight-averaged SD (cont.)

The new developed equation with A as independent variable, predicts the weighted average SD with an accuracy in which 100% of the calculated values fall between the range of $0.5<\mathbf{R}<2$. Fleming's equation estimates the weighted SD with 100% of the estimations falling between $0.5<\mathbf{R}<2$ though most of the predictions underestimate SD with 73% of them between $0.5<\mathbf{R}<0.75$. In contrast, the rest of the relationships overestimate the specific degradation by several orders of magnitude.

It follows that, the new relationship developed in this study in chapter 3 yields the best results compared with existing methods.

5.2: Validation of the new equations

5.2.1: Equation with R as independent variable

To validate the new equation with R (Eq. 3.6), an independent dataset of 55 suspended sediment data points covering various states in continental United States were randomly selected from the U.S. Geological Survey web site (http://waterdata.usgs.gov/). Observed SD are compared with predicted ones using the new equation. Mean R values were obtained from the National Climate Data Center database. The dataset is presented in Appendix G. It is observed that out of the 55 data points, only 12 points, which is equivalent to 22% are located outside of the 95% confidence limits as shown in figure 5.7. Thus, with 78% of the points lying within the 95% confidence limits, it is reasonable to say that the new equation yields satisfactory results.

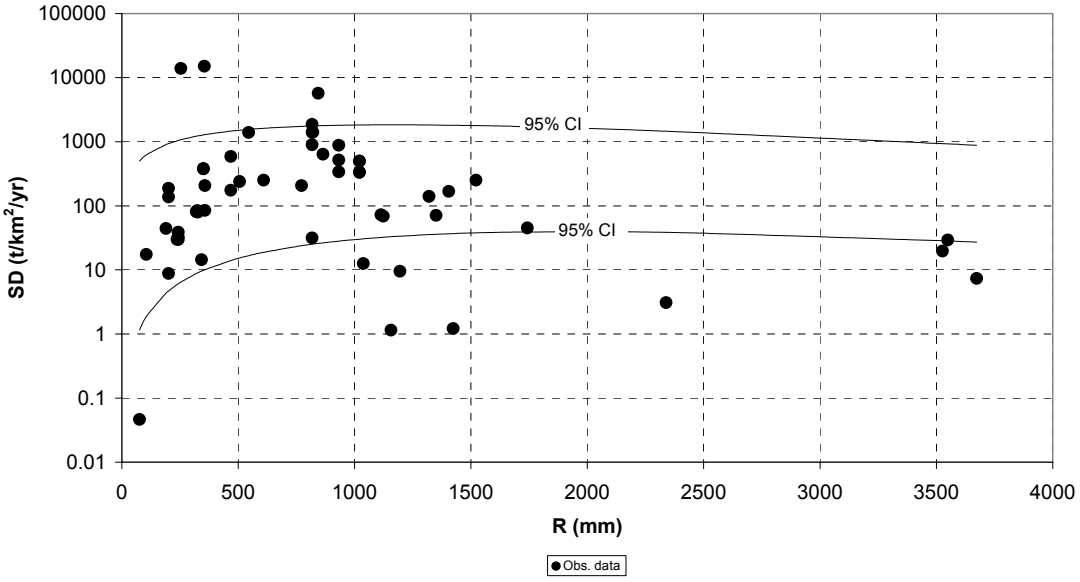


Figure 5.7: Comparison between observed SD and 95% CI using equation with R

Furthermore, an analysis of $\log(SD_{calc}/SD_{obs})$ gives a lognormal distribution shown in figure 5.8. If R denotes SD_{calc}/SD_{obs}, the mean and standard deviation of log(R) are as follows:

$\overline{LogR} = 0.36$

$\sigma_{LogR} = 0.89$

Thus 95% of the values of log (R) are between $\overline{Log_R}$ -1.96 σ_{LogR} = -1.38 and

$\overline{Log_R}$ +1.96 σ_{LogR} = 2.1.

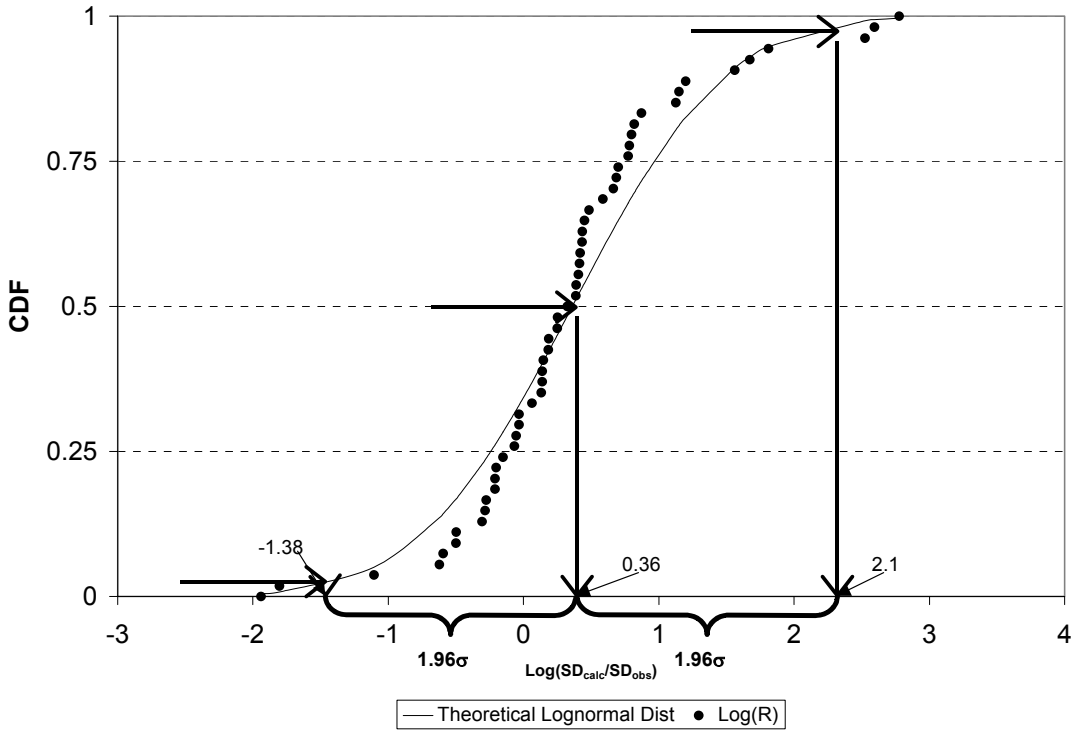


Figure 5.8: Distribution of Log (SD_{calc}/SD_{obs}) using the equation with R

5.2.2: Equation with A as independent variable

To validate the equation with A (Eq. 3.11), the dataset used to validate the relationship with R as independent variable was augmented with specific degradation data for the largest rivers of the world compiled by Jensen (1979) was used for a total data points of 103. The spreadsheet is presented in Appendix H. It is observed that out of the 103 data points, only 27 points, which is equivalent to 26.2% are located outside of the 95% confidence limits as shown in figure 5.9. With 73.8% of the points lying within the 95% confidence limits, it is reasonable to state that the new equation yields very satisfactory results.

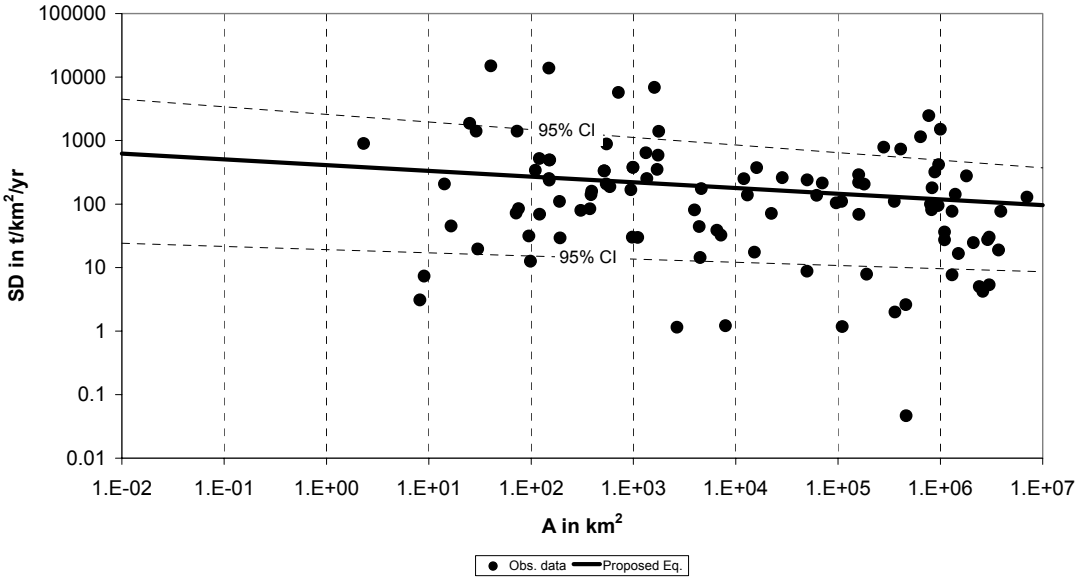


Figure 5.9: Comparison between observed SD and 95% CI using equation with A

An analysis of log(SD_{calc}/SD_{obs}) gives a lognormal distribution shown in figure 5.10. The mean and standard deviation of log(R) are given by:

$\overline{LogR} = 0.26$

$\sigma_{LogR} = 0.89$

Thus 95% of the values of log (R) are between $\overline{Log_R}$ -1.96 σ_{LogR} = -1.48 and

$\overline{Log_R}$ +1.96 σ_{LogR} = 2.0.

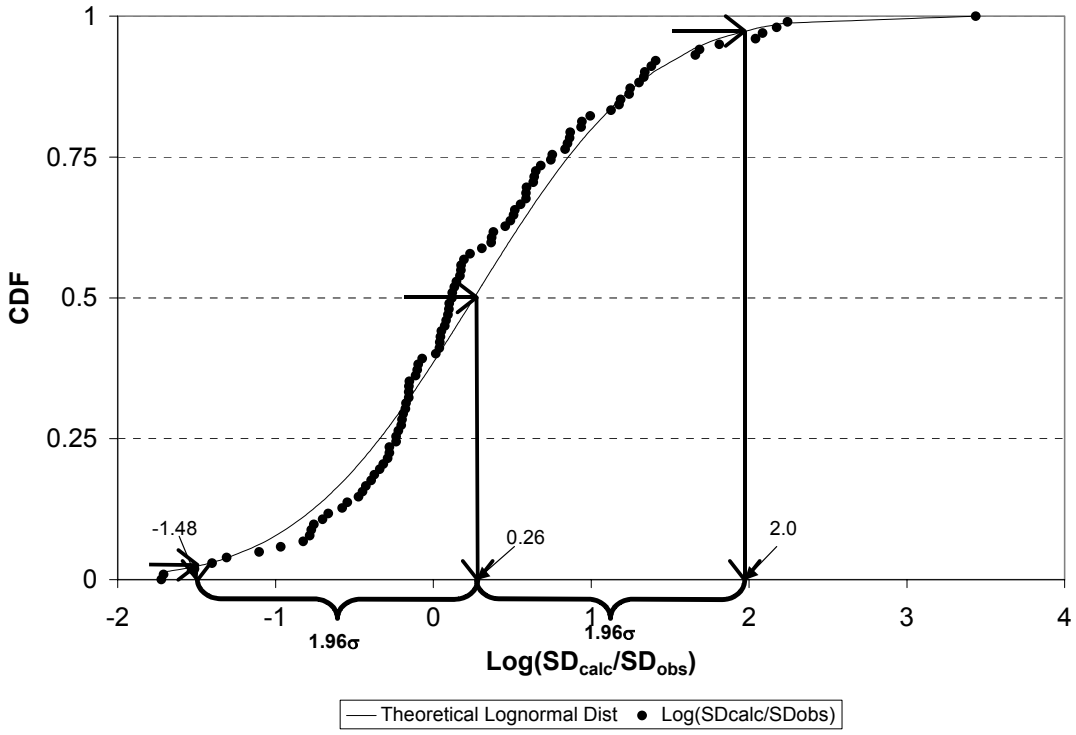


Figure 5.10: Distribution of Log (SD_{calc}/SD_{obs}) using the equation with A

5.2.3: Equation with A and R as independent variables

The same data set used in the analysis of Eq. 3.6 was used in this validation. Because of the fact that the drainage areas involved in the Jensen dataset are extremely large and cover more than one climatic region, we decided not to use it in the validation of the equation with A and R (Eq. 3.12).

An analysis of log(SD_{calc}/SD_{obs}) gives a lognormal distribution shown in figure 5.10. The mean and standard deviation of log(R) are given by:

$\overline{LogR} = 0.23$

$\sigma_{LogR} = 0.87$

Thus 95% of the values of log (R) are between $\overline{Log_R}$ -1.96σ_{LogR} = -1.47 and

$\overline{Log_R}$ +1.96σ_{LogR} = 1.93.

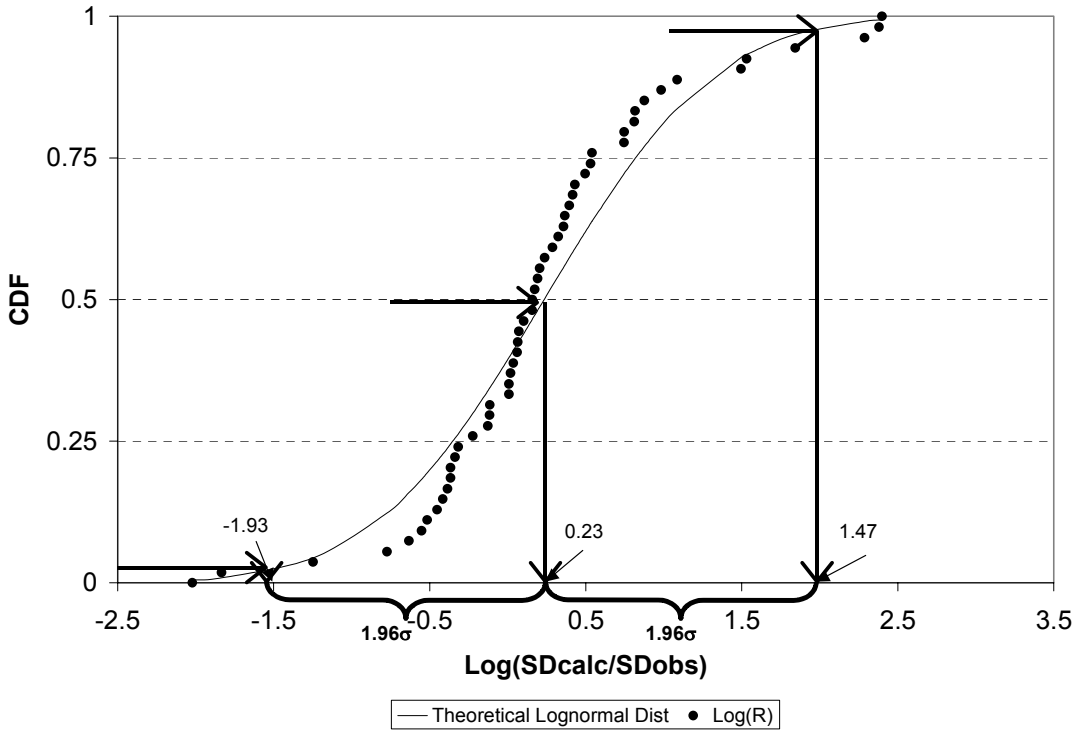


Figure 5.11: Distribution of Log (SD_{calc}/SD_{obs}) using the equation with R and A

5.2.4: Equation with S as independent variable

The same data set utilized in the analysis of the Eq. 3.6 was used to validate Eq. 4.5. An analysis of log(SD_{calc}/SD_{obs}) gives a lognormal distribution shown in figure 5.12. The mean and standard deviation of log(R) are given by:

$\overline{LogR}$ = 0.49

σ_{LogR} = 0.98

Thus 95% of the values of log (R) are between $\overline{Log_R}$ -1.96 σ_{LogR} = -1.43 and

$\overline{Log_R}$ +1.96 σ_{LogR} = 2.41

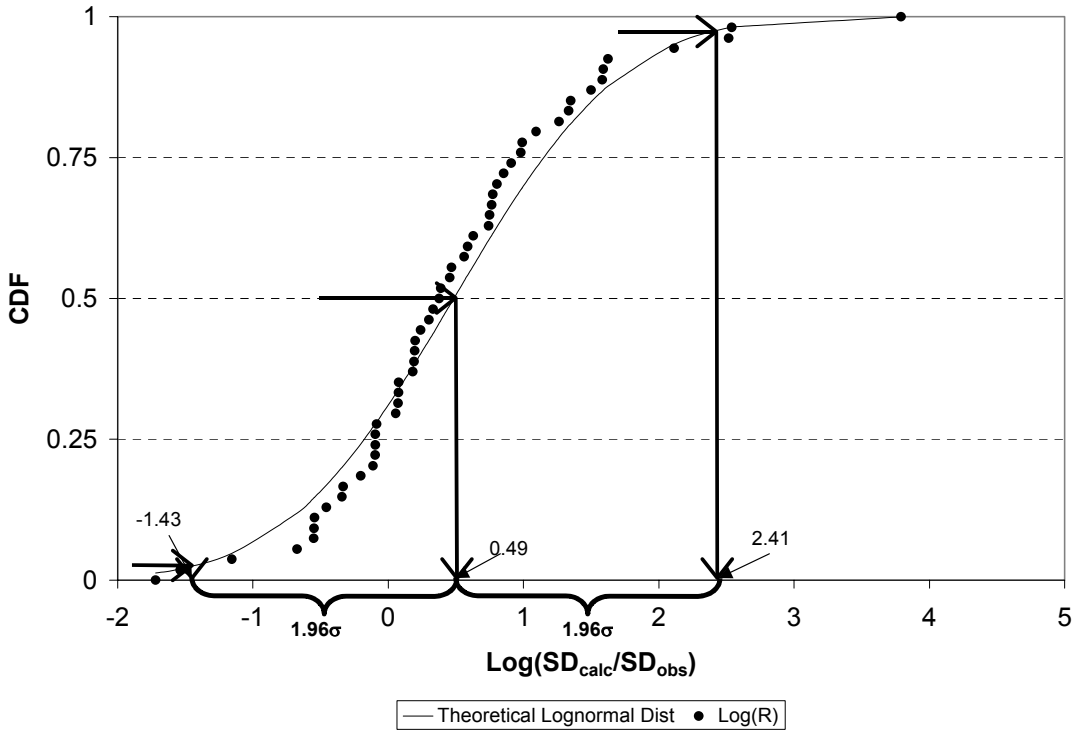


Figure 5.12: Distribution of Log (SD_{calc}/SD_{obs}) using the equation with S

5.2.5: Equation with A,R,S, and Vas independent variables

The analysis of log(SD_{calc}/SD_{obs}) gives a lognormal distribution shown in figure 5.13. The mean and standard deviation of log(R) are given by:

$\overline{LogR}$ = 0.06

σ_{LogR} = 0.87

Thus 95% of the values of log (R) are between $\overline{Log_R}$ -1.96 σ_{LogR} = -1.65 and

$\overline{Log_R}$ +1.96 σ_{LogR} = 1.77

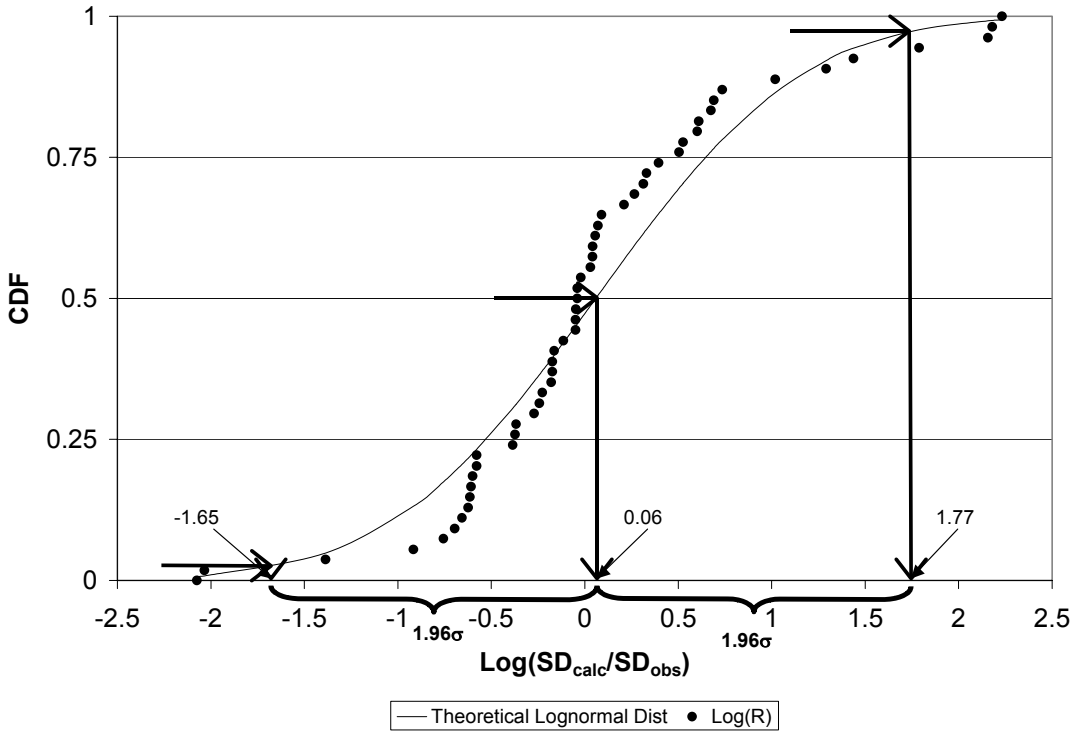


Figure 5.13: Distribution of Log (SD_{calc}/SD_{obs}) using the equation with A,R,S,V

5.3: Application example: California Gulch

5.3.1: Site description

The California Gulch basin is located in Lake County, Colorado, in the Upper Arkansas River watershed. The site is approximately 100 miles southwest of Denver and comprises an extension of 30.6 km^2. The basin includes the town of Leadville (elevation: 10,152 ft) and various parts of the Leadville Historic Mining District. The California Gulch basin is included in the EPA California Gulch Superfund site.

Figure 5.14: Picture of the California Gulch watershed

5.3.2: Climate data

The climate of Lake County is semi-arid continental. The average annual maximum temperature in the Leadville area is 50.5 degrees Fahrenheit and the average annual minimum temperature is 21.9 degrees Fahrenheit, with an annual mean temperature of 36.2 degrees Fahrenheit.

Precipitation falls throughout the year with the most significant precipitation occurring as rain in the summer months of July and August. The annual climatological normal precipitation for Leadville is 18.48 inches. The mean annual snowfall ranges from 134 inches at the lower elevations to 271 inches at the higher elevations.

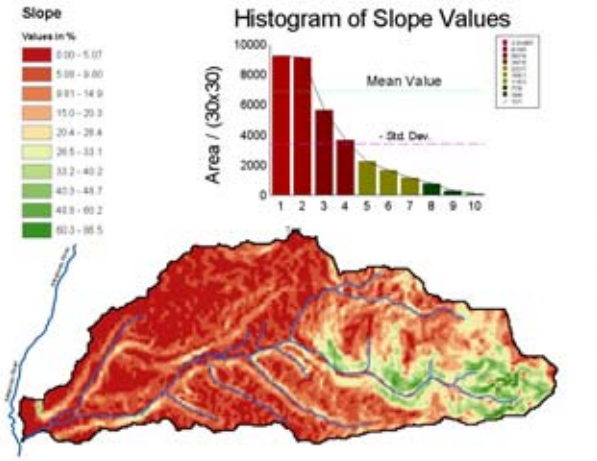
5.3.3: Topography

The upper California Gulch is a V-shaped valley with an intermittent stream that flows in a generally westerly direction. California Gulch extends about 7.8 miles from its headwaters

to its confluence with the Arkansas River. The basin has a maximum elevation value of 3654 m. AMSL and a minimum of 2909 m. AMSL. The average runoff length is estimated to be 100 m.

Digital Elevation Model (DEM)

Terrain Slopes (in percent)



Maximum elevation: 3654 m.

Minimum elevation: 2909 m.

Mean Slope: 12.6 %

Standard deviation: 11.18

Figure 5.15: Topography of the California Gulch

5.3.4: Land use/land cover data

Land cover definitions can be found at: http://landcover.usgs.gov/classes.html

Land Use Map

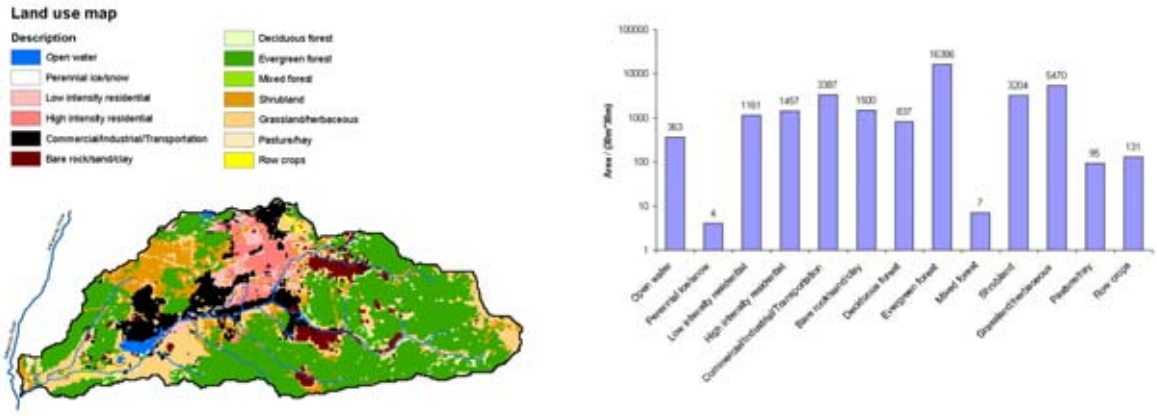


Figure 5.16: Land use/land cover data of the California Gulch

Using the five equations developed in chapters 3 and 4, the results shown in table 5.2. Figure 5.17 shows the average SD values and figure 5.18 shows the average SD values and the 95% confidence limits. The spreadsheet of the calculations can be seen in Appendix G.

Table 5.2: SD calculations for California Gulch using new equations

Variables	Equation	SD_{avg}	95% lower CL	95% upper CL
		$t/km^2/yr$		
R	3.6	313	15	1571
A	3.11	302	14	1903
AR	3.12	299	14	1433
S	4.5	78	4	430
ARSV	4.6	374	25	2102

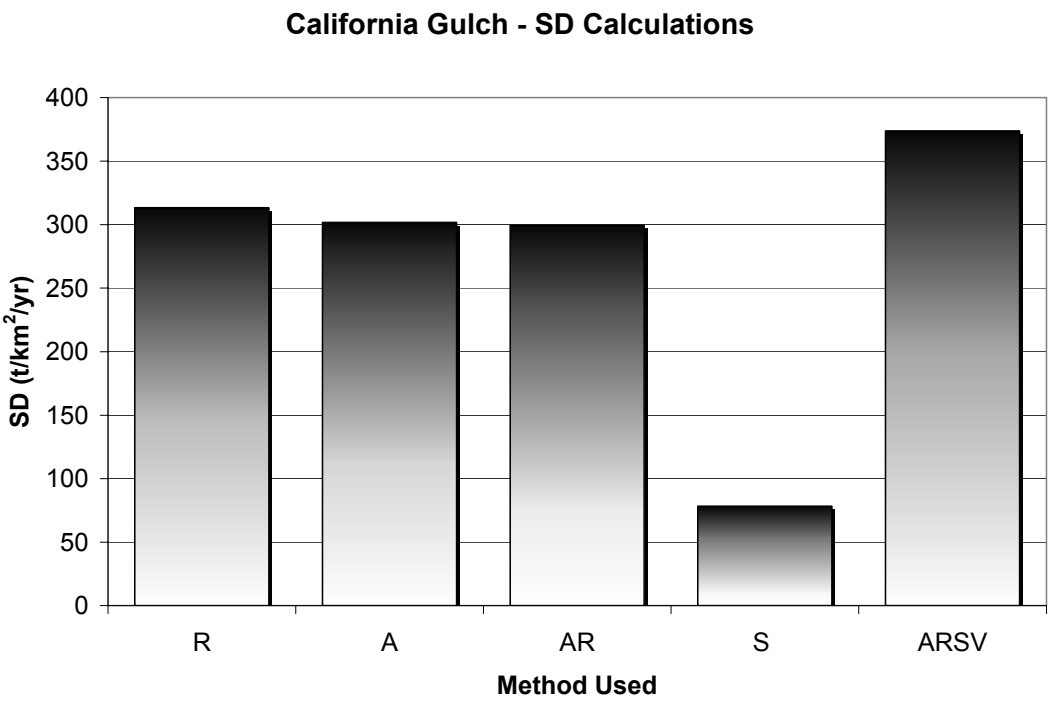


Figure 5.17: Average SD calculations for California Gulch

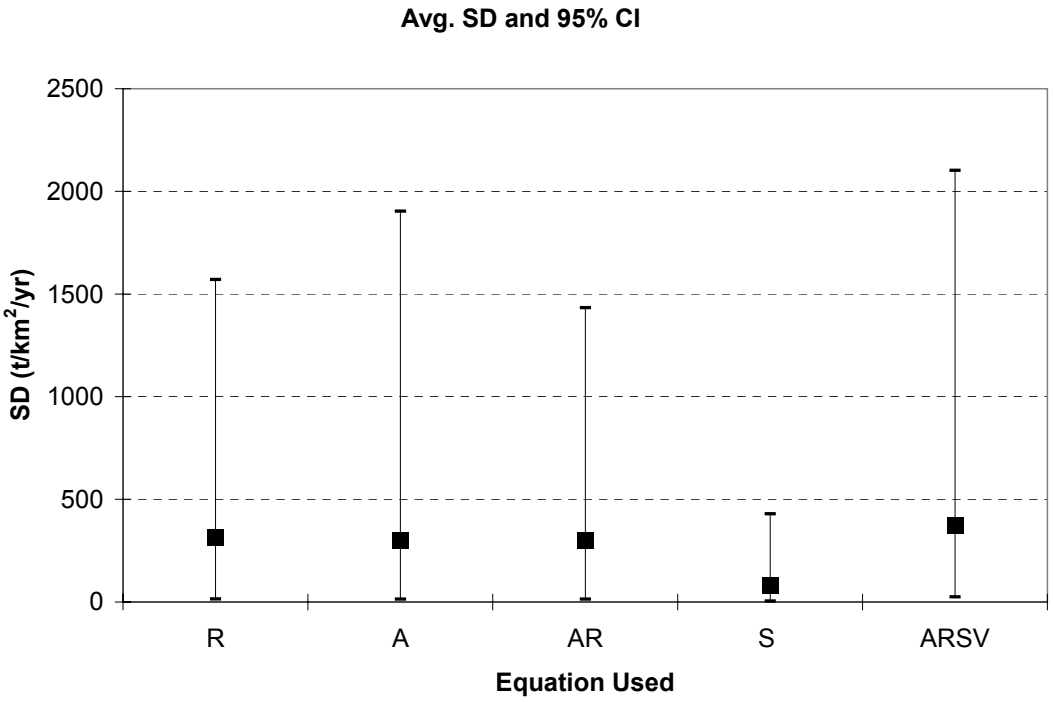


Figure 5.18: Average SD calculations and 95% confidence limits for California Gulch

Summary and conclusions:

In this chapter, it was seen that the new equations developed in this study (Eqs. 3.6 and 3.11) improve considerably the predictions of SD compared with the existing equations(Langbein and Schumm, Wilson and Fournier for R as independent variable, and Scott et al., Fleming, Strand, Khosla, Joglekar, and Lahlou for A as independent variable) as shown in the discrepancy ratios analyses performed in sections 5.1.1 and 5.1.2.

Furthermore, the equation with R and A as independent variables, i.e. Eqs. 3.6 and 3.11 are validated with 90% and 74% of the independent data falling within the 95% confidence interval respectively.

Moreover, the analyses of the lognormal distributions of the ratios between calculated and observed SD reveal that a slight increase in predictions is obtained when more variables are incorporated into the equations as shown in table 5.3 where lesser standard deviations of $\log(SD_{calc}/SD_{obs})$ are obtained with the equation with multiple variables. This result corroborates the findings obtained with the two- and four-parameter databases. Thus, to estimate SD in a given watershed, we recommend, in decreasing order, Eq. 4.6 followed by Eqs. 3.12, 3.6, 3.11 and in last resort Eq. 4.5.

An application example concerning California Gulch watershed in the state of Colorado showed that, out of the five new equations developed in this study, four yield very similar results ($SD \cong 300$ t/km^2/yr) as shown on figure 5.17. The observed SD in the watershed was not available to check the results against.

Table 5.3: Summary of SD equations and 95% confidence intervals

Parameter used	Equation	$\overline{Log_R}$	σ_{LogR}	95% CI	
				Lower limit	Upper limit
R	3.6	0.36	0.89	-1.38	2.1
A	3.11	0.26	0.89	-1.48	2.0
S	4.5	0.49	0.98	-1.43	2.41
A,R	3.12	0.23	0.87	-1.47	1.93
A,R,S,V	4.6	0.06	0.87	-1.65	1.77

CHAPTER VI

SUMMARY AND CONCLUSIONS

6.1: Summary

The main objectives of this research as described in chapter I were to:

1) Compile an extensive database on sediment yield and specific degradation;

2) Develop new SD relationships and determine the 95% confidence intervals;

3) Validate the new developed equations using an independent dataset and test the accuracy of existing specific degradation relationships including the ones of Langbein and Schumm (1958), Wilson (1973), and Fournier (1948), Scott et al. (1968), Fleming (1969), Strand (1975), Khosla (1953), Joglekar (1960), and Lahlou (1982);

Two different databases were compiled and analyzed in chapters 3 and 4. The first database contains 1463 data points relating SD to R and A as independent variables and the second database contains 551 data points relating SD to A, R, S, and V. Both datasets cover all the climatic variations encountered in continental United States.

6.2. Conclusions

In light of the obtained results, the following conclusions can be drawn:

1) 1463 data points were analyzed in the 2-parameter database and 551 data points were analyzed in the 4-parameter database.

2) Statistical analyses revealed that SD data are log normally distributed with respect to the independent variables.

Using regression analysis, it was possible to derive specific degradation relationships as a function of a single variable (Eqs. 3.6, 3.11, and 4.5) and as a function of a combination of variables (Eqs. 3.12, and 4.6). Based on analysis of the standard deviations of $\log(SD_{calc}/SD_{obs})$ shown on table 6.1, it can be seen that the accuracy of the predictions slightly increases as more independent variables are added to the SD equation.

Table 6.1: Summary of SD equations and 95% confidence intervals

Parameter used	Equation	R^2 using mean SD	R^2 using all raw data	$\overline{Log_R}$	σ_{LogR}	95% CI	
						Lower limit	Upper limit
R	3.6	0.53	0.06	0.31	0.52	-0.71	1.33
A	3.11	0.66	0.06	0.26	0.54	-0.80	1.32
S	4.5	0.53	0.12	0.26	0.51	-0.74	1.26
A,R	3.12	N/A	0.16	0.32	0.51	-0.68	1.32
A,R,S,V	4.6	N/A	0.17	0.21	0.49	-0.75	1.17

Considering the standard deviation of calculated SD to measured SD as the quantitative parameter to assess the accuracy of the developed equations, we recommend, in decreasing order, Eqs. 4.6, 3.12, 3.6, 3.11 and 4.5 to estimate specific degradation in watersheds.

3a) The existing equations with R as independent variable are less accurate than the new developed equation as discussed in sections 5.1.1 and 5.1.2. Specifically, with respect to mean SD predictions, the relationships of Langbein and Schumm (reservoir and station data), Wilson, and Fournier have accuracies in which 79%, 76%, 86%, and 24% of the predictions fall within a discrepancy range of $0.5<\mathbf{R}<2$ respectively. In contrast, for the same discrepancy range, the accuracy of our new developed equation (Eq. 3.6) is 90%. But it must be noted that the Langbein and Schumm curve was developed for effective precipitation and not direct precipitation. The effective precipitation was estimated from annual runoff using a conversion chart relating precipitation to runoff at a temperature of 10°C, which makes the curve valid for this range of climate.

3b) As of the equations with A as independent variable, they all overestimate SD by several orders of magnitude except the equation of Fleming, which predicts mean SD with 100% of the values lying within $0.5<\mathbf{R}<2$. In comparison, using our proposed equation (Eq. 3.11), the number of points of mean SD values falling within a discrepancy ratio of $0.5<\mathbf{R}<2$ is 100%.

3c) An independent dataset of 55 suspended sediment data points covering various states in continental United States were randomly selected from the U.S. Geological Survey web site (http://waterdata.usgs.gov/). The equation that is function of rainfall R is validated with 90%

of the predicted SD values falling within the 95% confidence interval, and the equation expressed in terms of A is validated with 74% of the independent data falling within the 95% confidence interval.

4) The following limitations apply to this study:
    a. All the data used to derive the new specific degradation relationships are from continental United States, thus the equations are mainly applicable to the concerned region. However, due to the wide variety of climatic regions in continental United States, it is possible to use the derived equations as a first approximation to estimate the specific degradation in basins located outside the United States with similar climatic characteristics.
    b. Rainfall data R does not include snow amount for most cases, therefore the equations should be applied with caution when snow amounts are added to the rainfall data.
    c. Specific degradation SD data are taken at reservoirs, thus they most likely include bedload. In contrast, the validation data only include suspended sediment amount.

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APPENDICES

A/ Two-parameter database

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
No.	**Res. ID**	**Reservoir**	**Stream**	**Nearest town**	**Ann. Rainfall**		**Dr. Area**		**Date of survey**		**Survey Per.**	**Spec. Wt**	**Specific degradation**			**Agcy suppl. data**
					(in)	**(mm)**	**($mi^{2)}$**	**(km^2)**	**Starts**	**Ends**	**(yrs)**	**(lb/ft^3)**	**(AF/mi^2 yr)**	**(T/mi^2 yr)**	**(T/km^2 yr)**	
1	60-33	West Tank	Trib. Centennail	Salome, Ariz.	6,6	167,6	0,29	0,7511	June. 1960	Oct. 1964	4,3	52,5	0,13	149	52	SCS
2	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,3	67,84	175,706	Jan.1936	June. 1938	3,0		2,41	4 460	1561	SCS
3	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,3	67,84	175,706	Oct.1943	Dec.1946	3,0		0,25	460	161	SCS
4	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,3	67,84	175,706	Dec.1946	Oct.1951	5,0	85	0,15	278	97	SCS
5	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,3	67,84	175,706	June. 1938	Oct.1943	5,0		0,72	1 330	466	SCS
6	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,3	67,84	175,706	Apr.1924	Jan.1936	11,0	85	0,1	185	65	SCS
7	57-27	Cochiti L	Rio Grande R	Pena Blanca, NM	7,5	190,5	11680	30251,2	avr-76	avr-78	2,08	76	0,067	110	39	CE
8	60-29	Big Horn Mt. Tank # 1	Trib. Centennail	Tonopah, Ariz.	7,7	195,6	0,51	1,3209	June. 1960	Oct. 1964	4,3	47,6	0,11	114	40	SCS
9	60-30	Big Horn Mt. Tank # 2	Trib. Centennail	Tonopah, Ariz.	7,7	195,6	0,44	1,1396	July. 1960	Oct. 1964	4,3	50	0,11	120	42	SCS
10	60-31	Centennial Wash Tank	Trib. Centennail	Tonopah, Ariz.	7,7	195,6	0,6	1,554	1954	May. 1965	11,0	91,97	0,09	180	63	SCS
11	60-32	New Tank	Trib. Centennail	Tonopah, Ariz.	7,7	195,6	1,88	4,8692	1945	May. 1965	20,0	77,12	0,094	158	55	SCS
12	60-47	Galleta Tank	Trib. Cent. Wash	Tonopah, Ariz.	7,7	195,6	0,645	1,67055	June. 1939	Apr. 1967	27,9	74,8	0,21	342	120	SCS
13	75-23	District #2 Desilting Pd	Drain	Grandview, WA	8,0	203,2	0,62	1,6058	juil-65	août-69	5,0	60,0	0,1500	198	69	SCS
14	62-11	Rondo Ruesch	Trib. Virgin River	St. George, Utah	8,2	208,3	0,09	0,2331	1944	Feb. 1966	22,0	90	0,61	1 196	419	SCS
15	62-12	Iliff Andrus	Trib. Warner Draw	St. George, Utah	8,2	208,3	1,08	2,7972	1949	Jan. 1966	17,0	78	0,76	1 290	452	SCS
16	62-13	Winfred Spendlove	Trib. Fort Pearce	St. George, Utah	8,2	208,3	0,84	2,1756	1946	Mar. 1966	20,0	87,5	0,42	800	280	SCS
17	62-14	Black Knolls	Trib. City Creek	St. George, Utah	8,2	208,3	0,58	1,5022	1922	Nov. 1965	43,0	75	0,34	555	194	SCS
18	62-16	Bill Snow Pond	Trib. Santa Clara River	St. George, Utah	8,2	208,3	0,057	0,14763	1956	June. 1966	10,0	72	1,79	2 820	987	SCS
19	62-17	Manganese Wash	Manganese Wash	St. George, Utah	8,2	208,3	0,17	0,4403	1956	Apr. 1966	10,0	80	0,38	662	232	SCS
20	62-8	CCC Pond (West)	Trib. Santa Clara River	St. George, Utah	8,2	208,3	0,03	0,0777	1941	Apr. 1966	25,0	92	0,23	461	161	SCS
21	64-5	Bullwinkle	Trib Brush Creek	Vernal Utah	8,2	208,3	0,11	0,2849	1938	Oct. 1968	30,0	70	0,79	1204	421	FS
22	64-7	Niles Haslon Pond	Trib. Stsinaker	Vernal Utah	8,2	208,3	0,095	0,24605	1952	août-63	15,0		0,67	1021	357	SCS
23	64-8	Maeser Reservoir	Trib. Twelve Mile Wash	Vernal Utah	8,2	208,3	0,65	1,6835		avr-64	26,0	90	0,23	450	158	SCS
24	75-2	High Valley Ranch #1 Pd	Wenas Cr	Yakima, WA	8,3	209,6	4,10	10,619	oct-35	oct-47	12,0	70,0	0,0200	30	11	SCS
25	75-25	Warrell Pond 1	Trib. Cowiche	Yakima, WA	8,3	209,6	0,07	0,18648	mai-72	juin-74	2,0	60,0	0,0400	52	18	SCS
26	75-25	Warrell Pond 1	Trib. Cowiche	Yakima, WA	8,3	209,6	0,07	0,18648	mai-75	juin-77	2,0	50,0	0,0800	48	17	SCS
27	75-26	Warrell Pond 2	Trib. Cowiche	Yakima, WA	8,3	209,6	0,15	0,3885	mai-72	juin-74	2,0	60,0	0,0300	39	14	SCS
28	75-26	Warrell Pond 2	Trib. Cowiche	Yakima, WA	8,3	209,6	0,15	0,3885	mai-75	juin-77	2,0	50,0	0,1200	62	22	SCS
29	75-6	Coffin Sheep Co. Pond	Naches R	Yakima, WA	8,3	209,6	0,48	1,2432	oct-35	oct-47	12,0	70,0	0,0270	41	14	SCS
30	64-1	Duck Fork	Ferron Creek	Ferron Utah	8,4	213,4	3,56	9,2204	1942	Oct. 1962	20,0	60	0,14	183	64	SCS
31	70-10	Laguna	Trib, of Newport Bay	Orange, Calif.	8,5	215,9	0,72	1,8648	Feb.1938	mai-35	2,0	40	5,56	4 840	1694	SCS
32	70-6	Bonita Canyon	Bonita Creek	Orange, Calif	8,5	215,9	4	10,36	Jan.1938	mai-35	2,0	60	2,63	3 437	1203	SCS
33	75-3	High Valley Ranch #2 Pd	Wenas Cr	Ellensburg, WA	8,5	215,9	0,18	0,47656	oct-36	oct-47	11,0	70,0	0,0400	61	21	SCS
34	75-4	High Valley Ranch #3	Wenas Cr	Ellensburg, WA	8,5	215,9	0,31	0,8081	oct-36	oct-47	11,0	70,0	0,0300	46	16	SCS
35	63-26	Creek Retention	Indian Wash	Grand Junction	8,8	223,5	0,4	1,036	1965	Oct. 1975	10,0	90	0,61	1190	417	SCS
36	57-15	Jemez Canyon Res.	Jemez R	Bernalillo, NM	8,86	225,0	1029	2665,11	oct-53	août-59	5,92	75,7	0,548	1868	654	CE
37	57-15	Jemez Canyon Res.	Jemez R	Bernalillo, NM	8,86	225,0	1029	2665,11	août-59	déc-65	6,33	75,7	0,0163	270	95	CE
38	57-15	Jemez Canyon Res.	Jemez R	Bernalillo, NM	8,86	225,0	1029	2665,11	déc-65	janv-75	9,08	75,7	0,718	1180	413	CE
39	57-22	Bernalillo Retard. Dam1	Piedra Lisa	Bernalillo, NM	8,86	225,0	4,07	10,5413	août-55	mai-67	11,75	94,6	0,26	537	188	SCS

40	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,019	0,04921	Nov. 1958	Nov. 1959	1,0	90	1,58	3095	1083	GS
41	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,019	0,04921	Nov. 1972	sept-69	1,0	90	0,53	39	14	GS
42	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,019	0,04921	Oct. 1971	Nov. 1972	1,0	90	0,53	1039	364	GS
43	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,019	0,04921	Nov. 1959	Nov. 1961	2,0	90	0,53	1032	361	GS
44	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,019	0,04921	Nov. 1961	Nov. 1963	2,0	90	0,53	1032	361	GS
45	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1956	Oct. 1957	1,0	90	0,7	1365	478	GS
46	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1958	Nov. 1959	1,0	90	2,15	2840	994	GS
47	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1963	Nov. 1964	1,0	90	2,78	5459	1911	GS
48	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1964	Nov. 1965	1,0	90	1,9	3722	1303	GS
49	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1966	Oct. 1967	1,0	90	2,34	4590	1607	GS
50	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1971	Nov. 1972	1,0	90	0,19	372	130	GS
51	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1972	sept-69	1,0	90	0,76	1490	522	GS
52	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1959	Nov. 1961	2,0	90	1,95	3846	1346	GS
53	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,158	0,40922	Nov. 1961	Nov. 1963	2,0	90	0,95	1110	389	GS
54	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	oct-65	oct-57	1,0	90	1,46	2654	929	GS
55	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	Nov. 1969	Oct. 1970	1,0	90	1,04	2042	715	GS
56	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	Nov. 1972	sept-69	1,0	90	1,04	2039	714	GS
57	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	Oct. 1970	Oct. 1971	1,0	90	2,08	4077	1427	GS
58	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	Oct. 1971	Nov. 1972	1,0	90	0,83	1627	569	GS
59	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	Nov. 1958	oct-65	1,1	90	1,46	2859	1001	GS
60	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,048	0,12432	oct-66	Nov. 1964	2,0	90	1,04	2042	715	GS
61	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	oct-59	Nov. 1964	1,0	90	0,24	467	163	GS
62	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	Nov. 1966	Oct. 1967	1,0	90	2,02	3967	1388	GS
63	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	Nov. 1968	NOV. 1969	1,0	90	0,36	700	245	GS
64	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	Nov. 1972	sept-69	1,0	90	36	706	247	GS
65	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	Oct. 1970	Nov. 1971	1,0	90	0,12	235	82	GS
66	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	oct-57	oct-59	2,0	90	0,59	1283	449	GS
67	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,084	0,21756	Nov. 1959	oct-57	2,0	90	1,9	3734	1307	GS
68	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,6	0,022	0,05698	June. 1970	Oct. 1970	0,4	90	2,27	4 455	1559	GS
69	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,6	0,022	0,05698	Nov. 1958	Nov. 1959	1,0	90	2,73	5 346	1871	GS
70	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,6	0,022	0,05698	Oct. 1970	Oct. 1971	1,0	90	2,73	5 351	1873	GS
71	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,6	0,022	0,05698	Oct. 1971	Nov. 1972	1,0	90	1,36	2 666	933	GS
72	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,6	0,022	0,05698	Nov. 1961	Nov. 1963	2,0	90	2,27	4 900	1715	GS
73	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,066	0,17094	Nov. 1963	Nov. 1964	1,0	90	0,6	1 188	416	GS
74	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,066	0,17094	Nov. 1966	Oct. 1967	1,0	90	2,41	4 752	1663	GS
75	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,066	0,17094	Nov. 1972	Oct. 1973	1,0	90	1,66	3 254	1139	GS
76	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,066	0,17094	Nov. 1959	Nov. 1961	2,0	90	2,73	5 198	1819	GS
77	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,066	0,17094	Nov. 1961	Nov. 1963	2,0	90	0,83	1 634	572	GS
78	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1958	Nov. 1959	1,0	90	1,49	2 914	1020	GS
79	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1963	Nov. 1964	1,0	90	0,68	1329	465	GS
80	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1964	Nov. 1965	1,0	90	2,23	4 371	1530	GS
81	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1968	Nov. 1969	1,0	90	0,34	664	232	GS
82	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1969	Oct. 1970	1,0	90	2,38	4651	1628	GS
83	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1971	Nov. 1972	1,0	90	1,01	1 980	693	GS

84	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1971	Nov. 1972	1,0	90	0,68	1329	465	GS
85	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1972	Oct. 1973	1,0	90	1,19	2333	817	GS
86	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Oct. 1970	Nov. 1971	1,0	90	0,68	1329	465	GS
87	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1959	Nov. 1961	2,0	90	2,71	5482	1919	GS
88	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1961	Nov. 1963	2,0	90	1,15	2 252	788	GS
89	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,6	0,148	0,38332	Nov. 1961	Nov. 1963	2,0	90	0,51	997	349	GS
90	57-1	Elephant Butte	Rio Grande R	Elephant Butte, NM	9,24	234,7	25866	66992,9	avr-47	fëvr-57	6,5	65,9	0,127	182	64	BR
91	57-1	Elephant Butte	Rio Grande R	Elephant Butte, NM	9,24	234,7	25866	66992,9	avr-35	oct-40	9,7	60	0,475	621	217	BR
92	57-1	Elephant Butte	Rio Grande R	Elephant Butte, NM	9,24	234,7	25866	66992,9	oct-40	avr-69	12,2	62	0,22	357	125	BR
93	66-12b	Mill Canyon Retarding	Mill Canyon	Glenwood, Utah	9,4	238,8	13,72	35,5348	Dec. 1959	Dec. 1960	1,5	84,9	1,05	1 960	686	SCS
94	66-12b	Mill Canyon Retarding	Mill Canyon	Glenwood, Utah	9,4	238,8	13,72	35,5348	Dec. 1960	May. 1963	2,4	84,9	0,01	18	6	SCS
95	66-12b	Mill Canyon Retarding	Mill Canyon	Glenwood, Utah	9,4	238,8	13,72	35,5348	May. 1963	May. 1968	5,0	84,9	0,03	74	26	SCS
96	66-12b	Mill Canyon Retarding	Mill Canyon	Glenwood, Utah	9,4	238,8	13,72	35,5348	May. 1968	Sept. 1974	6,3	84,9	10	185	65	SCS
97	60-34	Upper Twin Tank	Tiger Wash	Aguila, Ariz	9,6	243,8	1,83	4,7397	Oct. 1944	Oct. 1964	20,0	46	0,015	15	5	SCS
98	60-35	Harquahala Mt. Tank # 1	Trib. Brown's	Aguila, Ariz	9,6	243,8	0,11	0,2849	June. 1958	Oct. 1964	6,3	50	0,18	196	69	SCS
99	60-36	Judia Wash Retarding	Judia Wash	Solomon, Ariz.	9,7	246,4	4,57	11,8363	Jan. 1964	July. 1964	0,6	76,9	0,39	653	229	SCS
100	60-36	Judia Wash Retarding	Judia Wash	Solomon, Ariz.	9,7	246,4	4,57	11,8363	Jan. 1957	Jan. 1964	7,0	76,9	0,14	234	82	SCS
101	60-50	Frye Creek (No. 3)	Frye Creek	Thatcher, Ariz.	9,7	246,4	21,4	55,426	Apr. 1963	May. 1968	5,0	78,7	0,79	1 354	474	SCS
102	60-50	Frye Creek (No. 3)	Frye Creek	Thatcher, Ariz.	9,7	246,4	21,4	55,426	May. 1968	May. 1974	6,0	89,2	0,014	178	62	SCS
103	57-21	Rodey Hactch Val.Ar5	Rodey Arroyo	Hatch, NM	9,77	248,2	2,1	5,439	juil-58	août-67	9,1	85	1,55	2869	1004	SCS
104	57-29	Acomita L	Trib Rio San Jose	Acoma Pueblo, NM	9,9	251,5	17,13	44,3667	avr-05	nov-82	43	70	0,3	457	160	SCS
105	68-2	Elko Summit Res. No. 1	(ephemeral)	Elko, Nev.	9,9	251,5	1,25	3,2375	Mar. 1941	Aug. 1963	22,4	66	0,04	58	20	SCS
106	68-3	Elko Summit Res. No. 2	(ephemeral)	Elko, Nev.	9,9	251,5	0,63	1,6317	Aug. 1945	Aug. 1963	18,0	66,9	0,05	73	26	SCS
107	68-4	Dorsey Creek Reservoir	Dorsey Creek	Elko, Nev.	9,9	251,5	9,14	23,6726	Oct. 1952	Sept. 1963	10,9	56,9	0,12	149	52	SCS
108	62-2	Brooksby Tank	Trib. of Johnson	Fredonia, Ariz.	10	254,0	0,4	1,036	1951	Sept. 1965	14,0	97	0,1	211	74	SCS
109	62-3	Riggs Flat Charco	Sandy Canyon	Fredonia, Ariz.	10	254,0	57,83	149,78	Oct. 1956	Sept. 1965	8,9	72	0,035	55	19	SCS
110	62-4	Leroy Judd Tank	Trib. of Kanab	Fredonia, Ariz.	10	254,0	0,38	0,9842	1962	Aug. 1965	3,0	105,7	0,63	1 450	508	SCS
111	62-6	Jesse Judd Tank	Trib. of Kanab	Fredonia, Ariz.	10	254,0	3,49	9,0391	1955	Aug. 1965	10,0	80	0,12	209	73	SCS
112	71-36	Pine Flat	Kings River	Sanger, Calif	10	254,0	1 542	3993,78	May.1952	Feb.1954	1,8	62	0,04	54	19	CE
113	71-36	Pine Flat	Kings River	Sanger, Calif	10	254,0	1 542	3993,78	Feb.1954	Nov.1956	3,0	62	0,29	392	137	CE
114	78-10	Lambkin Pd	Trib of Boise R	Mount.Home, ID	10,1	256,5	0,19	0,49469	sept-37	sept-47	10,0	70,0	0,0500	76	27	SCS
115	78-11	Mud Springs Pd	Trib of Boise R	Mount.Home, ID	10,1	256,5	1,06	2,7454	sept-35	sept-47	12,0	70,0	0,0300	46	16	SCS
116	78-12	J. J. Colton Pd	Trib of Boise R	Mount.Home, ID	10,1	256,5	0,48	1,25097	sept-35	oct-47	12,0	70,0	0,0400	61	21	SCS
117	38-4a	W-9 (Smeenk)	Sulphur Creek	Sulphur, S. D.	10,2	259,1	1,27	3,2893	June. 1961	June. 1969	8,0	84	1,84	3 367	1178	ARS
118	38-4a	W-9 (Smeenk)	Sulphur Creek	Sulphur, S. D.	10,2	259,1	1,27	3,2893	Nov. 1951	June. 1961	9,6	84	1,38	2 525	884	ARS
119	57-3a	Santa Cruz	Santa Cruz River	Espanola, N. Mex.	10,2	259,1	93,1	241,129	Feb. 1929	Aug. 1956	27,4	80	0,27	470	165	SCS
120	75-16	Schaffer	No name	Moses Lake, WA	10,4	264,2	0,36	0,92204	juin-54	nov-66	12,0	60,0	0,2800	366	128	SCS
121	75-19	Sheffels	No name	Moses Lake, WA	10,4	264,2	4,77	12,3543	avr-59	mai-65	6,0	80,0	0,1500	229	80	SCS
122	57-2	Caballo	Rio Grande R	Truth or Conseqces,	10,44	265,2	1237	3203,83	janv-38	janv-81	43	75	0,29	467	163	BR
123	78-8	Miller Smeed Pd	Little Willow Cr	Payette, ID	10,5	266,2	0,22	0,56203	août-41	sept-47	6,0	70,0	0,1470	224	78	SCS
124	60-14	Halfmoon	Trib. of Gila River	Florence, Ariz	10,5	266,7	0,2	0,518	1941	June. 1960	19,0	85	0,75	1 388	486	SCS
125	60-15	Homestead	Trib. of Gila River	Florence, Ariz	10,5	266,7	0,9	2,331	1954	June. 1960	6,0	90	0,78	1 530	536	SCS
126	60-17	Magma No. 1	Magma Wash	Florence, Ariz	10,5	266,7	1,78	4,6102	1948	May. 1959	11,0	80	0,15	261	91	SCS
127	60-18	Magma No. 2	Magma Wash	Florence, Ariz	10,5	266,7	0,38	0,9842	Feb. 1954	May. 1959	5,4	85	0,15	278	97	SCS

128	60-19a	Magma No. 3	Magma Wash	Florence, Ariz	10,5	266,7	7	18,13	1949	May. 1959	10,0	75	0,03	49	17	SCS
129	60-22	Whitlow Old Tank	Trib. of Gila River	Florence, Ariz.	10,5	266,7	0,74	1,9166	1950	June. 1960	10,0	85	0,23	426	149	SCS
130	60-27	Williams-Chandler Pd.	Trib. of Queen	Florence Junction,	10,5	266,7	1,09	2,8231	1931	July. 1961	30,0	60	0,033	43	15	SCS
131	60-28a	Williams-Chandler Pd.	Trib. of Queen	Florence Junction,	10,5	266,7	0,65	1,6835	1944	July. 1961	17,0	60	0,13	174	61	SCS
132	70-15	Morena	Cottonwood Creek	San Diego, Calif.	10,6	269,2	109,4	283,346	Mar.1910	Dec.1935	25,7	60	2,16	2 823	988	SCS
133	71-11	Hume	Ten mile Creek	Fresno, Calif	10,6	269,2	24,1	62,419	June. 1909	June. 1946	37,0	62	0,03	40	14	SCS
134	34-6	Seminoe	North Platte River	Leo, Wy.	11	279,4	7 317	18951	1939	Sept. 1950	11,5	65	0,108	153	54	BR
135	71-41	Success Lake	Tule River	Porterville, Calif.	11	279,4	393	1017,87	Nov. 1967	Dec. 1968	1,1	62	0,163	219	77	CE
136	71-41	Success Lake	Tule River	Porterville, Calif.	11	279,4	393	1017,87	Nov. 1965	Nov. 1967	2,0	62	3,244	4 383	1534	CE
137	71-6	Crane Valley	N. Fk. San Joaquin R	Madera, Calif	11,1	281,9	52,7	136,493	1901	June. 1946	45,0	62	0,161	217	76	SCS
138	62-7	Frog Hollow Detention	Frog Hollow Wash	Hurricane, Utah	11,2	284,5	9,2	23,828	Jan. 1957	Jan. 1958	1,0	80	0,72	1 255	439	SCS
139	62-7	Frog Hollow Detention	Frog Hollow Wash	Hurricane, Utah	11,2	284,5	9,2	23,828	Jan. 1958	Nov. 1965	7,8	80	1,05	1 830	641	SCS
140	75-12	Schwisow	No name	Ritzville, WA	11,3	287,0	4,15	10,7485	mai-55	mai-65	10,0	80,0	0,0900	157	55	SCS
141	75-13	Rex Lyle	No name	Ritzville, WA	11,3	287,0	0,71	1,8389	juin-55	mai-65	10,0	80,0	0,1550	270	95	SCS
142	75-14	Schoesler	No name	Ritzville, WA	11,3	287,0	0,31	0,8029	juin-47	mai-65	18,0	80,0	0,4000	697	244	SCS
143	74-5	Luther Claypool	Trib. of Beaver Cr	Post, OR	11,5	291,8	1,09	2,8231	1946	Oct. 1951	5,0	70	0,037	56	20	SCS
144	66-11a	Fiddlers Canyon	Fiddlers Canyon	Cedar City, Utah	11,5	292,1	12,6	32,634	1947	Nov. 1956	9,0	70	0,145	221	77	SCS
145	40-2	Fort Peck	Missouri River	Fort Peck, Mont.	11,6	294,6	34692	89852,3	Sept. 1952	June. 1954	1,8	57,9	0,33	471	165	CE
146	40-2	Fort Peck	Missouri River	Fort Peck, Mont.	11,6	294,6	34692	89852,3	June. 1950	Sept. 1952	2,3	57,4	0,53	724	253	CE
147	40-2	Fort Peck	Missouri River	Fort Peck, Mont.	11,6	294,6	34692	89852,3	May. 1958	June. 1961	3,1	59,4	0,22	338	118	CE
148	40-2	Fort Peck	Missouri River	Fort Peck, Mont.	11,6	294,6	34692	89852,3	June. 1954	May. 1958	3,9	58,8	0,013	75	26	CE
149	40-2	Fort Peck	Missouri River	Fort Peck, Mont.	11,6	294,6	34692	89852,3	Oct. 1937	June. 1950	12,7	56,7	0,65	803	281	CE
150	48-5	Teller	Turkey Cr	Pueblo, CO	11,61	294,9	78,5	203,315	mars-11	fëvr-40	28,9	75,4	0,68	1117	391	SCS
151	34-5	Pathfinder	North Platte River	Alcova, Wy.	11,7	297,2	3 315	8585,85	June.1909	July. 1950	41,1	81,1	0,078	138	48	BR
152	41-1	Anderson Reservoir	Trib. of Pondera	Conrad, Mont.	11,9	302,3	0,156	0,40404	1916	Oct. 1955	39,0	60	0,136	183	64	SCS
153	41-2a	Kropp	Trib. of Pondera	Conrad, Mont.	11,9	302,3	0,156	0,40404	1916	Oct. 1955	39,0	60	0,025	33	12	SCS
154	41-3	Walston	Trib. of Pondera	Conrad, Mont.	11,9	302,3	0,156	0,40404	1916	Oct. 1955	39,0	60	0,122	166	58	SCS
155	76-17	Bauer Res	Unnamed	Ritzville, WA	11,9	303,3	1,17	3,0303	oct-44	oct-52	8,0	75,0	0,2600	425	149	SCS
156	70-4	Lake Sherwood	Triunfo Creek	Hollywood, Calif	12	304,8	15,7	40,663	1905	Mar.1936	31,0	50	0,16	174	61	SCS
157	71-2	Atascadero Park Lake	Atascadero Creek	Atascadero, Calif	12	304,8	1	2,59	1918	Nov. 1947	29,0	60	0,48	627	219	SCS
158	74-11	Arthur Schmidt	Trib. of Buck Cr	Shaniko, OR	12,0	304,8	0,114	0,29526	1940	Oct. 1951	11,0	70	0,03	46	16	SCS
159	74-15	Hunt Livest. Co. Pond	Trib of Buck Cr	Shaniko, OR	12,0	304,8	0,05	0,1295	1642	Oct. 1951	9,0	70	0,2	305	107	SCS
160	74-10	Willard Barnet Pond	Buck Cr	Kent, OR	12,0	305,8	0,209	0,54131	1941	Oct. 1951	10,0	70	0,24	366	128	SCS
161	43-7	Boysen	Wind River	Thermopolis, Wy.	12,1	307,3	7 670	19865,3	Oct. 1951	Aug. 1964	12,8	83	0,17	307	107	BR
162	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,3	18 102	46884,2	Dec. 1943	Sept. 1944	0,7	75,7	0,443	730	256	CE
163	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,3	18 102	46884,2	Sept. 1966	Aug. 1968	1,9	75,7	0,362	597	209	CE
164	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,3	18 102	46884,2	May. 1948	Oct. 1951	3,4	75,7	0,21	346	121	CE
165	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,3	18 102	46884,2	Sept. 1944	May. 1948	3,7	75,7	0,129	213	75	CE
166	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,3	18 102	46884,2	Mar. 1962	Sept. 1966	4,5	75,7	0,147	242	85	CE
167	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,3	18 102	46884,2	Oct. 1951	Aug. 1957	5,7	75,7	178	293	103	CE
168	71-12	La Grange	Tuolumne River	Modesto, Calif	12,1	307,3	1 501	3887,59	Sept. 1895	Oct. 1905	10,1	70	0,083	127	44	SCS
169	71-8	Don Pedro	Tuolumne River	Modesto, Calif	12,1	307,3	996,5	2580,94	Mar.1923	Nov. 1945	22,7	62	0,21	284	99	SCS
170	40-1	Yellow Water	Yellow Water Creek	Winnett, Mont.	12,2	309,9	54	139,86	June. 1938	Sept. 1948	10,3	32	0,32	224	78	SCS
171	60-48	Wellick Tank	Trib. Flying "E" Wash	Wickenburg, Ariz	12,2	309,9	0,77	1,9943	May. 1956	Sept. 1970	14,3	94,1	0,16	328	115	SCS

172	60-49	Pouquette Tank	Trib. Cemetery	Wickenburg, Ariz	12,2	309,9	0,129	0,33411	May. 1965	Dec. 1970	5,6	88,2	0,1	192	67	SCS
173	63-15a	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,011	0,02849	sept-62	Nov: 1967	1,0	90	0,73	142	50	GS
174	63-15a	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,011	0,02849	Nov. 1968	Nov. 1969	1,0	90	0,09	178	62	GS
175	63-15a	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,011	0,02849	Nov. 1969	Nov. 1970	1,0	90	0,36	710	249	GS
176	63-15a	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,011	0,02849	Nov. 1970	Oct. 1971	1,0	90	0,52	1019	357	GS
177	63-15a	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,011	0,02849	Nov: 1967	Nov. 1968	1,0	90	0,91	1780	623	GS
178	63-15a	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,011	0,02849	Oct. 1971	Nov. 1972	1,0	90	0,43	843	295	GS
179	63-16a.	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,008	0,02072	Nov. 1968	Nov. 1969	1,0	90	2,25	4410	1544	GS
180	63-16a.	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,008	0,02072	Nov. 1969	Nov. 1970	1,0	90	0,75	1470	515	GS
181	63-16a.	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,008	0,02072	Nov. 1970	Oct. 1971	1,0	90	2,38	4665	1633	GS
182	63-16a.	Boco Mountain No.	Trib. Alkali Creek	Wolcott Colo	12,2	309,9	0,008	0,02072	Oct. 1966	Nov. 1967	1,0	90	2,13	4165	1458	GS
183	74-3	McKay	McKay Cr.	Pendleton, OR	12,2	310,6	184	476,56	Oct. 1926	July. 1946	19,8	40	0,07	61	21	SCS
184	30-6	Gwinner Dam	Trib. Wild Rice River	Gwinner, N. Dak.	12,3	312,4	0,222	0,57498	1936	Aug. 1956	20,0	29	0,59	373	131	SCS
185	75-11	Llewellyn	Trib Goose	Wilbur, WA	12,3	312,4	1,25	3,2375	juil-53	juil-63	10,0	80,0	0,7300	1272	445	SCS
186	74-13	Vernon Christ Pond	Five Mile Cr	Dufur, OR	12,4	314,5	0,088	0,22792	1941	Oct. 1951	10,0	70	0,227	346	121	SCS
187	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,0	39,7	102,823	juin-59	juin-62	3	67	0,7	1007	352	SCS
188	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,0	39,7	102,823	June. 1959	June. 1962	3,0	67	0,69	1 012	354	SCS
189	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,0	39,7	102,823	June. 1962	June. 1966	4,0	80	0,89	1 693	593	SCS
190	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,0	39,7	102,823	June. 1966	July. 1972	6,0	83,6	0,63	1 215	425	SCS
191	61-3	Stockyard Tank	Trib Cottonwd	Snowflake, AZ	12,6	320,0	0,476	1,23284	1943	May. 1968	25,0	101,6	0,17	376	132	SCS
192	61-4	Thomas Tank I	Trib Cottonwd	Snowflake, AZ	12,6	320,0	0,549	1,42191	1947	June. 1968	21,0	77,9	0,15	250	88	SCS
193	61-5	Ellsworth Tank	Trib. Show Low Creek	Taylor Ariz	12,6	320,0	0,249	0,64491	1948	Aug. 1968	20,0	80	0,044	79	28	SCS
194	61-6	New Tank	Trib. Cottonwood	Snowflake, Ariz.	12,6	320,0	2,45	6,3455	1938	May. 1968	30,0	87,7	0,014	27	9	SCS
195	61-7	West Hall Tank	Trib. Cottonwood	Snowflake, Ariz.	12,6	320,0	0,32	0,8288	1944	June. 1968	24,0	93,4	0,02	41	14	SCS
196	61-8	Thomas Tank II	Trib. Perkins Spr. Draw	Snowflake, Ariz.	12,6	320,0	0,1	0,259	June. 1964	July. 1968	4,0	89,3	0,1	194	68	SCS
197	71-22	Contra Costa Country Club	Grayson Creek	Pacheco, Calif	12,8	325,1	0,2	0,518	1934	1951	17,0	40	0,15	131	46	SCS
198	71-42	Isabella Reservoir	Kern River	Isabella, Calif	12,9	327,7	2 074	5371,66	June. 1953	Sept. 1956	3,3	62	0,074	100	35	CE
199	71-42	Isabella Reservoir	Kern River	Isabella, Calif	12,9	327,7	2 074	5371,66	Sept. 1956	Dec. 1968	12,2	62	0,186	252	88	CE
200	48-8	Abiquiu Reservoir	Rio Chama	Abiquiu, NM	13,16	334,3	1 254	3247,86	Sept. 1972	Aug. 1973	0,9	65,8	1,04	1 490	522	CE
201	48-8	Abiquiu Reservoir	Rio Chama	Abiquiu, NM	13,16	334,3	1 254	3247,86	Apr. 1963	Oct. 1967	4,6	75,7	1,1	1 814	635	CE
202	48-8	Abiquiu Reservoir	Rio Chama	Abiquiu, NM	13,16	334,3	1 254	3247,86	Oct. 1967	Sept. 1972	4,9	65,8	0,32	242	85	CE
203	60-12	Dos Cabezas No. 4 SW	Trib. Wilcox Dry Lake	Dos Cabezas,	13,2	335,3	0,6	1,554	1949	Nov. 1960	11,0	90	0,29	559	196	SCS
204	60-13a	Dos Cabezas No. 15	Trib. Wilcox Dry Lake	Dos Cabezas,	13,2	335,3	0,38	0,9842	1940	Oct. 1960	20,0	90	0,26	510	179	SCS
205	60-20	Riggs	Trib. Wilcox Dry Lake	Dos Cabezas,	13,2	335,3	0,6	1,554	1946	Oct. 1960	14,0	80	0,06	105	37	SCS
206	62-18	Hollinger Debris Basin	Meadow Valley Wash	Pioche, Nev.	13,2	335,3	200	518	1962	July. 1962	10,0	80	0,03	52	18	SCS
207	74-6	Paul Jaeger #1 Pond	Trib. John Day R	Condon, OR	13,4	339,1	0,624	1,61616	1943	Oct. 1951	8,0	70	0,085	130	46	SCS
208	74-7	Paul Jaeger #2 Pond	Trib. of Rock Cr	Condon, OR	13,4	339,1	0,467	1,20953	1946	Oct. 1951	5,0	70	0,299	456	160	SCS
209	74-8	Paul Jaeger #3 Pond	Trib. John Day R	Condon, OR	13,4	339,1	0,249	0,64491	1944	Oct. 1951	7,0	70	0,12	183	64	SCS
210	34-3d	Guernsey Reservoir	North Platte River	Guernsey, Wy.	13,4	340,4	575	1489,25	Jan. 1944	July. 1947	3,5		0,21	243	85	BR
211	34-3d	Guernsey Reservoir	North Platte River	Guernsey, Wy.	13,4	340,4	575	1489,25	July. 1947	June. 1957	9,9	60,7	0,103	107	37	BR
212	78-2	Black Canyon	Payette R	Emmett, ID	13,5	342,4	1948	5045,32	juin-20	juin-32	12,0	60,0	0,1390	303	106	SCS
213	78-2	Black Canyon	Payette R	Emmett, ID	13,5	342,4	1948	5045,32	juin-32	juin-67	35,0	60,0	0,1500	327	114	SCS
214	60-41a	Bennett 14	Walnut Gulch	Tombstone, Ariz.	13,5	342,9	0,6	1,554	June. 1961	June. 1967	6,0	75	0,33	539	189	SCS
215	60-41a	Bennett 14	Walnut Gulch	Tombstone, Ariz.	13,5	342,9	0,6	1,554	June. 1967	June. 1973	6,0	75	0,2	327	114	SCS

216	60-42a	Cowan 7	Walnut Gulch	Tombstone, Ariz.	13,5	342,9	0,4	1,036	June. 1963	June. 1967	4,0	75	0,12	196	69	SCS
217	60-42a	Cowan 7	Walnut Gulch	Tombstone, Ariz.	13,5	342,9	0,4	1,036	June. 1967	Jan. 1973	6,0	75	0,25	408	143	SCS
218	57-17	Caballo Arroyo Site 1	Underwood Arroyo	Derry, NM	13,6	345,4	0,87	2,2533	nov-59	août-67	7,8	111	0,64	1547	541	SCS
219	57-20	North Salem site 2	North Salem Arroyo	Salem, NM	13,6	345,4	3,8	9,842	avr-57	août-67	10,25	98,5	0,35	751	263	SCS
220	71-3	Hawkins	N. Fk. Los Viboras	Hollister, Calif	13,8	350,5	4,01	10,3859	1912	May. 1940	28,0	60	0,15	196	69	SCS
221	71-30	North Fork	Pacheco Creek	Hollister, Calif	13,8	350,5	0,66	1,7094	1938	Apr. 1951	12,4	45	0,12	118	41	SCS
222	71-43	L, Kaweah (Terminus	Kaweah River	Lemon Cove, Calif.	13,8	350,5	560	1450,4	Nov. 1961	Nov. 1967	6,0	62	745	1 006	352	CE
223	71-7	Davis	Shaw Creek	Stockton, Calif	13,9	353,1	7,62	19,7358	1917	Sept. 1945	28,0	63	0,251	344	120	SCS
224	47-1	Conchas Reservoir	Canadian & Conchas	Conchas Dam, NM	14,2	360,7	6 976	18067,8	Nov. 1942	Oct. 1944	1,9	75,7	0,328	541	189	CE
225	47-1	Conchas Reservoir	Canadian & Conchas	Conchas Dam, NM	14,2	360,7	6 976	18067,8	May. 1940	June. 1942	2,1	75,7	0,996	1 643	575	CE
226	47-1	Conchas Reservoir	Canadian & Conchas	Conchas Dam, NM	14,2	360,7	6 976	18067,8	Oct. 1944	Feb. 1949	4,3	75,7	0,353	581	203	CE
227	47-1	Conchas Reservoir	Canadian & Conchas	Conchas Dam, NM	14,2	360,7	6 976	18067,8	Oct. 1963	Oct. 1970	6,9	75,7	0,453	746	261	CE
228	47-1	Conchas Reservoir	Canadian & Conchas	Conchas Dam, NM	14,2	360,7	6 976	18067,8	Feb. 1949	Oct. 1963	14,7	75,7	0,15	247	86	CE
229	74-14	Milt J. Martin Pond	Mill Cr	The Dalles, OR	14,6	370,6	0,069	0,17871	1944	Oct. 1951	7,0	70	0,29	442	155	SCS
230	42-2	Tongue River	Tongue River	Decker, Mont.	14,6	370,8	1 735	4492,36	May. 1939	Oct. 1948	9,4	70,5	0,188	289	101	BR
231	57-18	Alamo Arroyo Site 6	Alamo Arroyo	Chimayo, NM	14,6	370,8	3,12	8,0808	déc-68	mai-75	6,3	81	3,99	5521	1932	SCS
232	33-19	Glendo	North Platte	Glendo, Wy.	14,8	375,9	4 190	10852,1	Oct. 1957	May. 1972	14,5	70	0,13	198	69	BR
233	60-10	"D" Mt. No. 5	Whitewater Draw	Douglas, Ariz	14,8	375,9	12,3	31,857	1943	Nov. 1958	5,0	75	0,006	10	4	SCS
234	60-11	"D" Mt. Pond No. 6	Whitewater Draw	Douglass, Ariz.	14,8	375,9	5,68	14,7112	1941	Nov. 1958	6,0	75	0,006	10	4	SCS
235	60-6	"D" Mt. Tank No. 1	Whitewater Draw	Douglas, Ariz	14,8	375,9	0,21	0,5439	1917	Nov. 1958	41,0	75	0,05	82	29	SCS
236	60-7	"D" Mt. No. 2	Whitewater Draw	Douglas, Ariz	14,8	375,9	10,92	28,2828	1938	Nov. 1958	20,0	75	0,008	13	5	SCS
237	60-9	"D" Mt. No. 4	Whitewater Draw	Douglas, Ariz	14,8	375,9	0,36	0,9324	Mar. 1942	Nov. 1958	12,0	90	0,1	196	69	SCS
238	70-11	Encino	Encino Creek	Los Angeles, Calif.	14,8	375,9	1,3	3,367	20-mai	mai-35	18,0	40	0,815	710	249	SCS
239	65-2	Echo	Weber River	Echo, Utah	14,9	378,5	732	1895,88	Oct. 1930	Oct. 1954	24,0	71	0,104	161	56	BR
240	76-14	Arm McNary Res	Walla Walla R	Wallula, WA	15,0	381,0	1,76	4,5584	nov-52	nov-54	2,0	75,0	0,4840	791	277	CE
241	76-14	Arm McNary Res	Walla Walla R	Wallula, WA	15,0	381,0	1,76	4,5584	nov-54	nov-56	2,0	75,0	0,2550	417	146	CE
242	76-14	Arm McNary Res	Walla Walla R	Wallula, WA	15,0	381,0	1,76	4,5584	avr-49	nov-52	3,6	75,0	0,4050	662	232	CE
243	58-2	Alamogordo	Pecos R	Ft. Sumner, NM	15,04	382,0	3749	9709,91	sept-39	mars-40	0,5	73,5	1,03	1649	577	BR
244	58-2	Alamogordo	Pecos R	Ft. Sumner, NM	15,04	382,0	3749	9709,91	août-32	août-36	4	73,5	0,876	1410	494	BR
245	58-2	Alamogordo	Pecos R	Ft. Sumner, NM	15,04	382,0	3749	9709,91	mars-40	sept-60	20,42	73,5	0,281	450	158	BR
246	71-9	Exchequer	Merced River	Merced, Calif	15,2	386,1	1 022,40	2648,02	Sept. 1926	Mar. 1946	19,6	62	0,167	226	79	SCS
247	33-2	Lockhart Farm Pond	Trib. of N. Platte R.	Gering, Nebr.	15,3	388,6	2,558	6,62522	Aug. 1939	July. 1952	12,9	57,3	0,206	257	90	SCS
248	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,073	0,18907	Oct. 1964	Oct. 1965	1,0	110	0,14	328	115	FS
249	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,073	0,18907	Oct. 1965	Oct. 1966	1,0	110	0,27	656	230	FS
250	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,073	0,18907	Oct. 1967	Oct. 1968	1,0	110	0,14	328	115	FS
251	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,073	0,18907	Oct. 1962	Oct. 1964	2,0	110	0,55	1 313	460	FS
252	60-38a	Three Bar C Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,149	0,38591	Oct. 1960	Oct. 1961	1,0	110	0,67	1 608	563	FS
253	60-38a	Three Bar C Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,149	0,38591	Oct. 1961	Oct. 1962	1,0	110	0,67	1 608	563	FS
254	60-38a	Three Bar C Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,149	0,38591	Oct. 1965	Oct. 1966	1,0	110	0,34	804	281	FS
255	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,126	0,32634	Oct. 1961	Oct. 1962	1,0	110	0,63	1 521	532	FS
256	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,126	0,32634	Oct. 1964	Oct. 1965	1,0	110	0,08	190	67	FS
257	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,126	0,32634	Oct. 1965	Oct. 1966	1,0	110	0,08	190	67	FS
258	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,126	0,32634	Oct. 1962	Oct. 1964	2,0	110	0,04	95	33	FS
259	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,107	0,27713	Oct. 1963	Oct. 1964	1,0	110	0,37	886	310	FS

260	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,107	0,27713	Oct. 1964	Oct. 1965	1,0	110	0,09	224	78	FS
261	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,107	0,27713	Oct. 1965	Oct. 1966	1,0	110	0,19	448	157	FS
262	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,7	0,107	0,27713	Oct. 1969	Oct. 1970	1,0	110	0,08	2 016	706	FS
263	38-5	Angostura Reservoir	Cheyenne River	Hot Springs, S. D.	15,8	401,3	9 093	23550,9	Oct. 1949	Sept. 1965	16,0	56,4	0,145	178	62	BR
264	47-11	Hartshorn	Trib. Little Bear Creek	Syracuse, Kane.	15,8	401,3	1,89	4,8951	Mar. 1950	June. 1966	16,3	75	0,19	310	109	SCS
265	47-14	Amerine	Trib. Little Bear Creek	Syracuse, Kans.	15,8	401,3	3,4	8,806	Mar. 1953	June. 1966	13,3	75	0,2	327	114	SCS
266	47-15	Roy Kurz	Shirley	Syracuse, Kans.	15,8	401,3	8,91	23,0769	Apr. 1951	June.1967	16,5	70	0,1	152	53	SCS
267	47-9	Gregory	Trib. Arkansas	Syracuse, Kans.	15,8	401,3	6,5	16,835	Apr. 1951	June. 1967	16,5	70	0,11	167	58	SCS
268	66-10	Chalk Cr. Debris Basin	Chalk Creek	Fillmore, Utah	15,9	403,9	60	155,4	July. 1936	1946	10,0	75	0,14	229	80	SCS
269	34-9	Round Butte	Colo Creek	Wellington, Colo.	16	406,4	11,6	30,044	1905	June. 1965	60,0	69	0,07	105	37	SCS
270	38-11	New Underwood	Unnamed	New Underwood,	16	406,4	2,94	7,6146	1935	Aug. 1970	35,0	60	0,177	231	81	SCS
271	76-1	Mrs. Weiss #2 Pd	Asotin Cr	Asotin, WA	16,1	408,4	0,13	0,33152	sept-41	sept-47	6,0	70,0	0,3100	473	166	SCS
272	76-2	Mrs. Weiss #1 Pd	Trib Asotin	Asotin, WA	16,1	408,4	0,22	0,56203	sept-41	sept-47	6,0	70,0	0,3100	473	166	SCS
273	76-3	Lester Reeves #2 Pd	Asotin Cr	Asotin, WA	16,1	408,4	0,10	0,259	sept-37	sept-47	10,0	70,0	0,2700	4116	1441	SCS
274	76-4	Lester Reeves #1 Pd	Asotin Cr	Asotin, WA	16,1	408,4	0,13	0,32375	sept-41	sept-47	6,0	70,0	0,7000	1067	373	SCS
275	30-13	Raleigh Dam	Dog Tooth Creek	Raleigh, N. Dak.	16,1	408,9	4,45	11,5255	1909	July. 1956	47,0	35	0,144	110	39	SCS
276	70-7	Bouquet Canyon	Bouquet Creek	San Fernando,	16,1	408,9	11,6	30,044	Mar.1934	mai-35	0,5	40	1,1	958	335	SCS
277	70-8a	Chatsworth	Trib. Los Angeles	San Fernando,	16,1	408,9	4,45	11,5255	Apr.1918	mai-35	21,0	40	0,51	444	155	SCS
278	74-12	Rock Cr Improv. Co.	Trib. of White R	Tygh Valley, OR	16,2	410,2	5,6	14,504	1938	Oct. 1951	13,0	70	0,045	69	24	SCS
279	38-3a	W-14 (Anderson)	Trib. Fourmile	Vale, S. D.	16,2	411,5	0,054	0,13986	Nov. 1956	Oct. 1958	1,9	70	4,48	6 708	2348	ARS
280	38-3a	W-14 (Anderson)	Trib. Fourmile	Vale, S. D.	16,2	411,5	0,054	0,13986	Oct. 1958	Dec. 1958	4,2	70	2,78	4 158	1455	ARS
281	39-8	Battle Creek Detention D.	Battle Creek	Hulett, Wy.	16,3	414,0	18,44	47,7596	Nov. 1967	Sept. 1970	2,8	71,4	0,104	162	57	SCS
282	58-10	Pearson #8	Rio Salado Cr	Capitan, NM	16,44	417,6	0,24	0,6216	Jan. 1958	Jan. 1959	1,0	75	2,49	4 130	1446	SCS
283	58-10	Pearson #8	Rio Salado Cr	Capitan, NM	16,44	417,6	0,24	0,6216	Dec. 1956	Jan. 1958	1,1	75	2,63	4 280	1498	SCS
284	58-10	Pearson #8	Rio Salado Cr	Capitan, NM	16,44	417,6	0,24	0,6216	Mar. 1955	Dec. 1956	1,8	75	2,75	4 555	1594	SCS
285	58-10	Pearson #8	Rio Salado Cr	Capitan, NM	16,44	417,6	0,24	0,6216	Jan. 1959	Oct. 1965	6,8	75	1,53	2 519	882	SCS
286	58-11	Pearson #9	Rio Salado Cr	Capitan, NM	16,44	417,6	1,56	4,0404	Nov. 1954	Oct. 1965	10,9	75	0,45	734	257	SCS
287	58-12	Pearson #10	Rio Salado Cr	Capitan, NM	16,44	417,6	0,71	1,8389	May. 1957	Jan. 1958	0,7	75	0,14	228	80	SCS
288	58-12	Pearson #10	Rio Salado Cr	Capitan, NM	16,44	417,6	0,71	1,8389	Jan. 1958	Oct. 1958	0,8	75	0,76	1 241	434	SCS
289	58-12	Pearson #10	Rio Salado Cr	Capitan, NM	16,44	417,6	0,71	1,8389	Mar. 1955	May. 1957	2,2	75	1,39	2 262	792	SCS
290	58-12	Pearson #10	Rio Salado Cr	Capitan, NM	16,44	417,6	0,71	1,8389	Oct. 1958	Oct. 1965	7,0	75	0,31	505	177	SCS
291	58-13	Pearson #18	Rio Salado Cr	Capitan, NM	16,44	417,6	1,8	4,662	Mar. 1955	Oct. 1965	10,7	75	0,7	1 142	400	SCS
292	58-14	Pearson #20	Rio Salado Cr	Capitan, NM	16,44	417,6	0,16	0,4144	Mar. 1955	Oct. 1965	10,6	75	0,46	752	263	SCS
293	58-5	Upper Hondo site 1	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	May. 1959	Oct. 1959	0,4	75	0,65	1 060	371	SCS
294	58-5	Upper Hondo site 1	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	May. 1961	Mar. 1962	0,8	75	1,01	1 649	577	SCS
295	58-5	Upper Hondo site 1	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	Mar. 1962	Feb. 1963	0,9	75	0,25	408	143	SCS
296	58-5	Upper Hondo site 1	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	Oct. 1959	May. 1961	1,6	75	0,34	555	194	SCS
297	58-5	Upper Hondo site 2	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	Feb. 1963	Jan. 1965	1,9	75	0,26	424	148	SCS
298	58-5	Upper Hondo site 3	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	Jan. 1965	mai-68	7,3	84	0,5	933	327	SCS
299	58-5	Upper Hondo site 3	Rio Salado Cr	Capitan, NM	16,44	417,6	121,61	314,97	mai-68	juin-78	10,2	90	0,1	314	110	SCS
300	58-7	Bancroft #7	Rio Salado Cr	Capitan, NM	16,44	417,6	0,57	1,4763	Feb. 1955	Oct. 1965	10,7	75	0,92	1 500	525	SCS
301	58-8	Bancroft #11	Rio Salado Cr	Capitan, NM	16,44	417,6	0,69	1,7871	Feb. 1955	Oct. 1965	10,7	75	0,34	554	194	SCS
302	58-9	Pearson #6	Rio Salado Cr	Capitan, NM	16,44	417,6	0,19	0,4921	May. 1957	Apr. 1959	1,9	75	0,24	391	137	SCS
303	58-9	Pearson #6	Rio Salado Cr	Capitan, NM	16,44	417,6	0,19	0,4921	Mar. 1955	May. 1957	2,2	75	1,46	2 380	833	SCS

304	58-9	Pearson #6	Rio Salado Cr	Capitan, NM	16,44	417,6	0,19	0,4921	Apr. 1959	Oct. 1965	6,5	75	0,83	1 352	473	SCS
305	71-21	Lakewood	Walnut Creek	Concord, Calif	16,5	419,1	0,74	1,9166	1913	1951	40,0	30	0,76	50	18	SCS
306	58-15	Pecos Arroyo #1	Pecos Arroyo	Las Vegas, NM	16,53	419,9	19,04	49,3136	juin-61	fèvr-68	6,7	71	0,4	656	230	SCS
307	58-15	Pecos Arroyo #2	Pecos Arroyo	Las Vegas, NM	16,53	419,9	19,04	49,3136	fèvr-68	déc-81	12,8	71	0,3	454	159	SCS
308	34-10a	Q-51 Kiowa Creek Wshd.	Kiowa Creek	Elbert, Colo.	16,6	421,6	0,56	1,4504	June. 1957	Jan. 1966	9,0	80	0,43	749	262	SCS
309	34-12	B-9 Kiowa Creek Wshd.	Kiowa Creek	Elbert, Colo.	16,6	421,6	0,64	1,6576	Dec. 1955	July. 1965	9,5	80	0,09	157	55	SCS
310	34-8a	R-3 Kiowa Creek Wshd.	Kiowa Creek	Elbert, Colo.	16,6	421,6	2,89	7,4851	July. 1956	Mar. 1966	10,0	80	0,32	557	195	SCS
311	38-1	Johnson's Stock Pond	Trib. L. Cheyenne	Gettysburg, S. D.	16,6	421,6	0,168	0,43512	1912	June. 1937	25,0	58,1	0,16	202	71	SCS
312	38-9	Canyon Lake	Rapid Creek	Rapid City, S. D.	16,6	421,6	66,35	171,847	Sept. 1933	Oct. 1970	37,0	65	0,032	50	18	SCS
313	58-6	Bancroft #7	Rio Salado Creek	Capitan, N. Mex.	16,6	421,6	12	31,08	Feb. 1955	Oct. 1965	10,7	75	0,01	16	6	SCS
314	71-40	Santa Felicia	Piru Creek	Piru, Calif,	16,7	424,2	425	1100,75	Oct. 1955	Oct. 1965	10,0	52	0,58	658	230	GS
315	70-2	Lake Hudges	San Diequito River	Escondido, Calif.	16,8	426,7	301	779,59	July. 1935	July. 1948	13,0		0,332	470	165	SCS
316	70-2	Lake Hudges	San Diequito River	Escondido, Calif.	16,8	426,7	301	779,59	Jan. 1919	July. 1935	16,5	65	0,365	517	181	SCS
317	70-3	Railroad Canyon	San Jacinto River	Elsinore, Calif.	16,8	426,7	651	1686,09	May. 1928	June. 1939	11,0	60	0,03	39	14	SCS
318	33-8a	Reichelt Stock Pond	Unnamed	Julesburg, Colo.	16,9	429,3	0,71	1,8389	Oct. 1950	Nov.1957	7,0	80,4	0,28	490	172	SCS
319	39-6	Cole Reservoir	Trib. of Grand	Bison, S. D.	16,9	429,3	2,21	5,7239	Aug. 1937	Aug. 1964	27,0	60	0,29	379	133	SCS
320	47-12	Christian	Trib. Cimarron	Ulysses, Kans.	16,9	429,3	1,06	2,7454	June. 1961	June. 1966	5,0	75	0,14	229	80	SCS
321	34-1	Castlewood	Cherry Creek	Denver, Colo.	17	431,8	166,9	432,271	1890	Aug. 1933	43,0	77,5	0,099	167	58	SCS
322	39-9	Sterling Dam	Random Creek	Sterling, N. D.	17	431,8	42,7	110,593	1900	Aug. 1973	73,0	19,6	0,043	18	6	SCS
323	75-20	Telecky	Trib Crab	Edwall, WA	17,0	431,8	2,26	5,8534	avr-55	juin-60	7,0	60,0	0,8500	1480	518	SCS
324	76-19	Koch	Trib Rock	Fairfield, WA	17,0	431,8	0,19	0,47915	juil-67	juil-69	2,0	60,0	0,5100	672	235	SCS
325	76-19	Koch	Trib Rock	Fairfield, WA	17,0	431,8	0,19	0,47915	oct-62	juil-67	5,0	60,0	0,3600	467	163	SCS
326	76-23	Sullivan	Trib Rock	Fairfield, WA	17,0	431,8	0,54	1,40119	juil-67	juil-69	2,0	60,0	0,8300	1084	379	SCS
327	76-23	Sullivan	Trib Rock	Fairfield, WA	17,0	431,8	0,54	1,40119	oct-62	juil-67	5,0	60,0	0,7400	967	338	SCS
328	76-5	Dan Holt Pd	Latah Cr	Waverly, WA	17,0	431,8	0,11	0,28231	sept-40	oct-47	7,0	70,0	0,1200	183	64	SCS
329	76-18	Dechenne	Unnamed	St. John, WA	17,1	433,8	1,14	2,9526	sept-68	avr-69	1,0	70,0	0,6300	960	336	SCS
330	34-4a	Lake Cheesman	South Platte R. and	Deckers, Colo.	17,1	434,3	1 460	3781,4	Oct. 1900	Sept. 1931	31,0	70	0,025	37	13	BR
331	71-15	Pardee	Mokelumne River	Lodi, Calif	17,1	434,3	383,5	993,265	1929	Aug. 1943	14,0	62	0,152	205	72	SCS
332	71-19	ST. Mary's	Walnut Creek	Walnut Creek, CA	17,2	436,9	2,97	7,6923	1928	1951	11,0	45	0,66	647	226	SCS
333	39-2a	Hiddenwood Lake	Hiddenwood Lake	Selby, S. D.	17,3	439,4	27,2	70,448	May. 1926	Sept. 1959	33,3	55	0,047	56	20	SCS
334	33-12	Stroud Pond	Trib. Jones Canyon Cr.	McDonald, Kans.	17,4	442,0	0,82	2,1238	Nov. 1958	July. 1970	11,7	70	0,96	1 467	513	SCS
335	33-20	Howard Brothers	Driftwood Creek	McDonald, Kans.	17,4	442,0	0,82	2,1238	Nov. 1958	July. 1970	11,7	70	0,33	507	177	SCS
336	34-11	J-33 Kiowa Creek Wshd.	Kiowa Creek	Eastonville, Colo.	17,4	442,0	1,06	2,7454	July. 1956	July. 1965	9,0	80	0,05	87	30	SCS
337	30-10	Melvin Bellerud	Park River	Adams, N. Dak.	17,8	452,1	1,121	2,90339	1942	May. 1955	16,0	35	0,1579	115	40	SCS
338	30-14	Sioux Railroad	Park River	Adams, N. Dak.	17,8	452,1	1,121	2,90339	1942	May. 1955	16,0	35	0,026	19	7	SCS
339	30-5	Gustafson Farm Pond	Park River	Adams, N. Dak.	17,8	452,1	14,6	37,814	1935	Aug. 1957	22,0	25	0,101	77	27	SCS
340	37-1a	Elkins Stock Pond No. 1-	Br. Frozenman	Hayes, S. D.	17,8	452,1	0,57	1,4763	May. 1907	June. 1937	30,0	41,3	0,16	144	50	SCS
341	37-2	Elkins Stock Pond No. 2-	Br. Frozenman	Hayes, S. D.	17,8	452,1	0,33	0,8547	May. 1911	June. 1937	26,0	36,6	0,136	108	38	SCS
342	34-2	Kenwood	Cherry Creek	Denver, Colo.	17,9	454,7	386	999,74	June. 1938	June. 1939	1,0		0,741	1 220	427	SCS
343	34-2	Kenwood	Cherry Creek	Denver, Colo.	17,9	454,7	386	999,74	Mar. 1936	June. 1938	2,3	75,6	0,106	175	61	SCS
344	37-21	Harris Reservoir	Unnamed	Gordon, Nebr	17,9	454,7	0,573	1,48407	May. 1947	Nov. 1956	9,5	70	0,315	480	168	SCS
345	37-22	Harris Reservoir	Unnamed	Gordon, Nebr	17,9	454,7	11,85	30,6915	May. 1947	Nov. 1956	9,5	70	0,025	38	13	SCS
346	37-23	Johnson Reservoir	Unnamed	Gordon, Nebr	17,9	454,7	0,849	2,19891	1946	Nov. 1956	10,3	70	0,435	663	232	SCS
347	30-16a	Baldhill D. (L. Ashtabula)	Sheyenne River	Valley City, N. D.	18,4	467,4	1 979	5125,61	Dec. 1952	Jan. 1958	5,1	90	0,0981	192	67	CE

348	30-16a	Baldhill D. (L. Ashtabula)	Sheyenne River	Valley City, N. D.	18,4	467,4	1 979	5125,61	Jan. 1958	Feb. 1964	6,1	90	0,0865	170	60	CE
349	30-16a	Baldhill D. (L. Ashtabula)	Sheyenne River	Valley City, N. D.	18,4	467,4	1 979	5125,61	Feb. 1964	Jan. 1971	6,9	90	0,051	100	35	CE
350	33-14	Bondegard Stodk Pond	Sedgewick Draw	Lodgepole, Nebr.	18,4	467,4	1,5	3,885	1952	Dec. 1967	15,0	75	0,17	277	97	SCS
351	39-5	Wenner Reservoir	Trib. of Grand	Lemmon, S. D.	18,4	467,4	0,493	1,27687	Aug. 1951	Aug. 1964	13,0	60	0,3	392	137	SCS
352	65-3a	Santaquin Debris Basin	Summit Creek	Santaquin, Utah	18,4	467,4	13,5	34,965	Fall. 1954	Dec. 1957	3,0	90	0,47	921	322	SCS
353	36-22	Richmond Lake	Foot Creek	Aberdeen, S. D.	18,5	469,9	73,5	190,365	Jan. 1937	Sept. 1969	32,8	51,8	0,378	426	149	SCS
354	47-10	Lahey	Trib. Cimarron	Moscow, Kans.	18,5	469,9	2,75	7,1225	Oct. 1960	June. 1966	5,7	50	0,11	120	42	SCS
355	47-13	Downing	Trib. Cimarron	Moscow, Kans.	18,5	469,9	0,46	1,1914	Aug. 1961	June.1966	4,8	65	0,28	396	139	SCS
356	50-50a	Kent Creek Wshd. Site #1	Kent Creek	Quitaque, Tex.	18,6	472,4	1,46	3,7814	Apr. 1964	June. 1966	2,1	61	2,67	3 547	1241	SCS
357	72-4	Blodgett	Trib. Cosumnes	Sacramento, Calif.	18,6	472,4	3,05	7,8995	Mar. 1940	Oct. 1945	5,6	46	0,217	217	76	SCS
358	71-18a	Wood Pond	Sycamore Creek	Danville Calif	18,7	475,0	0,3	0,777	1940	1951	11,0	80	0,053	92	32	SCS
359	71-20	Black Valley Creek	Green Valley Creek	.Danville, Calif	18,7	475,0	0,76	1,9684	1880	1951	71,0	46	0,11	110	39	SCS
360	71-23	Englehart Pond	Marsh Creek	Brentwood, Calif	18,7	475,0	0,033	0,08547	1945	Jan. 1953	7,0	60	0,088	115	40	SCS
361	71-24a	C. C. Anderson	Marsh Creek	Brentwood, Calif	18,7	475,0	0,83	2,1497	1945	Oct. 1952	7,0	65	0,096	136	48	SCS
362	71-25	Upper Walter Keller Pond	Marsh Creek	Brentwood, Calif	18,7	475,0	0,27	0,6993	1943	Oct. 1952	9,0	40	0,682	594	208	SCS
363	71-26	F. J. Hoey Pond	Alhambra Creek	Brentwood, Calif	18,7	475,0	0,045	0,11655	1947	Jan. 1953	5,0	55	0,578	692	242	SCS
364	71-27a	Lee Higgins Pond	Marsh Creek	Brentwood, Calif	18,7	475,0	0,199	0,51541	1941	Jan. 1953	5,0	40	0,14	122	43	SCS
365	71-28a	Souza	Marsh Creek	Brentwood, Calif	18,7	475,0	0,283	0,73297	1946	Jan. 1953	6,0	30	0,894	584	204	SCS
366	71-29a	Ordwary	Marsh Creek	Brentwood, Calif	18,7	475,0	0,613	1,58767	1945	Jan. 1953	7,0	70	0,19	290	102	SCS
367	30-1	Lake Bronson	Two Rivers	Bronson, Minn.	18,8	477,5	438,5	1135,72	Summer. 1940	Oct. 1950	10,0	30,94	0,038	26	9	SCS
368	30-17a	Homme Dam (Park River)	S. Br. Park River	Park River, N. D.	18,8	477,5	229	593,11	Jan. 1953	Mar. 1958	5,2	90	0,225	441	154	CE
369	30-17a	Homme Dam (Park River)	S. Br. Park River	Park River, N. D.	18,8	477,5	229	593,11	Mar. 1958	Mar. 1964	6,0	90	0,0938	184	64	CE
370	30-17a	Homme Dam (Park River)	S. Br. Park River	Park River, N. D.	18,8	477,5	229	593,11	Mar. 1964	Dec. 1970	6,8	90	0,18	353	124	CE
371	36-24	Wild Rice Wr-3	Wild Rice Creek	Britton, S. D.	18,8	477,5	5,95	15,4105	May. 1961	Sept. 1973	12,3	59,57	0,16	243	85	SCS
372	36-25	Wild Rice Wr-5	Unnamed	Britton, S. D.	18,8	477,5	2,35	6,0865	Sept. 1961	Sept. 1973	12,0	61,38	0,2	267	93	SCS
373	33-17	Earl Brown Stock Dam	Beaver Creek	Atwood, Kans.	19,1	485,1	1,4	3,626	Nov. 1948	Aug. 1970	21,8	70	0,23	354	124	SCS
374	33-18	Frank Ruda Stock Dam	Sappa Creek	Atwood, Kans.	19,1	485,1	1,4	3,626	Nov. 1948	Aug. 1970	21,8	70	0,15	236	83	SCS
375	33-21	Raymond Solko wshd.	North Beaver	Atwood, Kans.	19,1	485,1	1,4	3,626	Nov. 1948	Aug. 1970	21,8	70	0,29	436	153	SCS
376	33-9	Dozbaba Pond	Trib. Beaver Creek	Atwood, Kans.	19,1	485,1	1,4	3,626	Nov. 1948	Aug. 1970	21,8	70	0,28	422	148	SCS
377	36-13	Bartlett	Green Creek	Alcester, S. D.	19,1	485,1	0,234	0,60606	Nov. 1936	Nov. 1955	19,0	77	1,35	2 264	792	SCS
378	36-16	Scott No. 2	Scott Creek	Alcester, S. D.	19,1	485,1	0,234	0,60606	Nov. 1936	Nov. 1955	19,0	77	1,52	1 867	653	SCS
379	36-21a	Scott Creek #11	Scott Creek	Alcester, S. D.	19,1	485,1	1,45	3,7555	Apr. 1965	May. 1970	5,1		1,785	2 527	884	SCS
380	36-21a	Scott Creek #11	Scott Creek	Alcester, S. D.	19,1	485,1	1,45	3,7555	Oct. 1954	Apr. 1965	10,5	65	0,26	368	129	SCS
381	47-8	Boles	Cimarron	Liberal, Kans.	19,1	485,1	0,36	0,9324	Mar. 1962	June. 1966	4,3	65	0,12	170	60	SCS
382	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,7	5 760	14918,4	Dec. 1914	Oct. 1916	1,8	70	3,35	5 107	1787	BR
383	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,7	5 760	14918,4	Jan. 1935	Jan. 1939	4,0	70	0,85	1 296	454	BR
384	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,7	5 760	14918,4	May. 1909	Dec. 1914	5,7	70	0,819	1 248	437	BR
385	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,7	5 760	14918,4	Jan. 1939	Jan. 1946	7,0	70	0,418	637	223	BR
386	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,7	5 760	14918,4	Oct. 1916	Sept. 1925	8,9	70	0,67	1 021	357	BR
387	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,7	5 760	14918,4	Sept. 1925	Jan. 1935	9,3	70	0,145	221	77	BR
388	33-22	Scott Brown Dam	Sappa Creek	Rexford, Kans,	19,5	495,3	1,98	5,1282	Dec. 1960	July. 1972	11,6	70	0,38	580	203	SCS
389	30-12	Norby Dam	Trib. Wild Rice River	Havana, N. Dak.	19,6	497,8	0,183	0,47397	1934	Aug. 1956	22,0	45	0,188	184	64	SCS
390	30-15	White Lake	Trib. Wild Rice River	Havana, N. Dak.	19,6	497,8	0,183	0,47397	1934	Aug. 1956	22,0	45	0,2167	151	53	SCS
391	78-4	Arrowrock-Boise Project	Boise R	Boise, ID	19,6	498,3	2170	5620,3	févr-11	oct-43	32,6	60,0	0,1090	173	61	SCS

392	78-9	Twin Puddles Pd	Trib of Boise R	Boise, ID	19,6	498,3	1,61	4,1699	sept-37	sept-47	10,0	70,0	0,0200	30	11	SCS
393	46-41	Davis	Pawnee	Kalvesta, Kans.	19,7	500,4	1,82	4,7138	Dec. 1952	Sept. 1967	16,8	60	0,17	222	78	SCS
394	65-1	East Canyon	East Canyon Creek	Morgan, Utah	19,9	505,5	144	372,96	1896	Oct. 1954	58,0	77,1	0,124	208	73	BR
395	72-7b	East Park	Little Stony Creek	Stonyford, Calif.	19,9	505,5	98,9	256,151	Dec. 1910	Nov. 1962	52,0	55	0,37	443	155	GS
396	30-7	Madsen Farm Pond	Swan Creek	Wheatland, N. Dak.	20	508,0	27,76	71,8984	1939	June. 1956	17,0	35	0,0078	6	2	SCS
397	30-8	Magnolia Dam	Buffalo Creek	Wheatland, N. Dak.	20	508,0	11,72	30,3548	1908	June. 1956	48,0	35	0,052	40	14	SCS
398	32-39	Jesse Pond	Trib. Smoky Hill River	Arnold, Kans	20	508,0	0,92	2,3828	Dec. 1944	Aug. 1970	25,7	80	0,09	158	55	SCS
399	50-19	George Pond	Unnamed	Canadian, tex.	20,1	510,5	0,535	1,38565	June. 1952	Apr. 1958	5,8	70,95	0,599	864	302	SCS
400	50-21	Harrison No. 1	Unnamed	Canadian, tex.	20,1	510,5	0,237	0,61383	May. 1952	Apr. 1958	5,9	79,68	0,325	564	197	SCS
401	50-22	Harrison No. 2	Unnamed	Canadian, tex.	20,1	510,5	0,292	0,75628	Sept. 1951	Apr. 1958	6,6	68,53	0,733	1 094	383	SCS
402	50-38	Stickley Pond No. 4	Canadian River	Canadian, Tex.	20,1	510,5	0,171	0,44289	Jan. 1947	Apr. 1958	11,3	77,65	0,959	1 622	568	SCS
403	50-39	Stickley Pond No. 6	Canadian River	Canadian, Tex.	20,1	510,5	0,162	0,41958	Oct. 1945	Apr. 1958	12,6	85,34	2,167	4 028	1410	SCS
404	50-40	Wheeler Farm Pond	Canadian River	Canadian, Tex.	20,1	510,5	0,205	0,53095	Dec. 1944	Apr. 1958	13,3	82,73	0,249	449	157	SCS
405	50-49a	Upper washita Site	Gageby Creek	Canadian, Tex.	20,1	510,5	6,96	18,0264	Nov. 1961	July. 1968	4,6	91,8	0,1	200	70	SCS
406	50-49a	Upper washita Site	Gageby Creek	Canadian, Tex.	20,1	510,5	6,96	18,0264	July. 1968	Sept. 1974	8,2	91	0,21	418	146	SCS
407	72-32	Black Vutte	Stony Creek	Orland, Calif.	20,1	510,5	433	1121,47	July. 1963	May. 1966	3,0	62	2,1	2 836	993	CE
408	72-32	Black Vutte	Stony Creek	Orland, Calif.	20,1	510,5	433	1121,47	May. 1966	Apr. 1973	7,0	62	3,14	4 244	1485	CE
409	78-5	Andy Anderson Pd	Wester R	Cambridge, ID	20,2	512,1	0,59	1,5281	oct-01	août-47	46,0	73,0	0,1360	207	72	SCS
410	78-6	Milton Branch Pd	Trib of Wester R	Cambridge, ID	20,2	512,1	0,42	1,09816	août-36	sept-47	11,0	70,0	0,2590	395	138	SCS
411	78-7	W. B. Winninger Pd	Trib of Wester R	Cambridge, ID	20,2	512,1	0,54	1,39342	sept-39	août-47	8,0	70,0	0,2400	366	128	SCS
412	54-2b	Lake Nasworthy	South Concho	San Angelo, Tex.	20,4	518,2	3 119	8078,21	Oct.1930	Dec. 1938	8,2	67,5	0,046	68	24	SCS
413	54-2b	Lake Nasworthy	South Concho	San Angelo, Tex.	20,4	518,2	3 119	8078,21	Dec. 1938	May. 1953	14,5	67,5	0,023	34	12	SCS
414	54-8	XQZ Ranch Pond	Trib. S. Concho	San Angelo, Tex.	20,4	518,2	1,53	3,9627	May. 1937	Aug. 1955	18,2	63,6	0,93	1 288	451	SCS
415	32-49	Sanger Pond	Trib. S.F.Solomo	Morland, Kans.	20,8	528,3	2,32	6,0088	Mar. 1954	Aug. 1970	16,4	65	0,65	917	321	SCS
416	46-35	Berger Pond	Trib. Pawnee	Jetmore, Kans.	20,8	528,3	3	7,77	Mar. 1952	Aug.1967	15,5	60	0,12	156	55	SCS
417	46-42	Lippoldt	Trib. Pawnee	Jetmore, Kans.	20,8	528,3	1,82	4,7138	Dec. 1952	Aug. 1967	14,8	60	0,1	131	46	SCS
418	46-43	Sebes Pond	Trib. Pawnee	Jetmore, Kans.	20,8	528,3	1,2	3,108	July. 1956	Aug. 1967	11,1	60	0,09	117	41	SCS
419	46-47	Smith Pond	Trib. Pawnee	Jetmore, Kans.	20,8	528,3	0,3	0,777	Dec. 1951	Aug. 1967	15,8	60	0,5	653	229	SCS
420	32-31	Heikes Pond	Trib. Elk Creek	Lenora, Kans.	21	533,4	1,83	4,7397	Oct. 1957	Aug. 1970	12,8	75	0,32	523	183	SCS
421	33-1	Wellfleet	Medicine Creek	Wellfleet, Nebr.	21	533,4	14,89	38,5651	Oct. 1931	May. 1937	5,6	65	0,66	934	327	SCS
422	33-7	Dempcy Pond	Trib. of E. Curtis Cr.	Moorefield, Nebr.	21	533,4	0,51	1,3209	July. 1953	June. 1958	4,9	75,6	0,392	645	226	ARS
423	76-8	Weldon Wassem Pd	Clearwater R	Nez Pierce, ID	21,2	539,0	0,01	0,03626	sept-41	sept-47	6,0	70,0	2,1400	3263	1142	SCS
424	33-10	Frickey Pond	Trib. Sappa Creek	Norcatur, Kans.	21,4	543,6	3,28	8,4952	Dec. 1958	July. 1970	11,6	60	0,24	320	112	SCS
425	71-37	Salinas Boys Ranch	Trib. Natividad	Salinas, Calif.	21,5	546,1	0,13	0,3367	Oct. 1953	Sep. 1964	11,0	65	0,23	326	114	SCS
426	71-37	Roy Alexander	Trib. Natividad	Salinas, Calif.	21,5	546,1	0,203	0,52577	04-mai	août-60	13,0	65	0,1	142	50	SCS
427	71-4b	Santa Margarita	Salinas River	Pozo, Calif,	21,5	546,1	110	284,9	Nov. 1947	Aug.1953	6,0	40	0,41	357	125	GS
428	71-4b	Santa Margarita	Salinas River	Pozo, Calif,	21,5	546,1	110	284,9	Aug.1953	July. 1975	22,0	58	0,98	1 627	569	GS
429	46-37	Siebert	Trib. Big Sandy	Meade, Kans.	21,7	551,2	0,23	0,5957	Jan. 1952	June. 1966	14,5	80	0,26	453	159	SCS
430	46-38	Hoop	Trib.Crooked Creek	Meade, Kans.	21,7	551,2	0,9	2,331	May. 1961	June.1966	5,2	80	0,06	104	36	SCS
431	46-39	Harris	Trib.Crooked Creek	Meade, Kans.	21,7	551,2	4,75	12,3025	Oct.1962	mai-62	3,7	70	0,04	61	21	SCS
432	46-5	Meade County State	Stump Arroya	Meade, Kans.	21,7	551,2	17,84	46,2056	June. 1928	Apr. 1937	8,8	60	0,459	600	210	SCS
433	46-52	Glen	Trib. Big. Sandy	Mead, Kans.	21,7	551,2	0,52	1,3468	Jan. 1952	July. 1966	7,8	60	0,35	457	160	SCS
434	46-53	Issac	Trib. Big. Sandy	Meade, Kans.	21,7	551,2	0,52	1,3468	Jan. 1952	June. 1966	14,5	75	0,25	408	143	SCS
435	32-47	North Pond	Trib. Smoky Hill River-	McCracken, Kans.	21,9	556,3	0,91	2,3569	Mar. 1955	July. 1970	15,3	65	0,38	537	188	SCS

436	36-14b	Lake Mitchell	Firesteel Creek	Mitchell, S. D.	22	558,8	496	1284,64	July. 1948	Aug. 1958	10,0	46,79	0,117	119	42	SCS
437	36-14b	Lake Mitchell	Firesteel Creek	Mitchell, S. D.	22	558,8	496	1284,64	Aug. 1958	July. 1969	11,0	65,47	0,103	231	81	SCS
438	36-14b	Lake Mitchell	Firesteel Creek	Mitchell, S. D.	22	558,8	496	1284,64	Oct. 1928	July. 1948	19,8	46,79	0,057	58	20	SCS
439	46-40	Whitford	Trib. Hackberry	Ashland, Kans.	22	558,8	1,97	5,1023	May. 1947	July.1966	19,2	75	0,15	245	86	SCS
440	46-51	Brodie	Spring Creek	Ashland, Kans.	22	558,8	2	5,18	June. 1951	July. 1966	15,1	70	0,07	107	37	SCS
441	46-54	Fox	Trib. Bluff Creek	Ashland, Kans.	22	558,8	2,17	5,6203	July. 1954	July. 1966	12,0	65	0,11	156	55	SCS
442	33-3a	Harry Strunk L. (Medicine	Medicine Creek	Cambridge, Nebr.	22,1	561,3	653	1691,27	Aug. 1949	Oct. 1951	2,2	71,4	1,34	2 084	729	BR
443	33-3a	Harry Strunk L. (Medicine	Medicine Creek	Cambridge, Nebr.	22,1	561,3	653	1691,27	Oct. 1951	Dec. 1962	11,2	70,3	0,31	475	166	BR
444	33-4a	Flannagin Reservoir	Trib. Republican	Bartley, Nebr	22,1	561,3	0,497	1,28723	1940	1956	16,0	70	0,602	918	321	SCS
445	35-50	Niles Wallace Pond	Platte	Cozad, Nebr.	22,1	561,3	0,81	2,0979	1939	Sept. 1964	25,0	104	0,05	113	40	SCS
446	35-51	Gayle Miller Pond	Platte	Cozad, Nebr.	22,1	561,3	0,94	2,4346	1948	Sept. 1964	16,0	70	0,21	320	112	SCS
447	35-52	Kenneth Smith Pond	Platte	Cozad, Nebr.	22,1	561,3	0,49	1,2691	1940	Oct. 1964	24,0	95	0,08	166	58	SCS
448	35-53	Wayne Bartleff Pond	Platte	Cozad, Nebr.	22,1	561,3	1,13	2,9267	1940	Oct. 1964	24,0	95	0,11	228	80	SCS
449	50-55	Upper Washita Sita	Gageby Creek	Wheeler, Tex.	22,1	561,3	16,46	42,6314	Jan. 1961	June. 1972	11,3	58	0,14	292	102	SCS
450	33-15	Albert Sauvage	Sappa Creek	Oberlin, Kans.	22,3	566,4	0,83	2,1497	Jan. 1962	July. 1972	10,6	70	0,6	918	321	SCS
451	46-1b	Fort Supply Lake	Wolf Creek	Fort Supply, Okla.	22,3	566,4	1 485	3846,15	Jan. 1943	June. 1949	6,4	57,8	0,125	157	55	CE
452	46-1b	Fort Supply Lake	Wolf Creek	Fort Supply, Okla.	22,3	566,4	1 485	3846,15	June. 1949	June. 1949	9,0	67	0,329	498	174	CE
453	46-1b	Fort Supply Lake	Wolf Creek	Fort Supply, Okla.	22,3	566,4	1 485	3846,15	June. 1949	Dec. 1969	11,5	65,3	0,061	74	26	CE
454	55-1	Site 6 Olmitos & Garcias	El Gato Creek	Rio Grande City, Tex.	22,3	566,4	12,94	33,5146	June. 1962	Sept. 1966	4,3	75	0,11	180	63	SCS
455	56-4a	Frees Pond	Trib. of Devils River	Sonora, Tex.	22,4	569,0	0,43	1,1137	Dec. 1944	Aug. 1955	10,8	69,6	0,074	112	39	SCS
456	56-5	Lowrey Draw, Site No. 9	Lowrey Draw	Sonora, Tex.	22,4	569,0	2,64	6,8376	June. 1961	Feb. 1969	7,7	64	0,01	18	6	ARS
457	56-6	Lowrey Draw, Site No. 10	Trib. Lowrey Draw	Sonora, Tex.	22,4	569,0	8,2	21,238	June. 1961	Mar. 1969	7,8	64	0,01	14	5	ARS
458	56-7	Lowrey Draw, Site No. 12	Trib. Lowrey Draw	Sonora, Tex.	22,4	569,0	4,19	10,8521	June. 1961	Feb. 1969	7,7	64	0,04	62	22	ARS
459	56-8	Lowrey Draw, Site No. 13	Trib. Lowrey Draw	Sonora, Tex.	22,4	569,0	1,02	2,6418	June. 1961	Mar. 1969	7,7	64	0,02	28	10	ARS
460	32-52	Walz Pond	Trib. Saline River	Ogallah, Kans	22,7	576,6	3,8	9,842	Aug. 1958	Aug. 1970	12,0	60	0,12	162	57	SCS
461	30-19	Orwell Dam	Other tail	Fergus Falls, Minn.	22,9	581,7	245	634,55	Mar. 1964	Dec. 1970	6,8	90	0,0317	62	22	CE
462	30-19	Orwell Dam	Other tail	Fergus Falls, Minn.	22,9	581,7	245	634,55	May. 1954	Mar. 1964	9,8	90	0,03	59	21	CE
463	35-24a	Roe Farm Pond	Trib, Turkey Creek	Dannebrog, Nebr	22,9	581,7	0,18	0,4662	July.1947	Aug.1953	5,0	65	0,69	552	193	SCS
464	35-26	Moller Farm Pond	Trib. of Oak Creek	Farwell, Nebr	22,9	581,7	0,354	0,91686	Aug.1949	Aug.1953	4,0	65	0,71	1 005	352	SCS
465	35-27	Ruzicka Farm Pond	do	Farwell, Nebr	22,9	581,7	0,26	0,6734	Aug.1949	Aug.1953	4,0	65	2,62	3 709	1298	SCS
466	36-17	Lake Vermillion	Vermillion	Montrose, S. D.	23	584,2	402	1041,18	Mar. 1959	June. 1964	5,3	35	0,117	80	28	SCS
467	32-38	Jansonius Pond	Trib. of Wolf Creek	Prairie View, Kans.	23,2	589,3	1,1	2,849	Nov. 1954	July. 1970	15,7	65	0,52	733	257	SCS
468	54-7	Mountain Creek	Mountain Creek	Robert Lee, Tex.	23,2	589,3	31,88	82,5692	May. 1950	Apr. 1961	10,9	53,06	0,4	462	162	SCS
469	54-11	Lake Ballinger	Valley Creek	Ballinger, Tex.	23,3	591,8	209	541,31	Nov. 1947	Aug. 1970	22,8	37	0,17	137	48	SCS
470	64-2	South Soda Crook Weir	South Soda Crook	Steamboat Springs Colo	23,4	594,4	3,4	8,806	Oct. 1967	Oct. 1968	1,0	135	0,005	13	5	FS
471	64-2	South Soda Crook Weir	South Soda Crook	Steamboat Springs Colo	23,4	594,4	3,4	8,806	Oct. 1969	Oct. 1970	1,0	135	0,005	15	5	FS
472	64-3	North Fish Creek Weir	North Fish Crook	Steamboat Springs Colo	23,4	594,4	2,24	5,8016	Oct. 1968	Oct. 1969	1,0	35	1	2	1	FS
473	64-3	North Fish Creek Weir	North Fish Crook	Steamboat Springs Colo	23,4	594,4	2,24	5,8016	Oct. 1969	Oct. 1970	1,0	135	0,004	12	4	FS
474	64-4	West Walton Crook Weir	Trib. Walton Creek	Steamboat Springs Colo	23,4	594,4	1,33	3,4447	Oct. 1967	Oct. 1968	1,0	110	0,16	38	13	FS
475	64-4	West Walton Crook Weir	Trib. Walton Creek	Steamboat Springs Colo	23,4	594,4	1,33	3,4447	Oct. 1968	Oct. 1969	1,0	110	0,006	15	5	FS
476	64-4	West Walton Crook Weir	Trib. Walton Creek	Steamboat Springs Colo	23,4	594,4	1,33	3,4447	Oct. 1969	Oct. 1970	1,0	110	0,02	48	17	FS
477	38-7	Sturgis Watershed	Alkali Creek	Sturgis, S. D.	23,5	596,9	0,139	0,36001	Oct. 1966	Oct. 1967	1,0	92,2	0,001	2	1	FS
478	38-8	Sturgis Watershed	Alkali Creek	Sturgis, S. D.	23,5	596,9	0,297	0,76923	Oct. 1969	Oct. 1970	1,0	92,2	0,001	2	1	FS
479	46-48	Seltman	Trib. Walnut Creek	Rush Center, Kans.	23,5	596,9	1,61	4,1699	Oct. 1958	Aug. 1967	8,8	60	0,27	352	123	SCS

480	32-2	Sheridan Co. State Lake	Saline River	Quinter, Kans.	23,6	599,4	463	1199,17	Aug. 1937	Aug. 1948	10,8	66,5	0,0681	99	35	BR
481	46-11	Lake Eldorado	Satchel Creek	Eldorado, Kans.	23,6	599,4	34,3	88,837	1929	Apr. 1937	9,0	66	0,426	612	214	SCS
482	35-23	Lake Ericson	Cedar River	Ericson, Nebr.	23,7	602,0	41	106,19	May.1915	Apr.1948	32,9	80	0,434	756	265	BR
483	36-15	Salem Dam	Silver Creek	Sioux Falls, S. D.	23,9	607,1	1,158	2,99922	Aug. 1950	Aug. 1955	5,0	60	0,8	1 045	366	SCS
484	50-17	Dean Pond No. 1	Trib. Nine Mile Creek	Cheyenne, Okla,	23,9	607,1	0,0354	0,09169	Spr. 1944	Mar. 1955	11,0	91	0,69	1 368	479	SCS
485	50-18	Dean Pond No.2	Trib. Nine Mile Creek	Cheyenne, Okla,	23,9	607,1	0,161	0,41699	Spr. 1941	Mar. 1955	14,0	89	1,06	2 032	711	SCS
486	50-35c	Sandstone Site No. 16A	Trib. Sandstone	Cheyenne, Okla.	23,9	607,1	5,03	13,0277	Dec. 1951	Oct. 1956	4,8	81	1,32	2 311	809	SCS
487	50-35c	Sandstone Site No. 16A	Trib. Sandstone	Cheyenne, Okla.	23,9	607,1	5,03	13,0277	Aug. 1966	Aug. 1971	4,9		0,34	580	203	SCS
488	50-35c	Sandstone Site No. 16A	Trib. Sandstone	Cheyenne, Okla.	23,9	607,1	5,03	13,0277	Oct. 1956	Sept. 1961	4,9	80	1,87	3 260	1141	SCS
489	50-36b	Sandstone Site No. 17	Currant Creek	Cheyenne, Okla.	23,9	607,1	10,04	26,0036	Oct. 1956	Oct. 1960	4,0	59	3,53	5 418	1896	SCS
490	50-36b	Sandstone Site No. 17	Currant Creek	Cheyenne, Okla.	23,9	607,1	10,04	26,0036	Oct. 1960	Aug. 1965	4,8	59	0,62	797	279	SCS
491	50-36b	Sandstone Site No. 17	Currant Creek	Cheyenne, Okla.	23,9	607,1	10,04	26,0036	Aug. 1965	June. 1970	4,9	60	0,34	526	184	SCS
492	50-36b	Sandstone Site No. 17	Currant Creek	Cheyenne, Okla.	23,9	607,1	10,04	26,0036	Aug. 1951	Oct. 1956	5,1	70,4	2,31	3 540	1239	SCS
493	50-37a	Sandstone Site No. 4	Sandstone	Cheyenne, Okla.	23,9	607,1	2,2	5,698	Oct. 1957	Oct. 1962	5,0	79,4	2,64	4 445	1556	SCS
494	50-37a	Sandstone Site No. 4	Sandstone	Cheyenne, Okla.	23,9	607,1	2,2	5,698	Aug. 1951	Oct. 1957	6,2	81,53	2,08	3 694	1293	SCS
495	32-36	Burger Pond	Trib. Buffalo Creek	Randall, Kans.	24,1	612,1	0,57	1,4763	June. 1953	June. 1970	17,0	65	1,15	1 632	571	SCS
496	51-39a	Clear Fork Trinity Site #7	Trib. Trinity River	Poolville, Tex.	24,2	614,7	2,44	6,3196	Apr.1969	Apr. 1974	5,0		2,14	3 388	1186	SCS
497	51-39a	Clear Fork Trinity Site #7	Trib. Trinity River	Poolville, Tex.	24,2	614,7	2,44	6,3196	Oct.1955	Apr.1969	13,5	47,2	3,66	3 760	1316	SCS
498	51-41a	E.Keechi cr. Site No. 1	Trib. Brozos River	Perrin, Tex.	24,2	614,7	6,37	16,4983	Jan. 1964	June.1968	4,4	72	0,66	1 035	362	SCS
499	51-41a	E.Keechi cr. Site No. 1	Trib. Brozos River	Perrin, Tex.	24,2	614,7	6,37	16,4983	June.1968	May. 1975	7,0			446	156	SCS
500	32-29	Harlan Country Lake	Republican River	Republican City,	24,4	619,8	7169	18567,7	Sept. 1962	Apr. 1972	9,7	62	0,16	189	66	CE
501	32-29	Harlan Country Lake	Republican River	Republican City,	24,4	619,8	7169	18567,7	July. 1951	Sept. 1962	11,3	72	0,116	182	64	CE
502	32-45	Lovell Pond	Beaver Creek	Franklin, Nebr	24,4	619,8	2,08	5,3872	July. 1951	July. 1970	19,0	85	0,78	1 106	387	SCS
503	54-1	Lake Abilene	Elm Creek	Abilene, Tex.	24,4	619,8	97,5	252,525	Aug.1921	Sept. 1948	27,0	60	0,21	274	96	SCS
504	54-6a	Lake Fort Phantom Hill	Elm Fork, Brazos River	Abilene, Tex.	24,4	619,8	268	694,12	Oct. 1938	Aug. 1953	14,8	35,99	0,67	525	184	SCS
505	50-20	Hall Pond No. 1	Unnamed	Leedey, Okla,	24,5	622,3	0,2	0,518	May. 1939	Aug. 1957	18,3	70,2	1,15	1 758	615	SCS
506	54-9	Lake Stamford	Paint Creek	Stamford, Tex.	24,8	629,9	352,34	912,561	June.1953	May. 1966	12,9	42,56	0,82	760	266	SCS
507	72-33	Highland Creek Dam	Highland Creek	Kelseyville, Calif.	25,1	637,5	13,4	34,706	Dec. 1965	Apr. 1972	6,3	70	42	640	224	SCS
508	37-24a	Lake Dante	Trib. of Choteau	Wagner, S. D.	25,2	640,1	2,89	7,4851	Nov. 1937	Oct. 1955	17,9	60	0,578	756	265	SCS
509	37-25	Eggars	Trib. of Missouri	Wagner, S. D.	25,2	640,1	10,3	26,677	July. 1937	July. 1965	28,0	50	0,107	115	40	SCS
510	28-2	Leroy Hemish	Lac Qui Parle	Canby, Minn.	25,3	642,6	2,1	5,439	Aug. 1968	June. 1972	3,8	56,1	0,28	336	118	SCS
511	76-10	George Hoidal Pd	Palouse R	Harvard, ID	25,3	642,6	0,04	0,10878	sept-40	sept-47	10,0	70,0	0,1900	290	102	SCS
512	76-11	Johanna Nelson Pd	Palouse R	Deary, ID	25,3	642,6	0,01	0,03108	sept-39	sept-47	8,0	70,0	2,0000	3050	1068	SCS
513	76-12	Ed Galloway Pd	Palouse R	Deary, ID	25,3	642,6	0,01	0,03626	sept-40	sept-47	7,0	70,0	0,6400	976	342	SCS
514	76-13	A. K. Tweedy Pd	Palouse R	Deary, ID	25,3	642,6	0,01	0,03626	sept-27	sept-47	20,0	70,0	0,6400	976	342	SCS
515	76-9	Henry Kortemeier	Palouse R	Potlatch, ID	25,3	642,6	0,02	0,0518	sept-39	sept-47	8,0	70,0	1,2000	1830	641	SCS
516	50-11c	Altus Reservoir	North Fork Red River	Altus, Okla.	25,4	645,2	2 104	5449,36	June. 1948	July. 1953	5,1	66,9	0,599	1 104	386	BR
517	50-11c	Altus Reservoir	North Fork Red River	Altus, Okla.	25,4	645,2	2 104	5449,36	Dec. 1940	June. 1948	7,5	52,3	0,495	564	197	BR
518	50-11c	Altus Reservoir	North Fork Red River	Altus, Okla.	25,4	645,2	2 104	5449,36	July. 1953	Apr. 1967	13,8	70,2	0,361	588	206	BR
519	46-27	Smith - Case	Trib. Litle Ark. River	Little River, Kans.	25,6	650,2	0,56	1,4504	Dec. 1958	Aug. 1968	9,8	60	0,44	575	201	SCS
520	46-44	Fry	Trib. Arkansas	Little River, Kans.	25,6	650,2	1,07	2,7713	Aug. 1949	Aug. 1968	19,0	60	0,14	183	64	SCS
521	35-25	Howe Farm Pond	Trib. Dead Horse Creek	Loup City, Nebr,	25,7	652,8	1,73	4,4807	juil-44	Aug.1953	5,0	85	0,2	288	101	SCS
522	36-18	Vermillion Wshd. No. A	Trib. of Vermillion	Salem, S. D.	25,7	652,8	0,075	0,19425	Aug. 1955	Nov. 1965	10,3	50	0,68	740	259	SCS
523	36-19	Vermillion Wshd. No. B	Trib. of Vermillion	Salem, S. D.	25,7	652,8	0,237	0,61383	Oct. 1950	Nov. 1965	15,0	50	0,4	435	152	SCS

524	28-3	Schuester	Trout Brook Trib	Afton, Minn.	26	660,4	3,07	7,9513	1971	1973	2,0	60	0,0049	6	2	SCS
525	28-3	Schuester	Trout Brook Trib	Afton, Minn.	26	660,4	3,07	7,9513	1967	1971	4,0	60	0,0342	45	16	SCS
526	36-10	Theobold Lateral C.	Unnamed	Anthon, Iowa	26	660,4	0,234	0,60606	July. 1950	May. 1951	0,8	67,9	1,06	1 597	559	SCS
527	36-10	Theobold Lateral C.	Unnamed	Anthon, Iowa	26	660,4	0,234	0,60606	May. 1951	May. 1952	0,9	67,9	3,6	5 324	1863	SCS
528	36-11	Theobold Lateral D.	Unnamed	Anthon, Iowa	26	660,4	0,089	0,23051	July. 1950	May. 1951	0,8	73,1	2,56	4 560	1596	SCS
529	36-11	Theobold Lateral D.	Unnamed	Anthon, Iowa	26	660,4	0,089	0,23051	May. 1951	Oct. 1952	1,4	73,1	0,72	1 146	401	SCS
530	36-9	Theobold Main	Unnamed	Anthon, Iowa	26	660,4	0,442	1,14478	June. 1949	Aug. 1950	1,2	72,3	1,36	2 142	750	SCS
531	50-27b	Sandstone Site No. 1	Washita	Hammon, Okla.	26	660,4	5,22	13,5198	Aug. 1965	July. 1970	4,9	83	0,23	360	126	SCS
532	50-27b	Sandstone Site No. 1	Washita	Hammon, Okla.	26	660,4	5,22	13,5198	May. 1960	Aug. 1965	5,0	83,11	1,36	2 462	862	SCS
533	54-10	Site 18 Valley Cr. Wshd.	Trib. Valley Creek	Winters, Tex.	26	660,4	4,11	10,6449	Aug. 1964	June. 1969	4,8	69	0,14	210	74	SCS
534	54-12	Lake Winters	Elm Creek	Winters, Tex.	26	660,4	63,14	163,533	Oct. 1945	July. 1970	24,8	39	0,4	340	119	SCS
535	53-35a	Deep Creek No. 3	Deep Cr, Mid. Colo. r.	Brady, Tex.	26,1	662,9	3,19	8,2621	June. 1965	Sept. 1971	6,3	79	0,16	277	97	SCS
536	53-35a	Deep Creek No. 3	Deep Cr, Mid. Colo. r.	Brady, Tex.	26,1	662,9	3,19	8,2621	Nov. 1953	Aug. 1960	6,8			3 335	1167	SCS
537	53-39	Upper Res. Site 5. Deep	Colorado	Brady, Tex.	26,1	662,9	2,18	5,6462	Aug. 1953	July. 1961	7,9	49,9	0,23	250	88	SCS
538	53-43a	Site No. 8 Deep Creek	Dry Prong	Brady, Tex	26,1	662,9	5,17	13,3903	Sept. 1966	Aug. 1972	5,9		0,27	174	61	CE
539	53-48	Diversion Pond Above	Trib. Deep Creek	Brady, Tex.	26,1	662,9	5,19	13,4421	Nov. 1955	Aug. 1962	6,8		0,09	79	28	SCS
540	46-28	Workman	Trib. Medicine	Medicine Lodge, Kans.	26,2	665,5	0,59	1,5281	June. 1936	Aug. 1968	32,2	60	0,44	575	201	SCS
541	46-29	Gant	Trib. Medicine	Medicine Lodge, Kans.	26,2	665,5	0,3	0,777	Mar. 1955	Aug. 1968	13,4	60	1,23	1 607	562	SCS
542	46-34	Mease	Trib. Medicine	Medicine Lodge, Kans.	26,2	665,5	1,71	4,4289	Feb. 1961	Aug. 1968	7,5	60	0,24	314	110	SCS
543	32-3a	Kanopolis	Smoky Hills River	Kanopolis, Kans.	26,3	668,0	2 560	6630,4	July. 1946	Sept. 1960	14,2	50	0,27	294	103	CE
544	53-46	Site 9 Lower San Saba R.	Colorado River	San Saba, Tex	26,3	668,0	2,88	7,4592	Jan. 1960	Sept. 1967	7,7		0,46	723	253	SCS
545	32-16a	Daugherty	Unnamed Trib.	Russell, Kans.	26,4	670,6	0,96	2,4864	Sept. 1947	Sept. 1955	8,0	60	0,83	1 085	380	SCS
546	32-37	Duvall Pond	Trib. Saline River	Bunker Hill, Kans.	26,4	670,6	1,41	3,6519	Dec. 1960	July. 1970	9,6	75	0,12	204	71	SCS
547	63-16	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	sept-65	sept-66	1,0		0,005	11	4	FS
548	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	sept-64	Oct: 1969	1,0		0,01	22	8	FS
549	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1951	Oct. 1952	1,0		0,032	65	23	FS
550	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1952	Oct. 1953	1,0		0,016	33	12	FS
551	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1955	Oct. 1956	1,0		26	53	19	FS
552	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1956	Oct. 1957	1,0		0,051	102	36	FS
553	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1957	Oct. 1958	1,0		0,031	62	22	FS
554	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1958	Oct. 1959	1,0		0,006	12	4	FS
555	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1959	Oct. 1960	1,0		0,01	20	7	FS
556	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1960	Oct. 1961	1,0		0,004	9	3	FS
557	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1961	Oct. 1962	1,0		0,012	24	8	FS
558	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1964	Oct. 1965	1,0		0,018	36	13	FS
559	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1965	Oct. 1966	1,0		0,004	8	3	FS
560	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1966	Oct. 1967	1,0		0,005	10	4	FS
561	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct. 1967	sept-64	1,0		8	18	6	FS
562	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,1	1,11	2,8749	Oct: 1969	Oct. 1970	1,0		0,011	25	9	FS
563	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	sept-59	Oct: 1964	1,0		0,001	2	1	FS
564	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	sept-63	sept-64	1,0		0,001	2	1	FS
565	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	sept-64	sept-65	1,0		0,002	3	1	FS
566	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1954	Oct. 1955	1,0		0,003	6	2	FS
567	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1955	Oct. 1956	1,0		0,012	27	9	FS

568	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1956	Oct. 1957	1,0		0,016	36	13	FS
569	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1957	Oct. 1958	1,0		0,006	3	1	FS
570	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1958	Oct. 1959	1,0		0,004	8	3	FS
571	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1959	Oct. 1960	1,0		0,004	8	3	FS
572	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1960	Oct. 1961	1,0		0,001	2	1	FS
573	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct. 1961	Oct. 1962	1,0		0,009	20	7	FS
574	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,1	1,04	2,6936	Oct: 1964	Oct. 1965	1,0		0,005	11	4	FS
575	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Got. 1956	Oct. 1957	1,0		0,009	18	6	FS
576	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	oat. 1966	Oct. 1967	1,0		0,001	2	1	FS
577	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1955	Got. 1956	1,0		0,005	10	4	FS
578	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1957	Oct. 1958	1,0		0,011	21	7	FS
579	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1958	Oct. 1959	1,0		0,002	4	1	FS
580	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1959	Oct. 1960	1,0		0,002	4	1	FS
581	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1961	Oct. 1962	1,0		0,005	9	3	FS
582	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1963	Oct. 1964	1,0		0,002	3	1	FS
583	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1964	Oct. 1965	1,0		0,003	6	2	FS
584	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1965	oat. 1966	1,0		0,002	2	1	FS
585	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1967	Oct. 1968	1,0		0,001	2	1	FS
586	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1968	Oct. 1969	1,0		0,001	2	1	FS
587	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,1	0,48	1,2432	Oct. 1969	Oct. 1970	1,0		0,002	4	1	FS
588	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,1	3,1	8,029	Oct. 1964	Oct. 1965	1,0			5	2	FS
589	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,1	3,1	8,029	Oct. 1966	Oct. 1967	1,0	100	0,002	3	1	FS
590	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,1	3,1	8,029	Oct. 1967	Oct. 1968	1,0	100	0,002	4	1	FS
591	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,1	3,1	8,029	Oct. 1968	Oct. 1969	1,0	100	0,001	3	1	FS
592	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,1	3,1	8,029	Oct. 1969	Oct. 1970	1,0	100	0,002	4	1	FS
593	36-20	Lake Okabena	Trib, Okabena	Worthington, Minn,	26,7	678,2	16,27	42,1393	1897	Mar. 1963	65,0	26	0,87	492	172	SCS
594	46-13	Canton Lake	North Canadian	Canton, Okla.	26,8	680,7	6 081	15749,8	July. 1947	May. 1953	5,8	70,9	0,302	4 664	1632	CE
595	46-13	Canton Lake	North Canadian	Canton, Okla.	26,8	680,7	6 081	15749,8	May. 1953	Oct. 1959	6,4	56,2	0,125	65	23	CE
596	46-13	Canton Lake	North Canadian	Canton, Okla.	26,8	680,7	6 081	15749,8	Oct. 1959	Sept. 1966	6,9	56,1	0,063	76	27	CE
597	50-28c	Sandstone Site No. 3	Trib. of Sandstone	Elk City, Okla.	26,9	683,3	0,6	1,554	Oct. 1956	Oct. 1961	5,0	73	2,8	4 841	1694	SCS
598	50-28c	Sandstone Site No. 3	Trib. of Sandstone	Elk City, Okla.	26,9	683,3	0,6	1,554	July. 1966	Aug. 1971	5,1		0,78	1 710	599	SCS
599	50-28c	Sandstone Site No. 3	Trib. of Sandstone	Elk City, Okla.	26,9	683,3	0,6	1,554	Apr. 1951	Oct. 1956	5,5	70	2,83	4 314	1510	SCS
600	50-29a	Sandstone Site No. 5	Washita	Elk City, Okla.	26,9	683,3	3,84	9,9456	July. 1957	Sept. 1961	4,2		4,06	5 501	1925	SCS
601	50-29a	Sandstone Site No. 5	Washita	Elk City, Okla.	26,9	683,3	3,84	9,9456	Sept. 1961	July. 1966	4,8	80	1,36	1 980	693	SCS
602	50-29a	Sandstone Site No. 5	Washita	Elk City, Okla.	26,9	683,3	3,84	9,9456	Mar. 1951	July. 1957	6,4	95,7	2,27	4 731	1656	SCS
603	50-30c	Sandstone Site No. 6	Sandstone	Elk City, Okla.	26,9	683,3	5,08	13,1572	Sept. 1967	June. 1972	4,8		0,6	998	349	SCS
604	50-30c	Sandstone Site No. 6	Sandstone	Elk City, Okla.	26,9	683,3	5,08	13,1572	Oct. 1962	Sept. 1967	5,0		0,3	703	246	SCS
605	50-30c	Sandstone Site No. 6	Sandstone	Elk City, Okla.	26,9	683,3	5,08	13,1572	Apr. 1951	Oct. 1962	11,5	71	2,4	3 773	1321	SCS
606	50-31a	Sandstone Site No. 9	Sandstone	Elk City, Okla.	26,9	683,3	3,46	8,9614	Oct. 1962	Sept. 1967	4,9	80	0,2	436	153	SCS
607	50-31a	Sandstone Site No. 9	Sandstone	Elk City, Okla.	26,9	683,3	3,46	8,9614	Oct. 1957	Oct. 1962	5,0	79,4	2,2	4 148	1452	SCS
608	50-31a	Sandstone Site No. 9	Sandstone	Elk City, Okla.	26,9	683,3	3,46	8,9614	Mar. 1951	Oct. 1957	6,6	75,78	2,52	4 160	1456	SCS
609	50-32c	Sandstone Site No. 10A	Washita	Elk City, Okla.	26,9	683,3	2,75	7,1225	Apr. 1951	Oct. 1956	5,5	79	1,8	3 097	1084	SCS
610	50-32c	Sandstone Site No. 10A	Washita	Elk City, Okla.	26,9	683,3	2,75	7,1225	July. 1966	June. 1972	5,9		0,67	1 795	628	SCS
611	50-33b	Sandstone Site No. 14	Washita	Elk City, Okla.	26,9	683,3	1	2,59	Aug. 1965	July. 1970	5,0	75	2,2	3 611	1264	SCS

612	50-33b	Sandstone Site No. 14	Washita	Elk City, Okla.	26,9	683,3	1	2,59	May. 1960	Aug. 1965	5,3	68,1	0,25	371	130	SCS
613	50-34c	Sandstone Site No.16	Trib. Sandstone	Elk City, Okla.	26,9	683,3	11,28	29,2152	July. 1957	Sept. 1961	4,2	75	2,78	4 305	1507	SCS
614	50-34c	Sandstone Site No.16	Trib. Sandstone	Elk City, Okla.	26,9	683,3	11,28	29,2152	Sept. 1961	Aug. 1966	4,9		2,35	2 464	862	SCS
615	50-34c	Sandstone Site No.16	Trib. Sandstone	Elk City, Okla.	26,9	683,3	11,28	29,2152	Aug. 1952	July. 1957	4,9	78	3,1	5 267	1843	SCS
616	50-34c	Sandstone Site No.16	Trib. Sandstone	Elk City, Okla.	26,9	683,3	11,28	29,2152	Aug. 1966	July. 1971	4,9		0,49	926	324	SCS
617	50-41c	Whiteshield Cr. Site #4	Washita	Elk City, Okla.	26,9	683,3	0,58	1,5022	Sept. 1959	Aug. 1964	4,9	75,68	2,83	4 667	1633	SCS
618	50-41c	Whiteshield Cr. Site #4	Washita	Elk City, Okla.	26,9	683,3	0,58	1,5022	Jan. 1949	Sept. 1959	10,7	75,68	2,52	4 151	1453	SCS
619	50-9	Lake Clinton	Turkey Creek	Canute, Okla.	26,9	683,3	23,1	59,829	Dec. 1930	June. 1938	7,4	63,36	2,54	3 505	1227	SCS
620	50-9	Lake Clinton	Turkey Creek	Canute, Okla.	26,9	683,3	23,1	59,829	June. 1938	Nov. 1950	12,4	65,9	2,23	3 201	1120	SCS
621	54-5	Lake Throckmorton	South Elm River	Throckmorton, Tex.	27,1	688,3	11,32	29,3188	Sept. 1918	June. 1954	35,7	31,55	0,29	199	70	SCS
622	46-45	Barber	Trib. Arkansas	Raymond, Kans.	27,3	693,4	0,57	1,4763	June. 1962	June. 1968	6,2	70	1	1 525	534	SCS
623	52-7	Baker Lake	Trib, San Antonia	Somerset, Tex	27,3	693,4	3,1	8,029	Sept. 1950	Aug. 1955	5,0	34,65	1,5	1 132	396	SCS
624	53-30b	Lake Brownwood	Pecan Bayou (Colo.	Brownwood, Tex.	27,3	693,4	1 533	3970,47	July.1932	Feb. 1940	7,6	41,9	0,361	329	115	SCS
625	53-30b	Lake Brownwood	Pecan Bayou (Colo.	Brownwood, Tex.	27,3	693,4	1 533	3970,47	Feb. 1940	Sept.1959	19,6	42,2	0,325	290	102	SCS
626	32-15a	Woody Hereford	Unnamed Trib.	Lincoln, Kans.	27,4	696,0	1,19	3,0821	Nov. 1936	Sept. 1955	19,0	60	0,79	1 032	361	SCS
627	32-17	Lost Creek D-1	Trib. of Lost Creek	Lincoln, Kans.	27,4	696,0	1,52	3,9368	Jan. 1957	July. 1962	5,5	47,1	0,69	708	248	SCS
628	32-18	Jepson	Trib. Spillman	Lincoln, Kans.	27,4	696,0	1	2,59	May. 1953	July. 1962	9,2	61,2	0,9	1 200	420	SCS
629	32-19	Wilson Bros	Trib. of Saline River	Lincoln, Kans.	27,4	696,0	0,21	0,5439	Sept. 1950	July. 1962	11,8	60	0,48	627	219	SCS
630	32-20	Zvolanek	Trib. of Saline River	Lincoln, Kans.	27,4	696,0	1,19	3,0821	Nov. 1936	Sept. 1955	19,0	60	0,73	1 122	393	SCS
631	32-30	Grant Tozier	Trib. of Saline River	Beverly, Kans.	27,4	696,0	0,96	2,4864	Mar. 1952	Sept. 1965	13,6	72	0,84	1 317	461	SCS
632	46-2b	Great Salt Plains Lake	Salt Fk. Arkansas	Jet, Okla.	27,5	698,5	3 156	8174,04	June. 1941	Dec. 1949	8,5	48,6	0,586	620	217	CE
633	46-2b	Great Salt Plains Lake	Salt Fk. Arkansas	Jet, Okla.	27,5	698,5	3 156	8174,04	Apr. 1971	Mar. 1971	9,8	63,8	0,286	494	173	CE
634	46-2b	Great Salt Plains Lake	Salt Fk. Arkansas	Jet, Okla.	27,5	698,5	3 156	8174,04	Dec. 1949	Apr. 1971	11,4	58,9	0,336	529	185	CE
635	52-12	Smith Pond	Trib, of Bonito Creek	Jourdanton, Tex	27,5	698,5	0,188	0,48692	Apr. 1953	Aug. 1955	2,4	27,8	1,8	1 090	382	SCS
636	53-45	Lake Daniel	Gonazles Creek	Breckenridge, Tex.	27,5	698,5	113	292,67	June. 1949	Nov. 1970	21,4	48	0,49	512	179	SCS
637	53-4	Lake Merritt	Browne Creek	Goldthwaite, Tex.	27,6	701,0	11,5	29,785	May. 1917	May. 1940	23,0	43	0,4	375	131	SCS
638	71-14	McCarty	Trib. of Johnny	San Andreas, CAlif	27,6	701,0	0,32	0,8288	Dec. 1937	Sept. 1945	7,7	45	0,3	294	103	SCS
639	71-16	Salt Springs Valley	Rock Creek	San Andreas, Calif	27,6	701,0	18,4	47,656	1882	July. 1945	63,0	50	0,201	219	77	SCS
640	32-34	Chancy Pond	Trib. Dry Creek	Delphos, Kans.	27,9	708,7	0,92	2,3828	Dec. 1956	June. 1970	13,5	60	0,72	947	331	SCS
641	53-1	Lake Scarborough	Trib. Jim Ned Creek	Coleman, Tex.	27,9	708,7	10,6	27,454	May. 1923	May. 1940	17,0	51,41	0,81	907	317	SCS
642	53-49	Hords Creek Reservoir	Hords Creek	Coleman, Tex.	27,9	708,7	46,02	119,192	Oct. 1962	Oct. 1968	6,0	50,3	0,48	528	185	CE
643	53-49	Hords Creek Reservoir	Hords Creek	Coleman, Tex.	27,9	708,7	46,02	119,192	Apr. 1948	Oct. 1962	14,6	50,3	0,67	734	257	CE
644	35-11b	Jones Creek	Jones Creek	Pisgah, Iowa	28	711,2	2,23	5,7757	Jan.1949	Sept.1950	1,7	61,8	2,68	3 620	1267	SCS
645	35-11b	Jones Creek	Jones Creek	Pisgah, Iowa	28	711,2	2,23	5,7757	Sept.1950	Jan.1953	2,3	61,8	2,4	3 230	1131	SCS
646	35-11b	Jones Creek	Jones Creek	Pisgah, Iowa	28	711,2	2,23	5,7757	Feb.1942	Jan.1949	6,9	47,8	2,11	2 197	769	SCS
647	32-44	Lloyd Pond	Trib. Republican	Scandia, Kans.	28,2	716,3	0,84	2,1756	July. 1932	July. 1970	38,0	70	0,38	575	201	SCS
648	35-29	Cook Reservior	Trib. of Papillion Cr.	Arlington, Nebr,	28,4	721,4	383	991,97	1934	1957	23,0	65	0,921	1 304	456	SCS
649	50-14b	Cavalry Creek Site No. 1	Washita	Cordell, Okla.	28,4	721,4	2,11	5,4649	Aug. 1964	June. 1969	4,9		1,27	2 023	708	SCS
650	50-14b	Cavalry Creek Site No. 1	Washita	Cordell, Okla.	28,4	721,4	2,11	5,4649	Sep. 1959	Aug. 1964	4,9	74,5	0,46	751	263	SCS
651	50-14b	Cavalry Creek Site No. 1	Washita	Cordell, Okla.	28,4	721,4	2,11	5,4649	June. 1969	June. 1974	5,0		2,14	3 135	1097	SCS
652	50-14b	Cavalry Creek Site No. 1	Washita	Cordell, Okla.	28,4	721,4	2,11	5,4649	July. 1948	Sep. 1959	11,2	74,5	1,22	1 979	693	SCS
653	52-16	Site #1 Escondido	San Antonio River	Kenedy, Tex.	28,4	721,4	2,84	7,3556	July.1964	July.1969	5,1		1,12	1 710	599	SCS
654	52-16	Site #1 Escondido	San Antonio River	Kenedy, Tex.	28,4	721,4	2,84	7,3556	July.1969	Aug. 1975	6,1			1 433	502	SCS
655	52-16	Site #1 Escondido	San Antonio River	Kenedy, Tex.	28,4	721,4	2,84	7,3556	Sept.1954	July.1964	9,8		0,67	763	267	SCS

656	52-9a	Escondido Cr. Wshd.	San Antonia River	Kenedy, Tex	28,4	721,4	7,96	20,6164	Sept. 1965	May. 1971	8,7	55,04	0,17	236	83	SCS
657	36-7	Nepper Main	Unnamed	Mapleton, Iowa	28,5	723,9	0,169	0,43771	Dec. 1949	Sept. 1950	0,8	77,7	1,25	2 070	725	SCS
658	50-26a	Cobb Creek No. 3	Washita	Weatherford, Okla.	28,6	726,4	8,18	21,1862	Aug. 1960	Oct. 1964	4,1	90	0,77	1 509	528	SCS
659	50-26a	Cobb Creek No. 3	Washita	Weatherford, Okla.	28,6	726,4	8,18	21,1862	Oct. 1964	Aug. 1970	5,8	91	1,24	2 563	897	SCS
660	51-10	T & P	Town Creek	Weatherford, Tax.	28,6	726,4	8,18	21,1862	Jan. 1957	Aug. 1960	3,6	90	0,796	1 053	369	SCS
661	51-25b	Clear Fk. Wshd. Site 10	Trinity River	Weatherford, Tex.	28,6	726,4	4,12	10,6708	Apr. 1963	May. 1968	5,1	86	0,92	1 682	589	SCS
662	51-25b	Clear Fk. Wshd. Site 10	Trinity River	Weatherford, Tex.	28,6	726,4	4,12	10,6708	May. 1968	June.1954	5,1		0,37	1 682	589	SCS
663	51-42	Lake Weathorford	Clear Fork Trinity	Weatherford, Tex.	28,6	726,4	8,18	21,1862	Jan. 1957	Aug. 1960	3,6	90	1,35	1 122	393	SCS
664	32-41	Kinsey Pond	Trib. Buffalo Creek	Mankato, Kans	28,7	729,0	0,71	1,8389	Sept. 1950	June. 1970	19,8	65	0,25	348	122	SCS
665	32-42	Lee Pond	Trib. Saline River	Tescott, Kans.	28,8	731,5	0,82	2,1238	Apr. 1952	June. 1970	18,2	55	0,41	492	172	SCS
666	46-4	Bennington's Lake	Chikaskia River	Rago, Kans.	28,8	731,5	1,4	3,626	Aug. 1929	Oct. 1940	11,2	69,47	2,68	4 055	1419	SCS
667	28-1	Donald Gardner	Minn. (Direct)	St. Peter, Minn.	28,9	734,1	1,482	3,83838	Aug. 1967	July. 1971	3,9	60	0,16	207	72	SCS
668	28-1	Donald Gardner	Minn. (Direct)	St. Peter, Minn.	28,9	734,1	1,482	3,83838	July. 1971	Feb. 1976	4,6	60	0,18	239	84	SCS
669	46-26	Adams	Trib. Bluff Creek	Anthony, Kans.	29	736,6	0,23	0,5957	Sept. 1934	Aug. 1968	33,9	60	0,84	1 098	384	SCS
670	46-31	Barret	Wild Creek	Anthony, Kans.	29	736,6	0,67	1,7353	Spring 1957	July. 1968	11,3	60	1,01	1 320	462	SCS
671	27-7	Franklin Farm Pond	Trib. of Spring	Red Wing, Minn.	29,1	739,1	1,181	3,05879	May. 1958	June. 1962	4,1	65	1,23	1 741	609	SCS
672	50-52	Saddle Mountain No.	Saddle Mountain	Carnegie, Okla.	29,2	741,7	3,37	8,7283	Apr. 1965	Sept. 1970	5,3	50	0,53	734	257	SCS
673	50-52	Saddle Mountain No.	Saddle Mountain	Carnegie, Okla.	29,2	741,7	3,37	8,7283	Apr. 1959	Apr. 1965	6,0	38	0,47	389	136	SCS
674	4-18	Mount Morris	Genesee R	Mount Morris, NY	29,3	744,2	1011	2618,49	nov-47	mai-53	5,5		0,25	419	147	CE
675	4-18	Mount Morris	Genesee R	Mount Morris, NY	29,3	744,2	1011	2618,49	avr-53	mai-59	5,9	77	0,2	335	117	CE
676	32-14	Wit Reservoir	Trib. Little Blue River	Hubbell, Nebr.	29,4	746,8	0,187	0,48433	1946	1958	12,0	65	2,508	3 551	1243	SCS
677	32-6	Evers Reservoir	Trib. Little Blue River	Hubbell, Nebr.	29,4	746,8	0,171	0,44289	1937	1958	21,0	65	1,566	2 217	776	SCS
678	32-8	Hansmire Reservoir	Trib. Little Blue River	Reynolds, Nebr.	29,4	746,8	0,103	0,26677	1948	1958	10,0	65	2,56	3 624	1268	SCS
679	52-11	Sirianni Lake	Trib, of Hondo	Moore, Tex	29,4	746,8	0,747	1,93473	Feb. 1951	Sept. 1955	4,5	45,6	1,12	1 112	389	SCS
680	53-41a	Sulphur Creek Site 3	Lampasas River	Lampasas, Tex	29,6	751,8	10,58	27,4022	Nov. 1962	Aug. 1968	5,8	55	0,02	24	8	SCS
681	22-18	Brooklyn Mill Pond	River Raisin	Brooklyn Mich	29,7	754,4	6,2	16,058	1948	avr-1965	21,0	43,4	0,484	457	160	SCS
682	35-12a	Emma La Frontz	Trib. of Boyer River	Denison, Iowa	29,9	759,5	0,139	0,36001	Dec.1938	Apr.1949	10,8	63,8	1,41	1 904	666	SCS
683	35-18a	Wilbur Meyer	Trib. of Boyer River	Denison, Iowa	29,9	759,5	0,139	0,36001	Dec.1938	Apr.1949	10,8	63,8	2,88	3 520	1232	SCS
684	35-21a	Barney Mondt	Trib. of Boyer River	Denison, Iowa	29,9	759,5	0,139	0,36001	Dec.1938	Apr.1949	10,8	63,8	3,67	4 440	1554	SCS
685	35-4	G & A . Evers Lower Res.	Trib. of Boyer River	Denison, Iowa	29,9	759,5	0,139	0,36001	Dec.1938	Apr.1949	10,8	63,8	3,75	5 700	1995	SCS
686	35-8	Otto Goslar	Trib. Middle Soldier R.	Charter Oak, Iowa	29,9	759,5	0,086	0,22274	May.1940	Mar.1949	8,8	68,8	2,5	3 750	1313	SCS
687	72-21	Leo Trentadue	Trib. of Dry Creek	Geyserville, CA	30	762,0	0,037	0,09583	Aug. 1961	Oct. 1965	4,0	66	2,97	4 269	1494	SCS
688	72-22	Hazel Hill	Trib. of Dry Creek	Geyserville, CA	30	762,0	0,173	0,44807	Oct. 1960	Oct. 1965	5,0	65	0,52	736	258	SCS
689	27-4	Prairie du Sac	Wisconsin River	Prairie du Sac, WI	30,2	767,1	600	1554	1914	1933	19,0	90	0,717	1 400	490	CE
690	50-16	Coit Pond No. 1	Unnamed	Clinton, Okla,	30,2	767,1	0,38	0,9842	Mar. 1947	July. 1957	10,3	61,49	1,07	1 433	502	SCS
691	50-47b	Barnitz No. 14	Barnitz	Clinton, Okla.	30,2	767,1	4,01	10,3859	Aug. 1968	June. 1973	4,8		1,4	4 020	1407	SCS
692	50-47b	Barnitz No. 14	Barnitz	Clinton, Okla.	30,2	767,1	4,01	10,3859	Nov. 1958	Sept. 1963	4,9		3,9	5 070	1775	SCS
693	50-47b	Barnitz No. 14	Barnitz	Clinton, Okla.	30,2	767,1	4,01	10,3859	Sept. 1963	Aug. 1968	4,9		0,5	883	309	SCS
694	72-24	Nielson	Trib. Santa Rosa Creek	Santa Rosa, Calif.	30,3	769,6	0,184	0,47656	Nov. 1960	Nov. 1964	4,0	65	0,96	1 359	476	SCS
695	72-34	Matanzas	Matanzas	Santa Rosa, Calif.	30,3	769,6	11,5	29,785	Mar. 1972		9,0	90	0,86	1 686	590	SCS
696	32-43	Lindsley Pond	Trib. Mill Creek	Morrowville, Kans.	30,5	774,7	0,65	1,6835	Oct. 1960	June. 1970	9,7	70	0,53	811	284	SCS
697	32-48	Raleigh Pond	Trib. Salt Creek	Agenda. Kans	30,5	774,7	0,8	2,072	Mar. 1964	July. 1970	6,3	60	0,42	544	190	SCS
698	32-53	Woelhoff Pond	Trib. Five Creek	Morganville, Kans	30,5	774,7	0,59	1,5281	June. 1954	July. 1970	16,1	65	0,48	680	238	SCS
699	35-13	Jenson-O' Neil Farm	Trib. L. Nemaha	Syracuse, Nebr	30,5	774,7	0,193	0,49987	Nov.1936	Nov.1948	12,0	56,9	2,97	3 680	1288	SCS

700	35-14	Peterson Farm Pond	Trib. L. Nemaha	Syracuse, Nebr	30,5	774,7	0,193	0,49987	Nov.1936	Nov.1948	12,0	56,9	2,19	2 850	998	SCS
701	35-38	Pickrell Reservoir No.	Russell Creek	Unadilla, Nebr,	30,5	774,7	0,326	0,84434	1949	1957	8,0	65	1,27	1 798	629	SCS
702	35-39	Pickrell Reservoir	Russell Creek	Unadilla, Nebr	30,5	774,7	0,326	0,84434	1949	1957	8,0	65	0,725	1 026	359	SCS
703	35-40	Pickrell Reservoir	Russell Creek	Unadilla, Nebr	30,5	774,7	0,086	0,22274	1939	1957	18,0	65	2,31	3 270	1145	SCS
704	35-41	Pickrell Reservoir No.	Russell Creek	Unadilla, Nebr	30,5	774,7	0,113	0,29267	1934	1957	21,0	65	0,272	385	135	SCS
705	35-43	Ross Farm Reservoir	N.Fork Little Fox R.	Otoe, Nebr	30,5	774,7	0,074	0,19166	1948	1957	9,0	65	2,04	2 888	1011	SCS
706	53-22	Lake Eddleman	Flint Creek	Graham, Tex.	30,6	777,2	41,4	107,226	Feb. 1929	May. 1954	25,3	49,2	0,64	687	240	SCS
707	36-2a	C. A. Stiles	Unnamed	Washta, Iowa	30,8	782,3	0,572	1,48148	Mar. 1949	Sept. 1950	1,5	57,8	1,82	2 300	805	SCS
708	36-2a	C. A. Stiles	Unnamed	Washta, Iowa	30,8	782,3	0,572	1,48148	Sept. 1950	Feb. 1953	2,4	57,8	0,98	1 240	434	SCS
709	36-2a	C. A. Stiles	Unnamed	Washta, Iowa	30,8	782,3	0,572	1,48148	Dec. 1940	Mar. 1949	8,3	46,9	1,54	1 580	553	SCS
710	46-30	Schupbach	Trib. Medicine	Kiowa, kans.	30,8	782,3	0,34	0,8806	June. 1956	Aug.1968	12,2	60	1,18	1 542	540	SCS
711	27-15	Ruegg-Alberts Group	M. Fk. Trib. Zumbro R.	Pine Island, Minn.	30,9	784,9	1,08	2,7972	Aug. 1963	June. 1971	8,0	55	0,11	136	48	SCS
712	32-50	Skucius Pond	Trib. Rose Creek	Munden, Kans	31	787,4	1,61	4,1699	July. 1954	July. 1970	16,0	70	0,24	361	126	SCS
713	46-16	Lies Pond	Unnamed	Andale, Kans.	31	787,4	3,36	8,7024	June. 1942	Sept. 1956	14,0	94,89	0,28	579	203	SCS
714	46-20	Pottszinger Pond	Unnamed	Andale, Kans.	31	787,4	0,9	2,331	Aug. 1949	Sept. 1956	7,0	103,4	1	2 252	788	SCS
715	46-32	Miller	Beaver Creek	Walton, Kans.	31	787,4	1,2	3,108	Aug. 1959	July. 1968	9,0	60	0,3	392	137	SCS
716	46-33	Roupp	Trib. Sand Creek	Hesston, Kans.	31	787,4	0,49	1,2691	June. 1950	Sept.1968	18,1	60	0,24	314	110	SCS
717	46-7	Santa Fe	Indianola Creek	Augusta, Kans.	31	787,4	37,55	97,2545	Oct. 1928	May. 1937	8,6	58,1	0,45	569	199	SCS
718	52-2	Medina Lake	Mednia River	San Antonio, Tex.	31	787,4	578	1497,02	Mar. 1913	Jan. 1937	23,9	61,1	0,465	619	217	SCS
719	52-8a	Calaveras Creek Site #6	Calaveras Creek	San Antonia, Tex	31	787,4	6,7	17,353	Dec. 1956	Mar. 1968	11,3	66,17	0,49	706	247	SCS
720	46-25	Koulouris	Trib. Sand Creek	Newton, Kans.	31,1	789,9	0,23	0,5957	Oct. 1948	Sept. 1968	19,9	60	0,58	758	265	SCS
721	53-33c	Site No.3 Cow Bayou	Trib. Brazos	Moody, Tex.	31,3	795,0	1,32	3,4188	Aug. 1965	Apr. 1970	4,7		1,41	1 572	550	SCS
722	53-33c	Site No.3 Cow Bayou	Trib. Brazos	Moody, Tex.	31,3	795,0	1,32	3,4188	Apr. 1970	Aug. 1975	5,3		1,18	1 897	664	SCS
723	53-34B	Cow Bayou No. 4	Foster Branch	Bruceville, Tex.	31,3	795,0	5,04	13,0536	Sept. 1969	July. 1975	5,8		0,73	1 241	434	SCS
724	53-34B	Cow Bayou No. 4	Foster Branch	Bruceville, Tex.	31,3	795,0	5,04	13,0536	July. 1956	Sept. 1969	13,2		1,19	1 419	497	SCS
725	50-13	Barbour Pond	Trib, Little Washita R.	Chickasha, Okla.	31,4	797,6	0,67	1,7353	Sep. 1935	May. 1955	19,7	75	1,37	2 238	783	SCS
726	46-55	Uncle John Site No. 7	Uncle John	El Reno, Okla.	31,5	800,1	9,05	23,4395	May. 1968	Sept. 1973	5,4		0,54	735	257	SCS
727	27-1	Elk Creek Lake	Elk Creek	Eau Claire, Wisc.	31,6	802,6	60	155,4	1926	Oct. 1941	15,0	70	0,252	384	134	SCS
728	25-11	C M St. P &P RR Res	Trib. of Big Creek	Madrid, Iowa	31,7	805,2	2,52	6,5268	1903	1918	15,0	70	0,476	726	254	SCS
729	31-18	Dominey Reservoir	Longs Creek	Johnson, Nebr.	31,7	805,2	0,699	1,81041	1952	1956	4,0	65	0,964	1 365	478	SCS
730	31-19	Hawley Reservoir	Trib. of Nemaha	Brock, Nebr.	31,7	805,2	0,115	0,29785	1947	1956	9,0	65	0,942	1 334	467	SCS
731	27-11	Wold Farm Pond	Trib. of Crooked	Spring Grove, Minn.	31,8	807,7	0,193	0,49987	Aug. 1954	Jan. 1962	7,3	51,86	0,331	374	131	SCS
732	32-35	Bruna Pond	Trib. Little Blue	Washington, Kans.	31,8	807,7	1,16	3,0044	Apr. 1956	June. 1970	13,3	75	0,51	831	291	SCS
733	22-28	Belleville Lake	Huron River	Belleville, Mich.	32	812,8	20,3	52,577	1929	July. 1969	40,0	69	2,42	3 637	1273	SCS
734	31-21	Cox	Unnamed Trib.	Blue Rapids, Kans.	32	812,8	0,3	0,777	June. 1946	Mar. 1955	8,8	67,22	1,1	1 610	564	SCS
735	51-26c	Honey Creek Site No. 11	Honey Creek	McKinney, Tex.	32	812,8	1,85	4,7915	July. 1967	Apr. 1972	4,7	52	3,51	3 975	1391	SCS
736	51-26c	Honey Creek Site No. 11	Honey Creek	McKinney, Tex.	32	812,8	1,85	4,7915	Apr. 1962	July. 1967	5,3	51,9	1,48	3 956	1385	SCS
737	51-27c	Honey Creek Site No. 12	Trib. E. Fork Trinity	McKinney, Tex.	32	812,8	1,2	3,108	July. 1969	June. 1975	6,0		2,56	2 219	777	SCS
738	51-27c	Honey Creek Site No. 12	Trib. E. Fork Trinity	McKinney, Tex.	32	812,8	1,2	3,108	jan.1952	July. 1969	17,5	40,72	3,53	3 130	1096	SCS
739	32-10	Kuhns Reservoir	Bloody Run	Virginia, Nebr.	32,1	815,3	5,28	13,6752	Apr. 1913	Sep. 1939	26,4	49,15	0,477	511	179	SCS
740	32-11	Kuhns Reservoir No.	Bloody Run	Virginia, Nebr.	32,1	815,3	6,11	15,8249	July. 1932	June. 1937	4,9	60,4	1,84	2 421	847	SCS
741	32-11	Kuhns Reservoir No.	Bloody Run	Virginia, Nebr.	32,1	815,3	6,11	15,8249	June. 1937	July. 1949	12,1	57,5	2,41	3 025	1059	SCS
742	27-8	Frieheit Farm Pond	Trib of Zumbro	Zumbro Falls, Minn.	32,3	820,4	0,268	0,69412	Aug. 1955	May. 1962	6,8	49,5	0,52	560	196	SCS
743	35-34	Lugn Reservoir	Unnamed	Douglas, Nebr.	32,3	820,4	0,257	0,66563	1946	1957	11,0	65	2,93	4 148	1452	SCS

744	46-24	Thever	Trib. Slate Creek	Wellington, Kans.	32,3	820,4	0,14	0,3626	1958	Aug. 1967	9,0	60	0,57	745	261	SCS
745	46-49	Rayl	Trib. Slate Creek	Wellington, Kans.	32,3	820,4	0,56	1,4504	1949	Aug. 1967	18,0	60	0,25	326	114	SCS
746	51-37a	Chambers Creek Site 37	Trib. Chambers	Keene Tex	32,3	820,4	1,95	5,0505	Sept.1964	May.1969	4,7	49	0,16	448	157	SCS
747	51-37a	Chambers Creek Site 37	Trib. Chambers	Keene Tex	32,3	820,4	1,95	5,0505	May.1969	May.1974	5,0		0,82	744	260	SCS
748	21-28 B	Babb Pond	Unnamed	Richfield Ohio	32,4	823,0	0,02	0,0518	avr-1905	Apr.1951	19,0	60	0,15	196	69	SCS
749	21-31	Schoenbeck Pond	Unnamed	Richfield Ohio	32,4	823,0	0,03	0,0777	1940	Apr.1951	11,0	60	0,567	741	259	SCS
750	21-32	Ticky Pon	Unnamed	Peninsula Ohio	32,4	823,0	0,16	0,4144	1949	Apr. 1951	2,0	60	0,1	131	46	SCS
751	27-12	FD-28 Structure	Trib. of Root River	Preston, Minn.	32,4	823,0	0,433	1,12147	Oct. 1954	June. 1962	7,7	65	0,48	680	238	SCS
752	27-13	E-3 Mensink	Trib. E. E. Willow Cr.	Preston, Minn.	32,4	823,0	3,1	8,029	May. 1956	Mar. 1960	3,8	50	0,11	120	42	SCS
753	27-13	E-3 Mensink	Trib. E. E. Willow Cr.	Preston, Minn.	32,4	823,0	3,1	8,029	Mar. 1960	Apr. 1964	4,1	50	0,3	330	116	SCS
754	27-6a	DA-1 - Fishbaugher	Trib. D. E. Willow Cr.	Preston, Minn,	32,4	823,0	1,29	3,3411	Nov. 1946	Mar. 1960	3,4	70	0,51	778	272	SCS
755	27-6a	DA-1 - Fishbaugher	Trib. D. E. Willow Cr.	Preston, Minn,	32,4	823,0	1,29	3,3411	Mar. 1960	Apr. 1964	4,1	70	0,43	656	230	SCS
756	32-24	Robson	Trib. of Holland	Elmo, Kans	32,4	823,0	0,152	0,39368	June. 1956	June. 1962	6,0	75,6	0,92	1 515	530	SCS
757	32-26	Pray	Trib. of Turkey	Elmo, Kans	32,4	823,0	0,127	0,32893	Dec. 1954	June. 1962	7,6	55,7	0,31	376	132	SCS
758	22-12	Simmile Creek 91	Sixmile Creek	Defiance Ohio	32,6	828,0	21,4	55,426	1912	juin-1947	39,0	43,8	0,36	343	120	ODW
759	22-3	Goller Pond	Unnamed	Defiance Ohio	32,6	828,0	26	67,34	févr-41	Aug.1951	6,4	45	0,92	902	316	ODW
760	22-5	Eagle Creek 9/	Eagle Creek	Defiance Ohio	32,6	828,0	5,2	13,468	1912	juin-1947	39,0	59	27	347	121	ODW
761	22-6	Beetree Creek 2/	Beetree Creek	Defiance Ohio	32,6	828,0	1,91	4,9469	1912	Aug.1951	39,0	52,5	0,59	675	236	ODW
762	22-7	Batt Pond	Unnamed	Defiance Ohio	32,6	828,0	0,012	0,03108	mars-43	juin-47	4,3	73,4	2,75	4396	1539	ODW
763	31-53	Lemon	Trib. of Elm Creek	Parker, kans.	32,6	828,0	0,19	0,4921	June. 1961	July. 1967	6,0	60	0,47	614	215	SCS
764	31-58	Johnson Pond	Trib. Little Sugar	Blue Mound, Kans.	32,6	828,0	0,93	2,4087	1936	July. 1967	31,0	60	0,24	313	110	SCS
765	35-45b	Mule Creek "A"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,177	0,45843	Dec.1960	Feb.1962	1,0	60,3	2,99	3 940	1379	SCS
766	35-45b	Mule Creek "A"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,177	0,45843	Sept.1957	Oct.1958	1,1	72,3	3,11	4 900	1715	SCS
767	35-45b	Mule Creek "A"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,177	0,45843	Oct.1958	Jan.1960	1,3	58,7	2,99	3 800	1330	SCS
768	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,368	0,95312	Jan.1960	Dec.1960	0,9	55,3	1,55	1 900	665	SCS
769	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,368	0,95312	Oct.1956	Sept.1957	0,9	69,5	2,55	3 900	1365	SCS
770	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,368	0,95312	Jan.1964	Jan.1965	1,0	51,8	4,92	5 550	1943	SCS
771	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,368	0,95312	Sept.1957	Oct.1958	1,1	59,2	3,64	4 700	1645	SCS
772	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,368	0,95312	Aug.1954	Oct.1956	2,2	72,6	3,31	5 200	1820	SCS
773	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,323	0,83657	Jan.1964	Jan.1965	1,0	65,44	11,49	1 048	367	SCS
774	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,323	0,83657	Sept.1957	Oct.1958	1,1	59,8	3,9	5100	1785	SCS
775	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,323	0,83657	Oct.1958	Jan.1960	1,3	61,9	1,98	2 700	945	SCS
776	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,323	0,83657	July.1954	Oct.1956	2,3	53,9	3,28	3 900	1365	SCS
777	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,6	0,323	0,83657	Jan.1965	Mar.1969	4,2	65,44	1,71	112	39	SCS
778	35-48b	Mule Creek "P"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,6	0,6	1,554	Sept.1957	Sept.1958	1,0	72,8	1,5	2 400	840	SCS
779	35-48b	Mule Creek "P"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,6	0,6	1,554	Dec.1960	Feb.1962	1,2	56,5	2,67	3 300	1155	SCS
780	35-48b	Mule Creek "P"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,6	0,6	1,554	Sept.1958	Jan.1960	1,3	44,5	5,83	5 600	1960	SCS
781	35-49c	Mule Creek "R"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,6	0,796	2,06164	Feb. 1960	Jan. 1974	4,9	66,29	0,4	582	204	SCS
782	35-49c	Mule Creek "R"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,6	0,796	2,06164	Oct. 1955	Jan. 1967	11,3	49,9	2,63	2 858	1000	SCS
783	46-10	Harris Stock Pond	Bois d'Arc Creek	Blackwell, Okla	32,8	833,1	0,21	0,5439	Apr. 1938	Sept. 1940	2,5	67	0,495	701	245	SCS
784	46-9	Gelmer's Stock Pond	Bois d'Arc Creek	Blackwell, Okla	32,8	833,1	0,31	0,8029	Oct. 1939	Sept. 1940	1,0	65	1	1 416	496	SCS
785	26-2	Backbone L . (Forestville	Maquoketa River	Strawberry Pt., Ia.	32,9	835,7	116	300,44	Feb. 1942	Feb. 1949	7,0	75,1	0,082	134	47	SCS
786	26-2	Backbone L . (Forestville	Maquoketa River	Strawberry Pt., Ia.	32,9	835,7	116	300,44	July. 1934	Feb. 1942	7,6		0,076	127	44	SCS
787	27-10	Wholfiel Farm Pond	Trib. of Zumbro	Millville, Minn.	32,9	835,7	0,384	0,99456	July. 1955	May. 1962	6,8	55	0,49	587	205	SCS

788	35-30a	Ingwerson Reservoir No.	Turkey Creek	Louisville, Nebr	32,9	835,7	0,209	0,54131	1952	1957	5,0	65	1,89	2 676	937	SCS
789	35-31	Ingwerson Reservoir No.	Turkey Creek	Louisville, Nebr	32,9	835,7	0,073	0,18907	1952	1957	5,0	65	1,43	2 024	708	SCS
790	35-32	Ingwerson Reservoir	Turkey Creek	Louisville, Nebr	32,9	835,7	0,331	0,85729	1954	1957	3,0	65	1,71	2 421	847	SCS
791	35-36	O' Brien Reservoir	South Cedar Creek	Manley, Nebr	32,9	835,7	0,412	1,06708	1937	1957	20,0	65	1,77	2 506	877	SCS
792	46-14	Guthrie Mun. Res. No. 2	Cottonwood Creek	Guthrie, Okla.	32,9	835,7	11,29	29,2411	May. 1949	Sept. 1960	11,4	95,66	1,92	4 000	1400	SCS
793	46-8	Guthrie	Trib. Cottonwood	Guthrie, Okla.	32,9	835,7	12,95	33,5405	Oct. 1920	May. 1935	14,5	60	2,42	3 162	1107	SCS
794	51-36	Lake Amon G. Carter	Big Sandy Creek	Bowie, Tex.	32,9	835,7	101	261,59	May.1956	May.1967	11,0	55,19	0,51	613	215	SCS
795	50-44c	Owl Creek No. 1	Owl Creek	Wayne, Okla.	33	838,2	0,56	1,4504	Aug. 1959	Oct. 1963	4,1		2,6	4 148	1452	SCS
796	50-44c	Owl Creek No. 1	Owl Creek	Wayne, Okla.	33	838,2	0,56	1,4504	Oct. 1963	Aug. 1968	4,8		1,4	1 862	652	SCS
797	50-44c	Owl Creek No. 1	Owl Creek	Wayne, Okla.	33	838,2	0,56	1,4504	Aug. 1968	Aug. 1973	5,0		3,12	5 160	1806	SCS
798	50-44c	Owl Creek No. 1	Owl Creek	Wayne, Okla.	33	838,2	0,56	1,4504	Apr. 1949	Aug. 1959	10,3	65,5	1,1	1 569	549	SCS
799	35-20b	Max Miller No. 5	Trib. W. Nishnabotna	Macedonia, Iowa	33,2	843,3	0,218	0,56462	Nov.1941	May.1949	7,5	65,2	1,23	1 996	699	SCS
800	24-9	Pittsfield	Trib. of Panther	Pittsfield, Ill.	33,3	845,8	1,77	4,5843	June. 1925	Dec. 1946	21,5	40	3,55	3 090	1082	SCS
801	35-28	Brehmer Reservoir	Trib. L. Nemaha	Dunbar, Nebr	33,3	845,8	0,18	0,4662	1952	1957	5,0	65	2,01	2 846	996	SCS
802	35-35	Neibuer Reservoir	Trib L. Nemaha	Dunbar, Nebr	33,3	845,8	0,18	0,4662	1952	1957	5,0	65	2,72	3 851	1348	SCS
803	72-12	Misselbeck	n. Fk. Cottonwood	Redding, Calif.	33,3	845,8	11,8	30,562	May. 1920	Dec. 1945	25,5	75	0,711	1 161	406	SCS
804	52-14	Iley Lake	Guadalupe River	Gonzales, Tex	33,4	848,4	2,32	6,0088	Jan. 1949	June. 1964	15,4	28,3	0,15	92	32	SCS
805	52-18	Lower Plum Cr. Site 31	Trib. Plum Creek	Lockhart, Tex.	33,4	848,4	3,26	8,4434	May. 1966	Sept.1975	8,8		0,54	881	308	SCS
806	25-2	Upper Pine	Pine Creek	Eldora, Iowa	33,5	850,9	13,8	35,742	May. 1934	Sept. 1947	13,3	60	1,14	1 490	522	SCS
807	25-6	Pine Lake	Pine Creek	Eldora, Iowa	33,5	850,9	13,8	35,742	May. 1934	Sept. 1947	13,3	60	1,52	1 990	697	SCS
808	32-4	Allington Reservoir	Sicily Creek	Beatrice, Nebr.	33,5	850,9	0,512	1,32608	1936	1956	20,0	65	1,77	2 506	877	SCS
809	32-5	Barnard Farm Reservoir	Indian Creek	Beatrice, Nebr.	33,5	850,9	0,512	1,32608	1936	1956	20,0	65	1,4	1 982	694	SCS
810	22-13a	Burt Lake	Unnamed	Oakwood Ohio	33,6	853,4	0,74	1,9166	août-1944	juin-1947	2,8	37,2	1,13	924	323	ODW
811	46-23	Nichlaus	Trib. Slough Creek	Haven, Kans.	33,6	853,4	2,27	5,8793	May. 1932	May. 1967	35,0	70	0,22	335	117	SCS
812	50-53	Lake Nocona	Farmers Creek	Nocona, Tex.	33,6	853,4	89,73	232,401	Apr. 1961	July. 1972	11,3	37	1,46	1 177	412	SCS
813	21-1	Pleasant Hill	Clear Fork	Perrysville Ohio	33,7	856,0	195	505,05	Oct. 1938	Feb. 1945	6,3	55	0,227	321	112	CE
814	21-18a	Stony Lake	McGuire Creek	Perrysville Ohio	33,7	856,0	11,72	30,3548	Dec.1938	avr-1945	10,4	65	0,156	221	77	SCS
815	21-18a	Stony Lake	McGuire Creek	Perrysville Ohio	33,7	856,0	11,72	30,3548	1927	Dec.1938	11,0	65	0,319	452	158	SCS
816	21-19	Tabor Club Lake	Small Br.Muskingu	Perrysville Ohio	33,7	856,0	0,54	1,3986	1923	Dec.1938	15,0	50	1,38	1500	525	SCS
817	31-3	L. H. Fuelling	Trib. Tarkio Creek	Westboro, Mo.	33,7	856,0	1,04	2,6936	July. 1939	May. 1949	9,8	62,5	2,93	3 900	1365	SCS
818	50-43b	Wildhorse Creek No. 33	Trib. of Wildhorse	Duncan, Okla.	33,7	856,0	1,67	4,3253	Sept. 1960	Aug. 1965	5,0	74	2,04	2 690	942	SCS
819	50-43b	Wildhorse Creek No. 33	Trib. of Wildhorse	Duncan, Okla.	33,7	856,0	1,67	4,3253	Mar. 1950	Sept. 1960	10,5	85	1,19	2 203	771	SCS
820	50-46	Fld ret. structure #2	Rush Creek	Rush Springs, Okla	33,7	856,0	2,05	5,3095	Aug. 1959	July. 1965	5,8	77,75	1,36	2 303	806	SCS
821	50-51	Rush Creek No. 2	Rush Creek	Rush Springs,	33,7	856,0	2,05	5,3095	July. 1965	Sept. 1970	5,2	77	0,39	654	229	SCS
822	50-51	Rush Creek No. 2	Rush Creek	Rush Springs,	33,7	856,0	2,05	5,3095	Aug. 1959	July. 1965	5,9	77,75	1,36	2 303	806	SCS
823	22-14	Kohart Pond	Unnamed	Grover Hill Ohio	33,8	858,5	0,019	0,04921	août-1939	juin-1947	7,8	26,1	0,53	301	105	ODW
824	27-14	Birch Lake	Trout Creek	Barneveld, Wisc.	33,8	858,5	1,5	3,885	Oct. 1964	Mar. 1975	10,5	69	0,65	977	342	SCS
825	31-45	Lake Elbow	Trib. of Kansas	Manhattan, kans	33,8	858,5	3,14	8,1326	Sept. 1949	Sept. 1965	16,3	75	0,58	947	331	SCS
826	46-15a	Lake Carl Blackwell	Stillwater Creek	Stillwater, Okla.	33,8	858,5	70,53	182,673	Mar. 1938	Sept. 1958	20,5	60	2,61	3 411	1194	SCS
827	46-3	Boomer Lake	Boomer Creek	Stillwater, Okla.	33,8	858,5	8,67	22,4553	Mar. 1925	June. 1935	10,3	60	1,93	2 522	883	SCS
828	25-13	Springbook	Spring Brook	Guthrie Center, Ia.	33,9	861,1	2,1	5,439	1936	1946	10,0	50	0,638	395	138	SCS
829	46-19	Petty City Lake	Cow Creek	Perry, Okla.	34	863,6	16,64	43,0976	June. 1937	May. 1955	17,9	83,5	1,33	2 419	847	SCS
830	46-56	Upper Black Bear #64	Upper Black Bear	Perry, Okla.	34	863,6	2,16	5,5944	May. 1968	July. 1972	4,1		1,94	2 734	957	SCS
831	53-47	Belton Lake	Leon River	Belton, Tex	34	863,6	2 221,80	5754,46	Oct. 1961	OCt.1966	5,0	51,4	0,39	439	154	CE

832	53-47	Belton Lake	Leon River	Belton, Tex	34	863,6	2 221,80	5754,46	Mar. 1954	Oct. 1961	7,7	51,4	0,39	437	153	CE
833	31-33	Sabetha Lake	Deer Cr. Trib.	Sabetha, kans.	34,1	866,1	8,99	23,2841	Apr. 1955	Apr. 1956	1,0	55	0,11	1 720	602	ARS
834	31-33	Sabetha Lake	Deer Cr. Trib.	Sabetha, kans.	34,1	866,1	8,99	23,2841	June. 1951	Aug. 1952	1,2	53,7	7,04	6 980	2443	ARS
835	31-33	Sabetha Lake	Deer Cr. Trib.	Sabetha, kans.	34,1	866,1	8,99	23,2841	Oct. 1953	Apr. 1955	1,5	54,1	3,93	379	133	ARS
836	31-33	Sabetha Lake	Deer Cr. Trib.	Sabetha, kans.	34,1	866,1	8,99	23,2841	Apr. 1956	Apr. 1958	2,0	56,2	0,28	1 400	490	ARS
837	31-33	Sabetha Lake	Deer Cr. Trib.	Sabetha, kans.	34,1	866,1	8,99	23,2841	Apr. 1958	July. 1960	2,3	54,6	4,02	3 537	1238	ARS
838	31-33	Sabetha Lake	Deer Cr. Trib.	Sabetha, kans.	34,1	866,1	8,99	23,2841	Jan.1936	June. 1951	15,5	54,7	4,48	5 337	1868	ARS
839	31-36	Tretman	Unnamed	Fairview, kans.	34,1	866,1	0,18	0,4662	May. 1947	Oct. 1955	8,4	52,01	0,9	1 301	455	SCS
840	31-46	Rokey	Trib. of Nemaha	Sabetha, kansas	34,1	866,1	8,99	23,2841	Jan.1936	June. 1951	15,5	54,7	1,61	1 777	622	SCS
841	32-23	Droge	Unnamed Trib.	Bern, Kans.	34,1	866,1	8,99	23,2841	Jan.1936	June. 1951	15,5	54,7	1,44	1 960	686	SCS
842	45-26	Bevoy	Big Caney River	Cedar Vale, Kans.	34,1	866,1	0,16	0,4144	Jan. 1938	août-56	22,7	60	0,44	574	201	SCS
843	52-1	Lack Corpus Christi	Nnueces River	Mathis, Tex.	34,4	873,8	16 791	43488,7	Mar. 1942	Mar. 1948	6,0	35,6	0,044	36	13	SCS
844	52-1	Lack Corpus Christi	Nnueces River	Mathis, Tex.	34,4	873,8	16 791	43488,7	July.1934	Mar. 1942	7,6	34,9	0,083	63	22	SCS
845	52-19	Vahlsing Lake	Bayou Creek	Mathis, Tex.	34,4	873,8	13,72	35,5348	1953	1971	18,0	51	0,24	267	93	SCS
846	53-42	Whitney Reservoir	Brazos River	Whitney, Tex	34,4	873,8	3 480	9013,2	Dec. 1941	Apr. 1959	7,4	62,6	0,55	750	263	CE
847	27-16	Structure R-2 Crooked Cr.	N. Fk. Crooked	Caledonia, Minn.	34,5	876,3	2,45	6,3455	May. 1966	May. 1971	5,0	60	0,72	937	328	SCS
848	52-15	Blackwell Lake	Trib, of Deor Creek	Cuero, Tex	34,6	878,8	2,75	7,1225	Sept. 1949	June. 1964	14,8	59,6	0,09	97	34	SCS
849	24-2b	Lake Bloomington	Money Creek	Hudson, Ill.	34,7	881,4	60	155,4	Aug. 1952	July. 1955	2,9	46	0,242	243	85	IWS
850	24-2b	Lake Bloomington	Money Creek	Hudson, Ill.	34,7	881,4	60	155,4	Aug. 1948	Aug. 1952	4,0	41,5	0,656	592	207	IWS
851	24-2b	Lake Bloomington	Money Creek	Hudson, Ill.	34,7	881,4	60	155,4	Dec. 1929	Aug. 1948	18,7	41,5	0,528	477	167	IWS
852	45-31	Kahola	Kahola Creek	Dunlap, Kans.	34,8	883,9	15,3	39,627	Dec. 1936	Apr. 1954	18,3	51,6	1,99	2 236	783	SCS
853	24-15a	Langdon Pond	Unnamed	Franklin, Ill	35	889,0	0,348	0,90132	1907	July. 1952	45,0	31,8	0,78	540	189	IWS
854	24-16	Franklin Outing Club	Unnamed	Franklin, Ill	35	889,0	0,414	1,07226	1905	July. 1925	47,0	52,4	1,43	1 632	571	IWS
855	24-18	Waverly City	Unnamed	Waverly, Ill	35	889,0	9,16	23,7244	Oct. 1938	July. 1952	13,8	42,4	0,551	509	178	IWS
856	24-27	Schmidt Pond	Unnamed	Chatham, Ill	35	889,0	1,3	3,367	1943	Aug. 1952	9,0	41,2	0,022	197	69	IWs
857	24-30	C B & Q R. R. Lake	Trib. of Sangamon	Tallula, Ill	35	889,0	0,84	2,1756	1902	July. 1952	50,0	49,3	0,09	419	147	IWS
858	45-35	Hulah	Caney River	Hulah, Okla.	35	889,0	712	1844,08	Feb. 1950	mai-54	8,4	4,2	0,429	413	145	CE
859	17-15	Patterson Lake	Trib. of Dismal	Edgewood Ill.	35,1	891,5	0,912	2,36208	1926	juin-55	33,0	48,54	1,18	1247	436	IWS
860	31-24	Honey Creek No. A-2	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,274	0,70966	Oct. 1958	Sept. 1959	0,9	66	0,74	1 100	385	SCS
861	31-24	Honey Creek No. A-2	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,274	0,70966	Oct.1956	Oct. 1958	2,0	66	0,71	1 000	350	SCS
862	31-25	Honey Creek No. A-4	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,346	0,89614	Oct. 1958	Aug. 1959	0,8	66	0,71	1 000	350	SCS
863	31-25	Honey Creek No. A-4	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,346	0,89614	Aug. 1957	Oct. 1958	1,2	66	3,52	5 100	1785	SCS
864	31-26	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	1,2	3,108	Oct. 1958	Oct. 1959	1,0	66	2,02	2 900	1015	SCS
865	31-26	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	1,2	3,108	Nov. 1955	Oct. 1958	2,9	66	0,77	1 100	385	SCS
866	31-27	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,47	1,2173	June. 1958	Sept. 1959	1,3	66	2,61	3 800	1330	SCS
867	31-27	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,47	1,2173	July. 1955	June. 1958	2,9	66	1,35	1 900	665	SCS
868	31-28	Honey Creek No.I-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,495	1,28205	Oct. 1958	Sep. 1959	0,9	66	2,22	3 200	1120	SCS
869	31-28	Honey Creek No.I-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,5	0,495	1,28205	Nov. 1955	Oct. 1958	2,9	66	0,85	1 200	420	SCS
870	51-38a	Chambers Cr. Site 101 A	Trinity River	Frost, Tex.	35,1	891,5	2,34	6,0606	Oct.1964	Sept.1968	3,9	54,9	2,49	2 806	982	SCS
871	24-25	Knapp	Unnamed	Springfield, Ill	35,2	894,1	3,43	8,8837	1907	Aug. 1952	45,0	38,7	0,431	363	127	IWS
872	24-26	Aschauer Pond	Unnamed	Riverton, Ill	35,2	894,1	0,518	1,34162	1939	Aug. 1952	13,0	56,2	1,31	1 603	561	IWS
873	24-6	Lake Springfield	Sugar and Lick Creeks	Springfield, Ill.	35,2	894,1	258	668,22	Jan. 1934	Aug. 1948	14,6	73	0,705	660	231	IWS
874	12-7	Temple res	Wesbster Branch	Temple, GA	35,3	896,1	0,61	1,5799	juin-50	mai-53	3,0	44,2	2,74	2638	923	SCS
875	46-21	O. F. Scott Ponds	Trib. So. Candadian	Union City, Okla.	35,3	896,6	1,79	4,6361	May. 1941	May. 1955	14,0	65,4	0,22	313	110	SCS

876	51-32a	Garza-Little Elm	Elm Fork Trinity River	Lewisville, Tex	35,3	896,6	1 599	4141,41	Sept.1960	Sept.1965	5,0	50,6	1,46	1 609	563	SCS
877	22-1	Grand (L.St.Mary's)	St.Mary's & Wabash R.	Celina Ohio	35,4	899,2	93	240,87	1844	Aug. 1940	96,0	55	2,64	3162	1107	SCS
878	19-39a	Upper Hocking No. 2	Hunters Run	Lancaster Ohio	35,5	901,7	1,815	4,70085	Apr. 1956	mai-57	5,0	68,24	0,66	976	342	SCS
879	19-39a	Upper Hocking No. 2	Hunters Run	Lancaster Ohio	35,5	901,7	1,815	4,70085	mai-57	Aug. 1971	10,2	68,24	0,47	539	189	SCS
880	31-16	Centerville No. 2	Manson's Branch	Centerville, Iowa	35,5	901,7	2,62	6,7858	1926	1937	11,0	60	2,12	2 760	966	SCS
881	31-2	Carl Chinquist	Trib. West Nodaway R.	Stanton, Iowa	35,5	901,7	0,163	0,42217	June. 1938	May. 1949	10,9	49,9	3,87	4 200	1470	SCS
882	32-54	Herington City Lake	Lyons Creek	Herington, Kans.	35,5	901,7	16,93	43,8487	May. 1922	May. 1966	44,0	70	0,96	1 463	512	SCS
883	45-39c	Heyburn Reservoir	Polecat Creek	Heyburn, Okla.	35,5	901,7	117	303,03	Mar. 1950	Dec. 1959	9,8	77,23	2,08	3 499	1225	CE
884	45-39c	Heyburn Reservoir	Polecat Creek	Heyburn, Okla.	35,5	901,7	117	303,03	Dec. 1959	Oct. 1971	11,8	91,51	1,62	3 776	1322	CE
885	31-32	Nyhart	do	Effingham, kans.	35,7	906,8	0,15	0,3885	Oct. 1949	Oct. 1957	7,9	60	2,4	3 136	1098	SCS
886	31-34	Sutter	Unnamed	Effingham, Kans	35,7	906,8	0,15	0,3885	Oct. 1949	Oct. 1957	7,9	60	1,88	2 457	860	SCS
887	31-37	Thorne	Unnamed	Effingham, kans.	35,7	906,8	0,15	0,3885	Oct. 1949	Oct. 1957	7,9	60	0,9	1 176	412	SCS
888	51-31b	Site #IIB Elm FK. Wshd.	Trinity River	Gainesville, Tex.	35,8	909,3	1,87	4,8433	Nov. 1958	July. 1963	4,7	78,3	0,96	1 637	573	SCS
889	51-31b	Site #IIB Elm FK. Wshd.	Trinity River	Gainesville, Tex.	35,8	909,3	1,87	4,8433	oct. 1968	Sept.1973	4,9	15,02	0,18	601	210	SCS
890	51-31b	Site #IIB Elm FK. Wshd.	Trinity River	Gainesville, Tex.	35,8	909,3	1,87	4,8433	July. 1963	oct. 1968	5,3	81	0,62	1 358	475	SCS
891	51-40a	Denton Cr. Wsh. Site 17	Trinity River	Decatur, Tex.	35,8	909,3	3,96	10,2564	Oct. 1968	June.1973	4,7		1,76	3 210	1124	SCS
892	19-46a	Delaware Lake	Olentangy River	Delaware Ohio	35,9	911,9	384	994,56	févr-47	avr-56	9,3	65	0,15	208	73	CE
893	19-46a	Delaware Lake	Olentangy River	Delaware Ohio	35,9	911,9	384	994,56	avr-56	avr-71	15,0	65	0,1	148	52	CE
894	22-11c	Contris Pond 1 01	Trib.of Hoo Creek	Lafayette Ohio	35,9	911,9	0,13	0,3367	1951	1954	3,0	49,3	1,36	1460	511	ODW
895	22-11c	Contris Pond 1 01	Trib.of Hoo Creek	Lafayette Ohio	35,9	911,9	0,13	0,3367	1947	1951	4,0	57,8	2,6	3270	1145	ODW
896	25-12a	Fairfield No. 3	Crow Creek	Fairfield, Iowa	35,9	911,9	2	5,18	1927	1946	10,0	50	0,638	695	243	SCS
897	31-42	McNees	Trib. Washington	Clinton, kans	35,9	911,9	0,58	1,5022	Jan. 1950	May. 1962	12,4	47,9	0,07	73	26	SCS
898	50-1	Ardmore Club Lake	Caddo Creek	Ardmore, Okla.	35,9	911,9	3,91	10,1269	Dec. 1922	June. 1938	15,5	40,7	2,52	2 234	782	SCS
899	5-10	Savage River Dam	Savage River	Bloomington Md	36	914,4	104,44	270,5	Mar. 1952	Mar. 1956	4,0	60	0,643	840	294	SCS
900	21-45	Orchard Park	Pipe Creek	Orchard Park N.Y.	36	914,4	1,67	4,3253	1928	sept-1947	23,0	60	0,23	300	105	SCS
901	4-19	Patterson Cr 1	Patterson Cr	Endwell, NY	36,1	916,9	4,22	10,9298	oct-66	août-68	1,8	80	0,03	60	21	SCS
902	4-19	Patterson Cr 1	Patterson Cr	Endwell, NY	36,1	916,9	4,22	10,9298	oct-64	oct-66	2	80	0,41	712	249	SCS
903	4-19	Patterson Cr 1	Patterson Cr	Endwell, NY	36,1	916,9	4,22	10,9298	août-68	sept-70	2,1	80	0,07	122	43	SCS
904	24-19	Whitehall City	Unnamed	White Hall, Ill	36,1	916,9	0,92	2,3828	1897	July. 1952	55,0	43,1	1,02	957	335	IWS
905	24-20	Roodhose Pk. District L.	Unnamed	Roodhouse, Ill	36,1	916,9	0,439	1,13701	1917	July. 1952	35,0	42,4	0,5	462	162	IWS
906	51-34a	Clear creek Site 21	Trinity River	Muenster, Tex.	36,1	916,9	1,48	3,8332	Aug. 1967	July.1973	6,0		0,25	423	148	SCS
907	51-8b	White Rock Lake	White Rock Creek	Dallas, Tex.	36,1	916,9	97,4	252,266	Mar. 1956	Oct. 1970	14,6	32	1,11	505	177	SCS
908	51-8b	White Rock Lake	White Rock Creek	Dallas, Tex.	36,1	916,9	97,4	252,266	Apr. 1910	Apr. 1935	25,0	49	1,6	1 708	598	SCS
909	17-3	Shafar Lake	Tippecanoe River	Monticello Ind.	36,2	919,5	1698	4397,82	mai-19	Aug. 1940	17,2	75	0,023	38	13	SCS
910	31-29	Miller Ranch	Unnamed Trib	Miller, Kans.	36,2	919,5	0,7	1,813	Nov. 1936	Sept. 1955	18,8	52,7	1,13	1 297	454	SCS
911	31-7	Lyon Co. State	do	Reading, Kans.	36,2	919,5	1,79	4,6361	1935	Aug. 1939	4,0	60	2,73	3 568	1249	SCS
912	53-31a	Lake Waco (old)	Bosque	Waco, Tex.	36,2	919,5	1 645	4260,55	Feb. 1935	Feb. 1936	1,0	58,5	1,28	1 631	571	CE
913	53-31a	Lake Waco (old)	Bosque	Waco, Tex.	36,2	919,5	1 645	4260,55	Apr. 1930	Feb. 1935	4,9	58,5	0,695	886	310	CE
914	53-31a	Lake Waco (old)	Bosque	Waco, Tex.	36,2	919,5	1 645	4260,55	Feb. 1936	Dec.1947	11,8	58,5	0,487	621	217	CE
915	21-59	Upper Hocking No.1	Hunters Run	Lancaster Ohio	36,3	922,0	0,94	2,4346	Apr.1956	mai-58	6,1	71,6	0,678	1057	370	SCS
916	22-15	Van Buren Lake	Rocky Ford Creek	Findlay Ohio	36,3	922,0	22,72	58,8448	oct-1944	Aug.1951	2,8	57,9	0,31	391	137	ODW
917	22-15	Van Buren Lake	Rocky Ford Creek	Findlay Ohio	36,3	922,0	22,72	58,8448	Spring 1939	oct-1944	9,5	53,6	0,2	233	82	ODW
918	25-19a	Coralville	Iowa River	Iowa City, Iowa	36,3	922,0	3 076	7966,84	Jan. 1964	Apr. 1968	4,3	45	0,397	443	155	CE
919	25-19a	Coralville	Iowa River	Iowa City, Iowa	36,3	922,0	3 076	7966,84	Sept. 1958	Jan. 1964	5,3	40	0,402	350	123	CE

920	31-60	Bethany	Big Creek	Bethany, Mo.	36,3	922,0	0,928	2,40352	June. 1960	July. 1973	13,1	54,2	0,35	411	144	SCS
921	19-4	Germantown	Twin Creek	Germantown Ohio	36,4	924,6	264	683,76	1927	1942	15,0	79,5	0,097	168	59	SCS
922	31-9	Mission Lake	Mission Creek	Horton, Kans.	36,4	924,6	7,76	20,0984	May.1924	Apr. 1937	13,0	62,2	3	4 064	1422	ARS
923	31-9	Mission Lake	Mission Creek	Horton, Kans.	36,4	924,6	7,76	20,0984	July. 1954	Aug. 1967	13,1	58,5	0,88	13	5	ARS
924	31-9	Mission Lake	Mission Creek	Horton, Kans.	36,4	924,6	7,76	20,0984	Apr. 1937	July. 1954	17,2	53,3	2. 86	3 326	1164	ARS
925	22-9	Allaandinger Pond	Unnamed	Ohio City Ohio	36,5	927,1	0,035	0,09065	Jan.1945	juin-1947	6,7	53,7	1,71	2001	700	ODW
926	24-8	Lake Bracken	Brush Creek	Galesburg, Ill.	36,5	927,1	8,65	22,4035	Dec. 1923	Aug. 1936	12,7		1,57	2 251	788	IWS
927	24-8	Lake Bracken	Brush Creek	Galesburg, Ill.	36,5	927,1	8,65	22,4035	Aug. 1936	June. 1949	12,9	52	1,82	2 061	721	IWS
928	19-3	Englewood	Stillwater	Dayton Ohio	36,6	929,6	639	1655,01	1927	1942	15,0	77,5	0,037	63	22	SCS
929	21-8	Barberton	Wolf Creek	Barberton Ohio	36,6	929,6	28	72,52	avr-1905	Dec.1938	12,0	55	1,1	1320	462	SCS
930	24-32	Ethcheson's Lake	Trib. Kaskaskia	Vandalia, Ill	36,6	929,6	0,26	0,6734	1943	Aug. 1958	15,0	55,66	0,93	1 127	394	IWS
931	25-20	Bear Cr. Wshd. Site	Bear Creek	Gorin, Mo.	36,6	929,6	3,89	10,0751	Nov. 1967	Aug. 1975	7,8	56,4	1,65	2 015	705	SCS
932	31-15	Allerton	South Chariton	Allerton, Iowa	36,6	929,6	4,82	12,4838	1913	Nov. 1939	25,5	60	0,894	1 170	410	SCS
933	31-22	Droege	Unnamed Trib.	Osage City, Kans.	36,8	934,7	0,4	1,036	Mar. 1944	Sept. 1955	11,5	60	0,97	1 267	443	SCS
934	31-30	Nolte	Trib. of Wolf River	Hiawatha, Kans	36,8	934,7	0,42	1,0878	May. 1951	Oct. 1955	4,0	68,43	1,12	1 669	584	SCS
935	31-50	Richter	Trib. Straight Creek	Holton, kans	36,8	934,7	0,27	0,6993	Fall. 1957	July. 1968	11,0	60	1,47	1 921	672	SCS
936	31-51	Reamer	Trib. Straight Creek	Holton, kans	36,8	934,7	0,23	0,5957	July. 1956	July. 1968	12,0	60	1,43	1 869	654	SCS
937	17-26	Upper Wabash Site	Wabash River	New Weston Ohio	36,9	937,3	12,83	33,2297	mai-60	Aug. 1971	7,2	55,9	0,31	373	131	SCS
938	17-27	Upper Wabash Site	Trib. Wabash	Burkettsville Ohio	36,9	937,3	1,07	2,7713	Oct. 1963	Mar. 1972	8,3	80	0,84	1467	513	SCS
939	24-7	Spring Lake	Spring Creek	Macomb, Ill.	36,9	937,3	20,1	52,059	Apr. 1927	Sept. 1947	20,4	59,7	0,701	911	319	IWS
940	31-49	Pool	Trib. Elk Creek	Circleville, kans.	36,9	937,3	0,16	0,4144	Oct. 1958	July. 1968	9,8	60	1,19	1 555	544	SCS
941	25-16	Bloomfield	Unnamed	Bloomfield, Iowa	37	939,8	2,13	5,5167	Sept. 1937	Sept. 1951	14,0	60	2,16	2 823	988	SCS
942	31-38c	Ashland Reservoir	Brushy Creek	Ashland, Mo.	37	939,8	3,75	9,7125	Nov. 1949	Apr. 1951	1,4	68	0,73	807	282	ARS
943	31-38c	Ashland Reservoir	Brushy Creek	Ashland, Mo.	37	939,8	3,75	9,7125	July. 1968	July. 1971	3,0	62,8	1,65	1 870	655	ARS
944	31-38c	Ashland Reservoir	Brushy Creek	Ashland, Mo.	37	939,8	3,75	9,7125	Apr. 1951	July. 1955	4,3	68	0,36	543	190	ARS
945	31-38c	Ashland Reservoir	Brushy Creek	Ashland, Mo.	37	939,8	3,75	9,7125	June. 1962	July. 1968	6,1	64,7	0,62	614	215	ARS
946	31-38c	Ashland Reservoir	Brushy Creek	Ashland, Mo.	37	939,8	3,75	9,7125	July. 1955	June. 1962	6,9	69,4	0,62	1 038	363	ARS
947	31-38c	Ashland Reservoir	Brushy Creek	Ashland, Mo.	37	939,8	3,75	9,7125	Apr. 1937	Nov. 1949	12,6	69	1,44	2 178	762	ARS
948	31-54	Elko Camera Reservoir	Trib. of Bull Creek	Gardner, Kans	37	939,8	0,69	1,7871	July. 1960	Sept. 1970	10,2	60	1,88	2 457	860	SCS
949	31-55	Oberhelmon Pond	Trib. of Bull Creek	Edgerton, Kans	37	939,8	0,5	1,295	Sept. 1960	Sept. 1970	10,0	65	0,77	1 000	350	SCS
950	31-61	Eugene Wagner	Trib, Dawson	Easton, Kans.	37	939,8	0,62	1,6058	Sept. 1956	Aug. 1973	16,9	70	2,25	3 435	1202	SCS
951	45-57	Keystone Lake	Arkansas River	Sand Springs,	37	939,8	7 136	18482,2	août-60	août-65	5,0	59,46	0,47	609	213	CE
952	45-58	Little Deep Fk. Site #10	Deep Fork	Drumright, Okla.	37	939,8	7,28	18,8552	Nov. 1968	août-70	5,9		0,67	1 059	371	SCS
953	45-38	Howard City Lake	Game Creek	Howard, Kans.	37,1	942,3	10,06	26,0554	août-32	août-61	28,9	60	0,57	745	261	SCS
954	31-6	Leavenworth Co. State L.	Unnamed Trib	Tonganoxie, Kans.	37,2	944,9	3,56	9,2204	Sept. 1931	Nov. 1947	16,1	61,45	2,53	3 386	1185	SCS
955	31-63	John Defries Stock Pond	Trib. Stranger	Tonganoxie, Kans.	37,2	944,9	0,2	0,518	June. 1960	June. 1963	13,0	70	2,65	4 034	1412	SCS
956	21-48	Meander Creek	keander Creek	Youngstown Ohio	37,3	947,4	81,76	211,758	1929	1949	20,0	65	0,246	489	171	ODW
957	25-5	McCraney Cr. New Desilting	McCraney Creek	Kinderhook, Ill	37,3	947,4	50,2	130,018	Dec. 1936	Dec. 1939	3,0	85	1,06	1 960	686	SCS
958	25-7	Hadley Cr. New Desilting	Hadley Creek	New Canton, Ill	37,3	947,4	72,7	188,293	1921	1936	15,0	85	2,41	4 460	1561	SCS
959	25-8	Hadley Cr. NEw Desilting	Hadley Creek	New Canton, Ill	37,3	947,4	72,7	188,293	Dec. 1936	Dec. 1939	3,0	85	2,41	4 460	1561	SCS
960	25-9	Kiser Cr. Desilting	Kiser Creek	New Canton, Ill	37,3	947,4	59,6	154,364	Dec. 1936	Dec. 1939	3,0	85	2,65	5 280	1848	SCS
961	45-40	Toronto Lake	Verdigris	Toronto, Kans.	37,3	947,4	714	1849,26	Mar. 1960	avr-62	6,2	50,4	0,731	802	281	CE
962	51-4	Lake Dallas	Elm Fk. Trinity River	Denton, Tex.	37,3	947,4	1 157	2996,63	Feb. 1928	Sept. 1938	10,5	53	1,13	1 304	456	SCS
963	25-3	Lake Calhoun	Fitch Creek	Galva, Ill	37,4	950,0	13	33,67	Aug. 1936	July. 1947	11,0	56	1,12	1 370	480	IWS

964	25-3	Lake Calhoun	Fitch Creek	Galva, Ill	37,4	950,0	13	33,67	Sept. 1924	Aug. 1936	11,9		0,977	1 190	417	IWS
965	45-33	Payer Pond	Unnamed	Burlington, Kans.	37,4	950,0	0,345	0,89355	Jan. 1938	juin-53	19,5	57	1,61	1 998	699	SCS
966	45-42	Hatch	Trib. Neosho River	Burlington, Kans.	37,4	950,0	0,18	0,4662	Oct. 1939	Aug. 1967	28,0	60	0,24	314	110	SCS
967	45-52	Meritt Pond	Big Creek	Burlington, Kans.	37,4	950,0	0,25	0,6475	1939	Aug. 1967	28,0	60	0,56	731	256	SCS
968	45-56	John Redmond	Grand (Neosho)	Burlington, Kans.	37,4	950,0	2 519	6524,21	août-59	Mar. 1974	10,5	61,97	0,549	741	259	CE
969	4-8	Pelto Dam	Dean Cr	Spencer, NY	37,7	957,6	0,41	1,0619	juil-55	août-57	2	80	0,17	296	104	SCS
970	4-8	Pelto Dam	Dean Cr	Spencer, NY	37,7	957,6	0,41	1,0619	août-57	juin-66	8,9	79,2	0,083	141	49	SCS
971	4-9	Pylkas Dam	Dean Cr	Spencer, NY	37,7	957,6	0,71	1,8389	juil-55	août-57	2	80	0,13	226	79	SCS
972	4-9	Pylkas Dam	Dean Cr	Spencer, NY	37,7	957,6	0,71	1,8389	août-57	juin-66	8,9	80	0,068	119	42	SCS
973	24-12	Lake Jacksonville	Sandy Creek	Jacksonville, III.	37,7	957,6	10,1	26,159	1939	June. 1952	12,0	32,5	1,51	1 069	374	IWS
974	24-13	Mauvaisse Terre Lake	Mauvaisse Terre Creek	Jacksonville, III.	37,7	957,6	32,2	83,398	1921	June. 1952	31,0	48,2	0,61	640	224	IWS
975	24-14a	Morgan Lake	Unnamed	Jacksonville, Ill	37,7	957,6	2,72	7,0448	1900	June. 1952	52,0	41,2	0,38	341	119	IWS
976	45-46	Fletcher	Big Creek	Gridley, Kans.	37,7	957,6	0,19	0,4921	1934	Aug. 1967	33,0	60	0,68	888	311	SCS
977	45-47	Isch Pond	Big Creek	Gridley, Kans.	37,7	957,6	0,37	0,9583	1927	Aug. 1967	40,0	60	0,46	601	210	SCS
978	45-55a	Big Wewoka Site No. 11	Big Wewoka	Wewoka, Okla.	37,7	957,6	2,05	5,3095	août-64	juin-69	4,9	59	1,33	2 025	709	SCS
979	45-55a	Big Wewoka Site No. 11	Big Wewoka	Wewoka, Okla.	37,7	957,6	2,05	5,3095	Mar. 1963	août-64	5,5	60	0,94	1 222	428	SCS
980	19-13a	O'Shaughnessy	Scioto River	Dublin Ohio	37,8	960,1	987	2556,33	fall 1934	fall 1942	8	65	0,135	191	67	ODW
981	19-13a	O'Shaughnessy	Scioto River	Dublin Ohio	37,8	960,1	987	2556,33	fall 1925	fall 1934	9	65	0,121	171	60	ODW
982	19-13a	O'Shaughnessy	Scioto River	Dublin Ohio	37,8	960,1	987	2556,33	fall 1942	juin-47	9	44,2	0,063	60	21	ODW
983	19-21	Eversole Run (Trib. Arm of	Eversole Run	Dublin Ohio	37,8	960,1	13,7	35,483	1925	1951	26,0	55,5	0,25	302	106	ODW
984	21-11	Muskingum College	Trib.Muskingum River	New Concord Chio	37,8	960,1	0,31	0,8029	1915	Nov. 1935	20,0	70	0,381	581	203	SCS
985	21-12	Conn.Pond No.22	Trib.of Duck Creek	Marietta Ohio	37,8	960,1	0,05	0,1295	Oct. 1938	oct-1935	1,1	40	4	3485	1220	SCS
986	21-13	Chio Cons.Pond	Trib.of Ohio River	Marietta Ohio	37,8	960,1	0,13	0,3367	sept-1934	Nov. 1939	1,1	40	977	851	298	SCS
987	21-14	Ohio Cons.Pond	Trib.of Ohio River	Marietta Ohio	37,8	960,1	0,05	0,1295	Oct. 1938	oct-1935	1,1	40	1,45	1579	553	SCS
988	50-15a	Chigley Sandy Site	Chigley Sandy	Wynnewood, Okla.	37,8	960,1	0,79	2,0461	June. 1955	Aug. 1959	4,1	60,3	1,52	1 996	699	SCS
989	50-15a	Chigley Sandy Site	Chigley Sandy	Wynnewood, Okla.	37,8	960,1	0,79	2,0461	Aug. 1959	Oct. 1963	4,2	60,3	3,22	4 229	1480	SCS
990	50-25	Muncrief Farm Pond	Trib. of Sandy Creek	Wynnewood, Okla.	37,8	960,1	0,029	0,07511	Aug. 1935	Nov. 1957	22,2	60	1,15	1 503	526	SCS
991	50-42c	Wildhorse No. 1	Wildhorse	Davis, Okla.	37,8	960,1	0,92	2,3828	July. 1959	Oct. 1963	4,3	61	0,62	829	290	SCS
992	50-42c	Wildhorse No. 1	Wildhorse	Davis, Okla.	37,8	960,1	0,92	2,3828	Oct. 1963	July. 1968	4,8		1,02	1 026	359	SCS
993	50-42c	Wildhorse No. 1	Wildhorse	Davis, Okla.	37,8	960,1	0,92	2,3828	July. 1968	July. 1973	4,9		0,58	904	316	SCS
994	50-42c	Wildhorse No. 1	Wildhorse	Davis, Okla.	37,8	960,1	0,92	2,3828	May. 1949	July. 1959	10,3	61	0,66	877	307	SCS
995	50-45b	Chigley Sandy Site	Washita	Wynnewood, Okla.	37,8	960,1	3,61	9,3499	Aug. 1955	Mar. 1958	2,6	51,61	2,17	2 439	854	SCS
996	50-45b	Chigley Sandy Site	Washita	Wynnewood, Okla.	37,8	960,1	3,61	9,3499	July. 1969	May. 1974	4,9		1,04	734	257	SCS
997	50-45b	Chigley Sandy Site	Washita	Wynnewood, Okla.	37,8	960,1	3,61	9,3499	Mar. 1958	Oct. 1963	5,5	51,61	1,85	2 076	727	SCS
998	50-45b	Chigley Sandy Site	Washita	Wynnewood, Okla.	37,8	960,1	3,61	9,3499	Oct. 1963	July. 1969	5,8		2,47	3 667	1283	SCS
999	19-14a	Decker Lake	Patterson Run	Piqua Ohio	37,9	962,7	2,3	5,957	1940	mai-46	10,0	51,91	0,913	1032	361	ODW
1000	24-17	Anderson Lake	Unnamed	Concord, Ill	37,9	962,7	0,6	1,554	1909	July. 1952	43,0	36,2	1,28	1 009	353	IWS
1001	51-28a	Dawson City Lake	Trib. Richland	Dawson, Tex.	37,9	962,7	1,07	2,7713	Feb. 1956	Sept.1963	7,5		9,46	6 387	2235	SCS
1002	51-28a	Dawson City Lake	Trib. Richland	Dawson, Tex.	37,9	962,7	1,07	2,7713	Apr.1937	Feb. 1956	18,8		7,16	5 130	1796	SCS
1003	19-23	Sylvan Lake (Lower)	Trib. of Beaver	Vienna Ohio	38	965,2	1,39	3,6001	1947	Aug. 1951	3,8	44,8	2,73	2664	932	ODW
1004	19-24	Sylvan Lake (Upper)	Trib. of Beaver	Vienna Ohio	38	965,2	0,38	0,9842	1948	Aug. 1951	2,8	45	3,53	3460	1211	ODW
1005	21-15	Robbins Lake	Ford Creek	Hartford Ohio	38	965,2	4,45	11,5255	Summer 1922	Dec.1939	17,4	68	0,151	224	78	SCS
1006	21-38	Berlin	Mahoning River	Berlin Center 0hio	38	965,2	246	637,14	juin-39	Nov.1951	8,4	100	1 .3	2830	991	CE
1007	22-10	Bucyrus No.2	Trib.Sandusky River	Bucyrus Ohio	38	965,2	2,79	7,2261	1919	mai-1945	30,0	45,4	0,28	277	97	ODW

1008	24-49a	Virginia	Job's Creek	Virginia, Ill	38,1	967,7	0,799	2,06941	1933	1950	17,0	40	2,7	2 352	823	IWS
1009	17-9	Craig & Davidson's	Trib. of Raccoon	Martinsville Ill	38,2	970,3	0,427	1,10593	1947	mai-55	12,0	33,14	2,46	1775	621	IWS
1010	19-25	Hosterman Lake	Trib. of Mad River	Springfield Ohio	38,3	972,8	1,58	4,0922	Nov. 1938	Aug. 1951	12,7	66,2	0,38	548	192	ODW
1011	24-11a	Mt. Sterling	Trib. Of Shelby	Mt. Sterling, Ill.	38,3	972,8	1,75	4,5325	1935	1951	16,0	60	2,05	2679	938	IWS
1012	24-21	Woodbine Country Club	Unnamed	Greenfield, Ill	38,3	972,8	0,32	0,8288	1926	July. 1952	26,0	54,4	1,81	2 144	750	IWS
1013	24-22	Dale Cole Pond	Unnamed	Greenfield, Ill	38,3	972,8	0,221	0,57239	1924	July. 1952	28,0	53,7	1,72	2 012	704	IWS
1014	24-31	Edwards Lake	Trib. of Cahokia	Gillespie, Ill	38,3	972,8	0,4	1,036	1949	Aug. 1958	9,0	46,86	1,72	1 755	614	IWS
1015	24-35	King's Lake	Trib. of Cahokia	Eagarville, Ill	38,3	972,8	0,44	1,1396	1921	June. 1958	37,0	54,42	1,17	1 387	485	IWS
1016	24-37	Lake Bunker Hill	Wood River	Bunker Hill, Ill	38,3	972,8	7,15	18,5185	1937	June. 1954	17,0	79,2	0,8	1 380	483	IWS
1017	24-38	Lake Gillespie	Dry Fork	Gillespie, Ill	38,3	972,8	5,62	14,5558	1923	July. 1954	32,0	37,9	0,57	470	165	IWS
1018	24-40	Lake Staunton	East Creek	Staunton, Ill	38,3	972,8	3,54	9,1686	1926	July. 1954	28,0	28,1	1,09	667	233	IWS
1019	24-42a	Mine Pond No. 4	Trib. of Cahokia	Wilsonville, Ill	38,3	972,8	5,23	13,5457	1916	July. 1958	42,0	65,34	0,7	996	349	IWS
1020	24-50	Walton Club Lake	Long Branch	Litchfield, Ill	38,3	972,8	2,67	6,9153	1862	July. 1959	97,0	48,4	0,73	770	270	IWS
1021	45-51	Hubert	Trib. Duck Creek	Longton, Kans.	38,3	972,8	0,4	1,036	Oct. 1948	Aug. 1967	19,0	60	0,18	235	82	SCS
1022	45-53a	Big Wewoka Site No. 36	Big Wewoka	Holdenville, Okla.	38,3	972,8	2,13	5,5167		juin-70	4,9	73	0,57	1 268	444	SCS
1023	45-53a	Big Wewoka Site No. 36	Big Wewoka	Holdenville, Okla.	38,3	972,8	2,13	5,5167	mai-56	Aug. 1969	9,1	62	0,58	788	276	SCS
1024	45-7a	Shawnee Lake	Deer Creek	Shawnee, Okla.	38,3	972,8	18,9	48,951	Dec. 1947	Mar. 1957	9,2	94,72	2,7	5 339	1869	SCS
1025	45-7a	Shawnee Lake	Deer Creek	Shawnee, Okla.	38,3	972,8	18,9	48,951	Aug. 1937	Dec. 1947	12,3	94,72	2,8	5 776	2022	SCS
1026	50-24b	Mill Creek Sita #17	Mill Creek	Sulphur, Okla.	38,3	972,8	1,51	3,9109	Aug. 1966	May. 1972	5,8		1,9	3 351	1173	SCS
1027	50-24b	Mill Creek Sita #17	Mill Creek	Sulphur, Okla.	38,3	972,8	1,51	3,9109	July. 1959	Aug. 1966	7,1		0,5	487	170	SCS
1028	50-24b	Mill Creek Sita #17	Mill Creek	Sulphur, Okla.	38,3	972,8	1,51	3,9109	Dec. 1948	July. 1959	10,6	70	0,4	610	214	SCS
1029	50-54	Rock Creel Site 6	Trin. Rock Creek	Sulphur, Okla.	38,3	972,8	4,39	11,3701	May. 1966	June. 1971	5,0		0,55	631	221	SCS
1030	45-48	Hess Pond	Trib. Duck Creek	Elk City, Kans.	38,4	975,4	1,73	4,4807	1933	juin-63	34,0	60	0,4	522	183	SCS
1031	19-56	Bluestone Lake	New River	Hinton W. Va.	38,5	977,9	2221	5752,39	juin-45	avr-61	15,8	55	0,15	180	63	CE
1032	24-5	Shaefer Pond	Trib. of Cahokia	Edwardsville, Ill.	38,5	977,9	0,83	2,1497	Nov. 1937	July. 1949	11,8	50	2,65	2 890	1012	IWS
1033	72-6	Combie (Van Geisen)	Bear River	Auburn, Calif.	38,5	977,9	129	334,11	June. 1928	Oct. 1935	7,3	70	0,749	1 140	399	SCS
1034	17-7	Vermilion Lake	N. Fork Vermilion R.	Danville Ill.	38,7	983,0	266	688,94	mai-11	Oct. 1940	25,3	70	0,179	273	96	SCS
1035	45-25	Adair	N. Caney River	Sedan, Kans.	38,7	983,0	0,33	0,8547	Mar. 1953	août-56	7,5	55	0,28	335	117	SCS
1036	45-28a	Foster	N. Caney River	Sedan, Kans.	38,7	983,0	2,25	5,8275	Jan. 1951	Aug. 1960	9,5	55	0,29	347	121	SCS
1037	45-32	Mills	Big Caney iver	Sedan, Kans.	38,7	983,0	0,2	0,518	1920	août-56	40,0	70	0,28	427	149	SCS
1038	51-21	Muephy Lake	East Fork Trinity River	Crandall, Tex.	38,7	983,0	3,98	10,3082	Oct. 1922	Apr. 1939	16,5	60	3,94	5 150	1803	SCS
1039	19-15b	Madison Lake	Doer Creek	London Ohio	38,8	985,5	57	147,63	mai-45	mai-47	2,0	45,9	0,17	170	60	ODW
1040	19-15b	Madison Lake	Doer Creek	London Ohio	38,8	985,5	57	147,63	1946	mai-45	2,6	49	0,43	459	161	ODW
1041	19-15b	Madison Lake	Doer Creek	London Ohio	38,8	985,5	57	147,63	mai-47	mai-50	3,0	49,9	0,14	152	53	ODW
1042	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,5	0,51	1,3209	1959	1954	5,0	46,24	2,9	2 921	1022	IWS
1043	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,5	0,51	1,3209	1954	1961	7,0	46,24	1,25	1 259	441	IWS
1044	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,5	0,51	1,3209	1922	1959	27,0	46,24	1,18	1 188	416	IWS
1045	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,5	25,79	66,7961	July. 1954	Sept. 1959	5,1	62,4	0,302	480	168	IWS
1046	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,5	25,79	66,7961	June. 1949	July. 1954	5,1	65,7	0,365	521	182	IWS
1047	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,5	25,79	66,7961	June. 1939	June. 1949	10,4	59,1	0,934	1 200	420	IWS
1048	24-41	Macoupin County L.	Trib. Hurrican	Carlinville, Ill	38,8	985,5	0,26	0,6734	1904	June. 1958	54,0	37,13	1,76	1 423	498	IWS
1049	31-44	Gertsenberger	do	Eudora, kans	38,8	985,5	0,122	0,31598	May. 1955	June. 1962	7,1	56,2	2,13	2 609	913	SCS
1050	31-12	Richamond	Unnamed Trib	Richmond, Kans	38,9	988,1	2,07	5,3613	1909	Oct. 1937	28,0	60	2	2 614	915	SCS
1051	31-8	Martin Farm Lake	Osage River	Ottawa, Kans.	38,9	988,1	0,17	0,4403	Nov. 1930	Oct. 1937	6,9	60	2,82	3 685	1290	SCS

1052	45-30	Herbert Niles Pond	Unnamed	Lebo, Kans.	38,9	988,1	0,192	0,49728	Jan. 1939	juin-53	8,5	60	0,6	810	284	SCS
1053	51-30a	Lavon Reservoir	East Fork Trinity River	Lavon,Tex.	38,9	988,1	163,77	424,164	Oct. 1953	Oct. 1959	6,0	53,1	1,9	2 197	769	SCS
1054	51-30a	Lavon Reservoir	East Fork Trinity River	Lavon,Tex.	38,9	988,1	163,77	424,164	Oct. 1959	Oct. 1965	6,0	20,9	2,14	2 472	865	SCS
1055	5-3	Burnt Mills	N. W. Br. Anacostia R.	Silver Spring Md	39	990,6	26,97	69,8523	avr 1926	Mar. 1938	7,8	6	0,408	533	187	SCS
1056	5-6	Jackson	Occoquan Creek	Manassas Va	39	990,6	336,4	871,276	juin 1926	Aug. 1937	7,2	60	141	184	64	SCS
1057	5-11	Rocky Gorge	Patuxent River	Laurel Md	39	990,6	50,14	129,863	Mar. 1954	Aug. 1964	10,4	67	1,15	1678	587	SCS
1058	19-44	Morgue Lake	Hargus Crook	Circleville Ohio	39	990,6	6,4	16,576	1956	1960	4,0	0,5	133	1450	508	ODW
1059	31-47a	Callahan Cr. Wshd. (C-1)	Barclay Branch	Columbia, Mo.	39	990,6	5,515	14,2839	Apr. 1967	Aug. 1967	0,3	41,6	4,57	4 144	1450	ARS
1060	31-47a	Callahan Cr. Wshd. (C-1)	Barclay Branch	Columbia, Mo.	39	990,6	5,515	14,2839	Aug. 1969	July. 1971	1,9	58,2	1,38	2 059	721	ARS
1061	31-47a	Callahan Cr. Wshd. (C-1)	Barclay Branch	Columbia, Mo.	39	990,6	5,515	14,2839	Aug. 1967	Aug. 1969	2,0	53	1,94	2 379	833	ARS
1062	31-47a	Callahan Cr. Wshd. (C-1)	Barclay Branch	Columbia, Mo.	39	990,6	5,515	14,2839	July. 1971	June. 1974	2,9	64,4	1,64	2 655	929	ARS
1063	31-62	Geo. Stiglelire	Trib. Jarbalo Creek	McLouth, Kans.	39	990,6	0,58	1,5022	Aug. 1958	Aug. 1973	15,0	70	2,08	3 170	1110	SCS
1064	31-65	John Willits Farm Pond	Trib. Buck Creek	Oskaloosa, Kans	39	990,6	0,33	0,8547	Apr. 1961	July. 1973	12,3	70	1,28	1 957	685	SCS
1065	5-4b	Greenbelt Lake	Trib. of Indian Creek	Greenbelt Md	39	990,6	0,79	2,0461	Aug. 1957	mai 1964	10,8	80	1,52	1945	681	SCS
1066	5-4b	Greenbelt Lake	Trib. of Indian Creek	Greenbelt Md	39	990,6	0,79	2,0461	Feb. 1938	Aug. 1957	19,5	60	2,27	2970	1040	SCS
1067	5-la	Lake Barcroft	Trib. of Potomac	Falls Church Va	39	990,6	14,3	37,037	Feb. 1938	Aug. 1957	19,5		0,728	950	333	SCS
1068	5-la	Lake Barcroft	Trib. of Potomac	Falls Church Va	39	990,6	14,3	37,037	Jan. 1915	Feb. 1938	23,1	60	0,257	336	118	SCS
1069	75-10	Crabtree	Trib White	Auburn, WA	39,0	990,6	0,11	0,2849	mai-63	juin-66	3,0	60,0	1,6500	2156	755	SCS
1070	16-22a	Lake Ashley	Trib. of kuddy River	Ashley Ill	39,1	993,1	1,22	3,1598	juil-37	Aug. 1954	14,0	44,5	0,69	692	242	IWS
1071	21-10	Leesville	McGuire Creek	Leesville Ohio	39,1	993,1	45,7	118,363	Aug. 1936	Nov. 1939	3,3	50	0,067	73	26	SCS
1072	21-27a	Atwood Reservoir	Indian Fk.Conottou	Sherrodsville 0hio	39,1	993,1	66,2	171,458	Apr.1940	Dec.1946	6,7	65	0,29	410	144	CE
1073	24-39	Lake Nashville	Nashville Creek	Nashville, Ill	39,1	993,1	1,33	3,4447	1936	Aug.1954	19,0	35,3	1,19	913	320	IWS
1074	50-12b	Lake Texoma (Denison D.)	Red River	Denison, Tex.	39,1	993,1	28 925	74915,8	Oct. 1948	June.1954	5,7	57,9	1	1 261	441	CE
1075	50-12b	Lake Texoma (Denison D.)	Red River	Denison, Tex.	39,1	993,1	28 925	74915,8	July. 1942	Oct. 1948	6,2	52,1	0,785	891	312	CE
1076	50-12b	Lake Texoma (Denison D.)	Red River	Denison, Tex.	39,1	993,1	28 925	74915,8	June.1954	Mar. 1962	7,8	62,5	0,709	965	338	CE
1077	19-2	Radford	Little River	Radford Va	39,2	995,7	329	852,11	Aug. 1934	juin-40	10,0	70	0,191	291	102	SCS
1078	19-22	Allen Lake	Trib. of Silver Creek	Kenton Ohio	39,3	998,2	0,5	1,295	1938	Aug. 1951	13,0	52,6	0,26	298	104	ODW
1079	24-47	Robinson Pond	Terre Creek	Jacksonville, Ill	39,3	998,2	0,304	0,78736	1900	July. 1952	52,0	46,8	0,7	714	250	IWS
1080	31-35	Shirley Pond	Unnamed	Lawrence, kans	39,3	998,2	0,18	0,4662	Mar. 1939	Nov. 1950	17,7	86,7	0,56	1 058	370	SCS
1081	31-41	Mitchell	Trib. Washington	Lawrence, kans	39,3	998,2	0,18	0,4662	Mar. 1939	Nov. 1950	17,7	86,7	0,85	1 051	368	SCS
1082	31-66	Lake Dabinawa	Mud Creek	Lawrence, Kans	39,3	998,2	0,18	0,4662	Mar. 1939	Nov. 1950	17,7	86,7	2,23	3 401	1190	SCS
1083	21-20	Zanesville Nursery Lake	N.Br.Blount Run	Zanesville Ohio	39,4	1000,8	2,93	7,5887	Dec.1936	juin-1937	4,5	65	0,325	462	162	SCS
1084	21-61	Dillon Lake	Licking River	Zanesville Chio	39,4	1000,8	690	1787,1	Feb. 1961	Mar.1973	12,2	65	0,17	234	82	CE
1085	45-18	Lake Claremore	Dog Creek	Claremore, Okla	39,4	1000,8	55,7	144,263	30-mai	Oct. 1939	8,4	51,17	0,749	835	292	SCS
1086	19-18	Stewart Lake	Trib. of Stoney	Chillicothe Ohio	39,5	1003,3	0,3	0,777	1939	août-47	12,3	60	0,87	1137	398	ODW
1087	31-11	Lake Olathe	Cedar Creek	Olathe, Kans	39,6	1005,8	6,11	15,8249	July. 1932	June. 1937	4,9	60,4	1,84	2 421	847	SCS
1088	31-11	Lake Olathe	Cedar Creek	Olathe, Kans	39,6	1005,8	6,11	15,8249	June. 1937	July. 1949	12,1	57,5	2,41	3 025	1059	SCS
1089	17-24	Lake Charleston	Embarrass	Charleston Ill.	39,7	1008,4	811	2100,49	1947	1960	13,0		0,084	108	38	IWS
1090	17-24	Lake Charleston	Embarrass	Charleston Ill.	39,7	1008,4	1,38	3,5742	1960	1974	14,0	59,3	0,047	61	21	IWS
1091	17-6	Ridge Lake	Trib. of Embarrass	Charleston Ill.	39,7	1008,4	1,38	3,5742	Apr. 1941	août-43	6,4	72,4	1,75	2760	966	IWS
1092	19-20c	Kiser Lake	Mosquito Creek :	St Paris Ohio	39,7	1008,4	8,15	21,1085	Jan. 1940	Jan. 1950	10,5	50	2,4	2610	914	ODW
1093	21-3a	Charles Mill	Black Fork Mohican R.	Mansfield Ohio	39,7	1008,4	207	536,13	août-43	juin-50	7,8	65	0,253	358	125	CE
1094	21-3a	Charles Mill	Black Fork Mohican R.	Mansfield Ohio	39,7	1008,4	207	536,13	mai-34	août-43	8,3	65	1,24	1755	614	CE
1095	21-2a	Senecaville	Seneca Fork	Senecaville Ohio	39,8	1010,9	1,13	2,9267	Oct. 1936	Mar. 1945	8,3	65	89	1260	441	CE

1096	45-15	Kirk Lake	Unnamed	Iola, Kans.	39,8	1010,9	2,36	6,1124	1897	août-35	42,0	48,1	0,43	450	158	SCS
1097	45-54	Cane Creek Site No. 11	Cane Creek	Okmulgee, Okla.	39,8	1010,9	8,89	23,0251	Nov. 1965	août-65	3,9	55	0,95	1 018	356	SCS
1098	19-53	Middle Fork Reservoir	M. Fk. of E. Fk. White	Richmond Ind.	39,9	1013,5	47,87	123,983	Jan. 1962	Oct. 1957	5,5	49,6	0,79	850	298	SCS
1099	45-41	Eufaula Lake	Canadian	Whitefield, Okla.	39,9	1013,5	13 693	35464,9	Feb. 1964	mai-65	5,3	62,2	0,68	921	322	CE
1100	19-10	Walton	Bank Lick Creek	Walton Ky	40	1016,0	0,24	0,6216	1931	1937	6,0	50	4,46	4860	1701	SCS
1101	19-38	Pike Lake	Richardson Hollow of	Bainbridge Ohio	40	1016,0	3,42	8,8578	1937	Aug. 1950	13,0	40,2	0,11	963	337	ODW
1102	31-56	Richmond Lake	Dry Branch	Richmond, Kans	40	1016,0	0,84	2,1756	1955	July. 1967	12,0	60	1,07	1 398	489	SCS
1103	45-17	Neosho Co. State Lake	Small Trib. Neoso R.	Parsons, Kans.	40	1016,0	3,24	8,3916	26-juil	Aug. 1939	12,1	60	0,74	967	338	SCS
1104	45-45	Scott	Trib. Neosho	Parsons, Kans.	40	1016,0	0,23	0,5957	Dec. 1956	mai-64	11,8	60	0,35	457	160	SCS
1105	19-17	Caldwell Lake	Trib. of Stoney	Waverly Ohio	40,1	1018,5	1	2,59	1937	août-45	12,0	60	0,253	331	116	ODW
1106	3-6	Stony Brook 5	Baldwin Cr	Pennington, NJ	40,2	1021,1	2,4	6,216	mars-67	mars-72	5	55	0,41	514,3	180	SCS
1107	3-6	Stony Brook 5	Baldwin Cr	Pennington, NJ	40,2	1021,1	2,4	6,216	mars-72	mars-77	5	55	0,132	158	55	SCS
1108	3-6	Stony Brook 5	Baldwin Cr	Pennington, NJ	40,2	1021,1	2,4	6,216	août-58	mars-67	8,6	52	0,287	315	110	SCS
1109	3-7	Stony Brook 3	Baldwin Cr	Pennington, NJ	40,2	1021,1	1,41	3,6519	janv-71	sept-75	4,7	47	2,19	2242	785	SCS
1110	3-7	Stony Brook 5	Baldwin Cr	Pennington, NJ	40,2	1021,1	1,41	3,6519	sept-75	avr-80	4,7	47,9	0,95	102	36	SCS
1111	4-1	Stony Brook 3	Baldwin Cr	Pennington, NJ	40,2	1021,1	219,4	568,246	oct-10	oct-39	29	60	0,618	808	283	SCS
1112	24-4a	Lake Decatur	Sangamon River	Decatur, III.	40,2	1021,1	902	2336,18	1956	1966	10,0		0,11	154	54	SCS
1113	24-4a	Lake Decatur	Sangamon River	Decatur, III.	40,2	1021,1	902	2336,18	July. 1936	June. 1946	10,0	51,7	0,26	224	78	SCS
1114	24-4a	Lake Decatur	Sangamon River	Decatur, III.	40,2	1021,1	902	2336,18	June. 1946	1956	10,0		0,09	141	49	SCS
1115	24-4a	Lake Decatur	Sangamon River	Decatur, III.	40,2	1021,1	902	2336,18	Apr. 1922	July. 1936	14,2		0,22	192	67	SCS
1116	72-28	McGuire	Virgin Creek	Fort Bragg, Calif.	40,2	1021,1	0,083	0,21497	July. 1954	July. 1957	13,0	60	0,21	274	96	SCS
1117	21-35c	Clouse Lake	Ctr.Br.Rush Creek	Somerset Ohio	40,3	1023,6	8,66	22,4294	1948	1949	1,0	55,7	1	1218	426	ODW
1118	21-35c	Clouse Lake	Ctr.Br.Rush Creek	Somerset Ohio	40,3	1023,6	8,66	22,4294	1950	1951	1,0	53	0,45	693	243	ODW
1119	21-35c	Clouse Lake	Ctr.Br.Rush Creek	Somerset Ohio	40,3	1023,6	8,66	22,4294	1951	1952	1,0	55,6	0,34	609	213	ODW
1120	21-35c	Clouse Lake	Ctr.Br.Rush Creek	Somerset Ohio	40,3	1023,6	8,66	22,4294	1952	1953	1,0	55,6	0,25	1239	434	ODW
1121	21-35c	Clouse Lake	Ctr.Br.Rush Creek	Somerset Ohio	40,3	1023,6	8,66	22,4294	1953	1954	1,0	65,3	0,41	926	324	ODW
1122	21-35c	Clouse Lake	Ctr.Br.Rush Creek	Somerset Ohio	40,3	1023,6	8,66	22,4294	1949	1950	2,0	50,5	1,27	1177	412	ODW
1123	24-34	I. C. at Kinmundy	Trib. E. Fk. Kaskaskia R.	Kinmundy,ill	40,3	1023,6	0,581	1,50479	1902	July. 1959	57,0	35,5	0,756	584	204	IWS
1124	4-13	Lake Rushford	Caneadea Cr	Caneadea, NY	40,4	1026,2	60,7	157,213	oct-25	oct-51	26	60	0,37	484	169	SCS
1125	19-29a	Lake Alma	Unnamed	Wellston Ohio	40,4	1026,2	0,7	1,813	1901	août-47	50,0	55,5	0,84	1015	355	ODW
1126	19-50	Jisco Lake	Trib. Little Salt Creek	Jackson Ohio	40,4	1026,2	1,58	4,0922	août-64	Aug. 1970	2,0	50,7	1,16	2108	738	ODW
1127	19-50	Jisco Lake	Trib. Little Salt Creek	Jackson Ohio	40,4	1026,2	1,58	4,0922	1952	août-64	16,0	43,7	0,67	38	13	ODW
1128	31-10	Moran	S. Fk. Osage River	Moran, Kans	40,4	1026,2	5,28	13,6752	Apr. 1913	Sep. 1939	26,4	49,15	0,477	511	179	SCS
1129	21-24b	Crooked Creek	Crooked Creek	Ford City Pa.	40,5	1028,7	274	709,66	Apr.1940	août-1941	5,4	65	0,062	87	30	CE
1130	21-24b	Crooked Creek	Crooked Creek	Ford City Pa.	40,5	1028,7	274	709,66	août-1941	Aug.1964	18,9	51	0,277	308	108	CE
1131	31-23	Flinner	Unnamed Trib.	Leavenworth, Kans	40,5	1028,7	0,63	1,6317	Nov. 1936	Aug. 1957	20,7	60	4,22	5 515	1930	SCS
1132	51-1	Terrell City Lake	Kings Creek	Terrell, Tex.	40,5	1028,7	8,71	22,5589	Oct. 1921	Dec. 1949	28,3	59,2	2,49	3 211	1124	SCS
1133	3-5	Batavia Kill site 4A	Trib Batavia Kill	Windham, NY	40,6	1031,2	6,65	17,2235	juin-70	août-73	3,2	80	0,036	64	22	SCS
1134	11-5	Bridge-Ochlocknee8	Big Cr	Moultrie, GA	40,6	1031,2	0,99	2,5641	1974	1981	7,0	34,0	0,74	553	194	SCS
1135	17-19	Stevenson's Lake	Trib. of Kettering Br.	Martinsville Ill.	40,6	1031,2	0,327	0,84693	1950	mai-55	9,0	48	1,89	1975	691	IWS
1136	17-20	Vevay Park Lake	Trib. of Range	Greenup Ill.	40,6	1031,2	0,278	0,72002	1906	mai-55	53,0	47,61	0,87	902	316	IWS
1137	17-5	Greendale Lake	Connor's Branch	Xenia Ill.	40,6	1031,2	25	64,75	Aug. 1927	août-36	13,1	70	0,14	213	75	SCS
1138	17-8	Brown Park Lake	Trib. of Raccoon	Flora Ill.	40,6	1031,2	1,33	3,4447	1938	mai-55	21,0	58,6	0,4	510	179	IWS
1139	4-5	Lake Williams	Codoros Cr	York, PA	40,7	1033,8	42,6	110,334	avr-08	avr-35	27	49,1	0,394	421	147	SCS

1140	4-12	Palington Res	Powder Cr	Spring Grove, PA	40,7	1033,8	2,9	7,511	avr-37	avr-39	1,6	33,2	0,669	483	169	SCS
1141	16-29	West Frankfort	Stevens Creek	West Frankfort Ill.	40,7	1033,8	7,288	18,8759	1945	juin-56	15,0	35,9	2,41	1884	659	IWS
1142	21-9	Buckeye Lake	S.Fork Licking River	Millersport Ohio	40,7	1033,8	45,1	116,809	1832	juin-1935	107,0	50	86	937	328	SCS
1143	24-48	Salem City	Trib. of Crooked	Salem Ill	40,7	1033,8	3,9	10,101	1912	Aug. 1960	48,0	40,8	0,36	320	112	IWS
1144	31-1	Lake of the Ozarks	Osage River	Eldon, Mo.	40,8	1036,3	13 900	36001	Feb. 1931	Oct. 1948	17,8	59,2	0,464	598	209	CE
1145	16-10	Pineview (Middle)	South Fork Ionaca	Farmington Mo	40,9	1038,9	0,06	0,1554	1930	1939	9,0	60	3,3	4310	1509	SCS
1146	16-11	Pineview Upper	South Fork Ionaca	Farmington Mo	40,9	1038,9	0,48	1,2432	1928	1938	10,0	65	0,583	825	289	SCS
1147	16-20	Herrin Reservoir No.	Unnamed	Herrin Ill	40,9	1038,9	1,7	4,403	1913	1951	38,0	27,5	0,32	192	67	IWS
1148	16-9	Pineview (Lower)	South Fork Ionaca	Farmington Mo	40,9	1038,9	0,07	0,1813	1932	1939	7,0	60	1,43	1870	655	SCS
1149	72-31	M. S. Wilson	Bourns Gulch	Gualala, Calif.	40,9	1038,9	0,283	0,73297	July. 1952	July. 1967	15,0	60	0,24	314	110	SCS
1150	31-48	Wakefield	Trib. Marias Des Cygnes	Mound City, kans.	41	1041,4	0,82	2,1238	1936	July. 1967	31,0	60	0,34	444	155	SCS
1151	19-47	W. Fk. Mill Creek Res.	W. Fork Mill Creek	Cincinnati Ohio	41,1	1043,9	28,6	74,074	Dec. 1952	avr-57	8,4	71,8	1,08	1689	591	CE
1152	19-49	Whitewater Lake	SilverCreek	Liberty Ind	41,2	1046,5	19	49,21	août-50	juin-59	8,8	67,5	1,04	1529	535	SCS
1153	4-23	Martin Cr PA467	Trib Martin Cr	Kingsley, PA	41,3	1049,0	0,79	2,0461	sept-63	sept-71	8	67,3	0,09	132	46	SCS
1154	4-23	Martin Cr PA467	Trib Martin Cr	Kingsley, PA	41,3	1049,0	0,79	2,0461	sept-71	mai-81	9,7	90,1	0,2	614	215	SCS
1155	6-10	Walnut Cove	Dan R	Walnut Cove, NC	41,4	1051,6	397	1028,23	avr-20	avr-28	9,0	43,0	0,21	200	70	CE
1156	20-1	South Holston	S. Fork Holston R	Bristol, TN	41,6	1056,6	591	1530,69	mai-54	Aug. 1964	6,2	55	0,611	732	256	TVA
1157	20-1	South Holston	S. Fork Holston R	Bristol, TN	41,6	1056,6	591	1530,69	Nov. 1950	mai-54	7,6	55	240	298	104	TVA
1158	73-7	Cooper Cr.	Cooper Cr	Sutherlin, OR	41,6	1057,4	4,20	10,878	avr-67	févr-73	5,8	80,0	0,8200	1437	503	SCS
1159	24-36	Lake Coulterville	South Fork Mud Creek	Coulterville, Ill	41,7	1059,2	1,18	3,0562	1940	Aug. 1954	14,0	34	0,73	541	189	IWS
1160	24-46	Raccoon Lake	Raccoon Creek	Centralia, Ill	41,7	1059,2	47,3	122,507	1943	Sept. 1959	16,0	39,7	0,47	406	142	IWS
1161	19-43	Cowan Lake	Cowan Crook	Wilmington Ohio	41,9	1064,3	48,5	125,615	1947	1960	13,0	50	0,847	923	323	ODW
1162	16-14a	Lake Miller	Casey Fork	Mt. Vernon Ill	42	1066,8	4,43	11,4737	Feb. 1944	mai-56	16,3	34	1,2	888	311	IWS
1163	16-25	W. F. Farrell	Trib. of Harper	Mt. Vernon	42	1066,8	4,43	11,4737	Feb. 1944	mai-56	16,3	34	1,06	1189	416	IWS
1164	17-12a	ICRR at Bluford	Fourmile Creek	Bluford Ill.	42	1066,8	3,199	8,28541	1926	mai-56	34,0	43,5	0,565	493	173	IWS
1165	31-39	Higginsville Old City L.	Trib. of Davis Creek	Higginsville, Mo.	42,1	1069,3	2,633	6,81947	Sept. 1924	July. 1964	39,8	55,94	2,061	2 511	879	ARS
1166	31-40	Huscher	Trib. of Brush Creek	Higginsville, Mo.	42,1	1069,3	2,633	6,81947	Sept. 1924	July. 1964	39,8	55,94	2,686	3 436	1203	ARS
1167	46-18	Hughes No. 1	Unnamed	Ingalls, Kans.	42,1	1069,3	0,63	1,6317	1942	Aug. 1955	13,0	72,07	0,32	502	176	SCS
1168	19-36a	Adams Lake	Lick Creek	West Union Ohio	42,2	1071,9	0,39	1,0101	Spring 1947	juin-46	3,5	53,24	0,825	1038	363	ODW
1169	20-2	Watauga	Watauga R	Hampton, TN	42,2	1071,9	458	1186,22	déc-44	mars-49	4,3	55,0	0,61	730	256	TVA
1170	20-2	Watauga	Watauga R	Hampton, TN	42,2	1071,9	458	1186,22	févr-49	avr-54	5	55,0	0,57	680	238	TVA
1171	20-2	Watauga	Watauga R	Hampton, TN	42,2	1071,9	458	1186,22	avr-54	août-60	6,4	55,0	0,43	515	180	TVA
1172	20-6	Nolichuky	Nolichuky R	Greeneville, TN	42,2	1071,9	1182	3061,38	sept-54	févr-57	2,3	50,0	0,11	117	41	TVA
1173	20-6	Nolichuky	Nolichuky R	Greeneville, TN	42,2	1071,9	1182	3061,38	mars-63	sept-66	3,5	50,0	0,17	183	64	TVA
1174	20-6	Nolichuky	Nolichuky R	Greeneville, TN	42,2	1071,9	1182	3061,38	avr-49	oct-54	5,4	50,0	0,33	357	125	TVA
1175	20-6	Nolichuky	Nolichuky R	Greeneville, TN	42,2	1071,9	1182	3061,38	mars-43	mai-49	6,1	50,0	0,30	326	114	TVA
1176	20-6	Nolichuky	Nolichuky R	Greeneville, TN	42,2	1071,9	1182	3061,38	janv-34	avr-43	9,2	50,0	0,22	245	86	TVA
1177	20-6	Nolichuky	Nolichuky R	Greeneville, TN	42,2	1071,9	1182	3061,38	1925	févr-34	12,5	50,0	0,25	274	96	TVA
1178	21-16	Gorleys Lake	Trib.Youghiogheny R	Uniontown Pa.	42,2	1071,9	2,97	7,6923	1908	mai-1935	30,0	60	135	176	62	SCS
1179	72-30	Appleton	Unnamed	Healdsburg, Calif.	42,2	1071,9	0,161	0,41699	Aug. 1950	Aug. 1967	17,0	59	0,37	475	166	SCS
1180	17-18	Stainer Lake	Trib. of Pond Creek	Fairfield Ill.	42,3	1074,4	0,295	0,76405	1945	mai-56	15,0	41,3	1,15	1034	362	IWS
1181	19-37	Vesuvius Lake	Storm Creek	Ironton Ohio.	42,3	1074,4	10,7	27,713	mai-45	juin-48	3,0	54	0,019	22	8	ODW
1182	19-37	Vesuvius Lake	Storm Creek	Ironton Ohio.	42,3	1074,4	10,7	27,713	1937	mai-45	12,0	54	0,697	820	287	ODW
1183	21-22b	Loyalhanna	Loyalhanna Creek	Saltsburg Pa.	42,3	1074,4	285	738,15	Oct.1948	août-1949	4,9	44	0,326	312	109	CE

1184	21-22b	Loyalhanna	Loyalhanna Creek	Saltsburg Pa.	42,3	1074,4	285	738,15	mai-1938	Oct.1948	6,3	44	0,358	343	120	CE
1185	21-22b	Loyalhanna	Loyalhanna Creek	Saltsburg Pa.	42,3	1074,4	285	738,15	août-1949	Apr.1962	8,6	44	0,284	272	95	CE
1186	21-23B	Mahoning Creek	Mahoning Creek	Dayton Pa	42,3	1074,4	336	870,24	mai-1937	Aug.1948	7,2	65	162	229	80	CE
1187	21-23B	Mahoning Creek	Mahoning Creek	Dayton Pa	42,3	1074,4	336	870,24	Aug.1948	mai-1961	16,8	43	0,178	167	58	CE
1188	31-68	Michael Pavicich Res	Trib. Betts Creek	Edwardsville, Kans.	42,3	1074,4	0,16	0,4144	Oct. 1971	July. 1973	1,8	70	2,18	3 322	1163	SCS
1189	5-15	E. Fork Falling R.Site	Mulberry Crook	Appomattox Va	42,5	1079,5	5,03	13,0277	juin 1954	avr 1967	12,7	60	0,17	226	79	SCS
1190	5-16	E.Fork.Falling R. Site35	Caldwell's Creek	Appomattox Va	42,5	1079,5	3,54	9,1686	Aug. 1956	avr 1967	14,6	60	0,14	181	63	SCS
1191	16-24	Lake DuQuoin	Reese Creek	Du Quoin Ill	42,5	1079,5	10,35	26,8065	1937	juin-53	20,0	38,3	0,64	534	187	IWS
1192	20-30	Clear Cr L	Clear Cr	Bristol, VA	42,5	1079,5	5,68	14,7112	Dec. 1965	Aug. 1971	5,8	62	0,152	205	72	TVA
1193	17-14a	Olney Reservoir	Trib. of East Fork	Olney Ill.	42,6	1082,0	3,15	8,1585	août-50	Aug. 1960	6,9	30,3	1,7	1460	511	IWS
1194	2-4	Southington Res	Budd River	Southington, CT	42,66	1083,6	1,08	2,7972	1883	sept-51	68	50	0,1	109	38	SCS
1195	21-21b	Tionesta Lake	Tionesta Creek	Tionesta Pa	42,7	1084,6	474	1227,66	Feb.1941	août-1945	8,6	65	203	287	100	CE
1196	21-21b	Tionesta Lake	Tionesta Creek	Tionesta Pa	42,7	1084,6	474	1227,66	août-1945	avr-1967	21,7	66,3	0,02	31	11	CE
1197	5-7b	Triadelphia L. (Brighton D)	Patuxent River	Brighton Md	42,8	1087,1	80	207,2	août 1954	Aug. 1964	5,9	61,1	1,25	1663	582	SCS
1198	5-7b	Triadelphia L. (Brighton D)	Patuxent River	Brighton Md	42,8	1087,1	80	207,2	Oct. 1950	août 1954	7,9	50	0,72	784	274	SCS
1199	5-7b	Triadelphia L. (Brighton D)	Patuxent River	Brighton Md	42,8	1087,1	80	207,2	Jan. 1942	Oct. 1950	8,3	50	0,2	218	76	SCS
1200	4-7	Atkisson Res	Winter's Run	Bel Air, MD	42,89	1089,4	45,35	117,457	avr-50	Apr-61	11	60,1	0,177	232	81	SCS
1201	4-7	Atkisson Res	Winter's Run	Bel Air, MD	42,89	1089,4	45,35	117,457	avr-38	avr-50	12	60	0,351	459	161	SCS
1202	4-7	Atkisson Res	Winter's Run	Bel Air, MD	42,89	1089,4	45,35	117,457	Apr-61	Apr-76	15	60,1	0,59	773	271	SCS
1203	16-23	Christopher	Trib. of King Creek	Christopher Ill.	42,9	1089,7	0,858	2,22222	1925	juin-56	35,0	37,1	1,01	816	286	IWS
1204	17-22	Scotteburg Lake	Trib. of Muscatatuck	Scottsburg Ind.	42,9	1089,7	2,98	7,7182	Fall 1949	Oct. 1961	12,0	60,8	1	1324	463	SCS
1205	45-36a	Double Creek Site No. 5	Caney River	Ramona, Okla.	42,9	1089,7	2,36	6,1124	Apr. 1964	août-65	0,5	54,3	0,29	343	120	SCS
1206	45-36a	Double Creek Site No. 5	Caney River	Ramona, Okla.	42,9	1089,7	2,36	6,1124	Feb. 1955	Apr. 1964	9,2	54,3	0,6	710	249	SCS
1207	31-4	McDaniel Lake	Little Sac River	Springfield, Mo.	43	1092,2	41,5	107,485	1929	June. 1940	11,0	60	0,538	703	246	SCS
1208	51-14	Wills Point	Magbee Creek	Wills point, Tex.	43	1092,2	1,75	4,5325	Sept.1914	Apr. 1938	23,6	60,1	2,93	3 835	1342	SCS
1209	72-23	Babe Wood	Trib. of Dry Creek	Cloverdale, Calif.	43	1092,2	1,68	4,3512	Oct. 1958	Nov. 1965	7,0	78,9	0,69	1 186	415	SCS
1210	19-45	Hillsboro	Trib. of Clear Creek	Hillsboro Chio	43,1	1094,7	0,69	1,7871	1946	1955	9,0	40	1,36	1190	417	ODW
1211	17-4	Spring Mill	Mill Creek	Mitchell Ind.	43,2	1097,3	5,29	13,7011	Oct. 1938	août-44	9,9	67	0,975	1420	497	SCS
1212	16-1	Grisham	Lost Creek	Bismarck Mo	43,3	1099,8	0,45	1,1655	Oct. 1930	juin-35	8,8	75,4	1,133	1860	651	SCS
1213	16-3	Shepherd Mountain	Trib. of Stouts Creek	Ironton Mo	43,3	1099,8	3,96	10,2564	1929	juin-35	10,0	64	0,338	471	165	SCS
1214	3-3	Carnegie Lake	Millstone R	Princeton, NJ	43,4	1102,4	47,8	123,802	déc-07	sept-50	42,8	50	0,2	218	76	SCS
1215	6-3	L. Brandt	Reddy Fork	Greensboro, NC	43,4	1102,4	73,4	190,106	févr-19	août-30	11,5	60,0	0,31	402	141	SCS
1216	45-43	Mound Valley Experimental	Trib. of Pumpkin	Mound Valley, Kans.	43,4	1102,4	0,42	1,0878	mai-50	mai-64	14,0	60	0,36	470	165	SCS
1217	45-44	Cranor	Trib. Verdigris	Edna, Kans.	43,4	1102,4	0,22	0,5698	Nov. 1953	mai-64	14,6	60	0,32	418	146	SCS
1218	22-8	Harrtson Lake	Mill Creek	Fayette Ohio	43,9	1115,1	37	95,83	mai-45	juin-47	2,1	53	0,34	392	137	ODW
1219	22-8	Harrtson Lake	Mill Creek	Fayette Ohio	43,9	1115,1	37	95,83	avr-1905	mai-45	8,3	53,2	0,2	232	81	ODW
1220	45-4b	Brown Lake	Peaceable Creek	McAlester, Okla.	43,9	1115,1	19,9	51,541	avr-39	juin-48	9,2	54,2	1,83	2 160	756	SCS
1221	45-4b	Brown Lake	Peaceable Creek	McAlester, Okla.	43,9	1115,1	19,9	51,541	juin-48	Apr. 1963	10,8		0,63	743	260	SCS
1222	16-17	Crab Orchard Lake	Crab Orchard	Carbondale, Ill	44	1117,6	160	414,4	avr-36	juin-47	11,2	47,5	1,91	1976	692	IWS
1223	16-19	Little Grassy Lake	Little Grassy	Carbondale,Il l	44	1117,6	160	414,4	avr-36	juin-47	11,2	47,5	2,85	2402	841	IWS
1224	16-5	Carbondale	Piles Fork	Carbondale Ill	44	1117,6	2,77	7,1743	Aug. 1926	août-44	22,1	73,9	3,15	5070	1775	IWS
1225	16-26a	ICRR at Thompsonvill	Trib of Ewing Creek	Thompsonvill e Ill.	44,1	1120,1	1,725	4,46775	1926	Aug. 1960	34,0	48,7	0,88	934	327	IWS
1226	16-27	Lake Johnston City	Lake Creek	Johnston City Ill	44,1	1120,1	3,75	9,7125	1922	Aug. 1957	35,0	48,3	0,59	620	217	IWS
1227	16-28	Valiier Outing Club	Andy Creek	Valier Ill	44,1	1120,1	2,37	6,1383	1922	Aug. 1957	35,0	41,17	0,59	530	186	IWS

1228	2-1	Broad Brook	Broad Brook R	Broad Brook, CT	44,14	1121,2	5,13	13,2867	sept-12	sept-47	35	50	0,33	359	126	SCS
1229	4-22	Kaercher Cr PA476	Kaercher Cr	Hamburg, PA	44,2	1122,7	0,49	1,2691	déc-61	sept-71	9,8	57,7	0,22	277	97	SCS
1230	4-22	Kaercher Cr PA476	Kaercher Cr	Hamburg, PA	44,2	1122,7	0,49	1,2691	sept-71	juin-81	9,8	70,1	0,28	598	209	SCS
1231	6-12	Philpott	Smith R	Bassett, VA	44,3	1124,2	185,7	480,963	déc-47	nov-56	8,9	46,2	2,1	2103	736	CE
1232	19-59	Fox Creek MPS #4	Sand Lick Creek	Flemingsburg Ky.	44,3	1125,2	7,06	18,2854	août-64	Feb. 1975	6,5	60	0,34	417	146	SCS
1233	21-26b	Youghioghen y River Lake	Youghioghe ny River	Confluence Pa.	44,3	1125,2	428	1108,52	Oct.1943	Oct.1949	6,0	65	0,341	483	169	CE
1234	21-26b	Youghioghen y River Lake	Youghioghe ny River	Confluence Pa.	44,3	1125,2	428	1108,52	Oct.1949	Oct.1973	24,0	50,6	0,493	516	181	CE
1235	17-25	Lake Salinda	Hoggatt Br. (Blue R.)	Salem Ind.	44,4	1127,8	5,525	14,3098	Jan. 1949	Apr. 1971	22,2	57,8	1,02	1279	448	SCS
1236	6-11	John H. Kerr	Roanoke R	South Hill, VA	44,4	1128,8	7391	19142,7	juil-48	déc-55	7,4	32,6	1,06	754	264	CE
1237	17-16b	Plum Creek No. 15	Little Plum Creek	Taylorsville Ky.	44,5	1130,3	0,99	2,5641	Apr. 1959	sept-56	1,5	53	4,24	5460	1911	SCS
1238	17-16b	Plum Creek No. 15	Little Plum Creek	Taylorsville Ky.	44,5	1130,3	0,99	2,5641	août-52	Apr. 1959	2,5	45	1,94	1901	665	SCS
1239	17-16b	Plum Creek No. 15	Little Plum Creek	Taylorsville Ky.	44,5	1130,3	0,99	2,5641	sept-56	févr-71	14,4	86,4	0,65	850	298	SCS
1240	17-17a	Plum Creek No. 17	Trib. of Little Plum Cr.	Taylorsville Ky.	44,5	1130,3	0,55	1,4245	Apr. 1959	sept-56	1,5	47	3	2581	903	SCS
1241	17-17a	Plum Creek No. 17	Trib. of Little Plum Cr.	Taylorsville Ky.	44,5	1130,3	0,55	1,4245	nov-52	Apr. 1959	2,3	56	2,01	2452	858	SCS
1242	17-17a	Plum Creek No. 17	Trib. of Little Plum Cr.	Taylorsville Ky.	44,5	1130,3	0,55	1,4245	sept-56	févr-71	14,4	53	0,47	633	222	SCS
1243	72-13	L. Pillsbury (Scott Dam)	Eel River	Potter Valley, CA	44,8	1137,9	284	735,56	Dec. 1921	May. 1959	37,5	73	0,71	1 129	395	GS
1244	6-18	Byrum Pond	Trib. L Prince	Windsor, VA	45,0	1143,0	0,13	0,3367	avr-72	avr-81	9,0	53,0	2,95	3428	1200	SCS
1245	20-7	Douglas	French Broad R	Sevierville, TN	45,0	1143,0	2854	7391,86	mai-51	juin-56	5,1	55,0	0,75	895	313	TVA
1246	20-7	Douglas	French Broad R	Sevierville, TN	45,0	1143,0	2854	7391,86	févr-39	juil-45	6,4	55,0	0,83	994	348	TVA
1247	20-7	Douglas	French Broad R	Sevierville, TN	45,0	1143,0	2854	7391,86	mai-56	août-63	7,2	55,0	0,71	847	296	TVA
1248	24-56	Hambaugh-Martin #1	Fondulac Creek	Versailles,Ill	45,1	1145,5	2,034	5,26806	Sept. 1961	Feb. 1972	10,5	51,6	2,38	2,38	1	CE
1249	16-15	Flucks Lake	Unnamed	Marion Ill	45,2	1148,1	0,316	0,81844	1919	1951	32,0	56,6	1,11	1368	479	IWS
1250	16-16	Baker's Lake	Unnamed	Marion Ill	45,2	1148,1	0,25	0,6475	1937	1951	14,0	36,8	0,64	512	179	IWS
1251	16-18	Marion	Limb Branch	Marion Ill	45,2	1148,1	0,316	0,81844	1919	1951	32,0	56,6	0,61	458	160	TWS
1252	16-21	Knights of Pythias Lake	Unnamed	Marion Ill	45,2	1148,1	0,316	0,81844	1919	1951	32,0	56,6	1,22	1671	585	IWS
1253	7-15	Lexington	Leonards Cr	Lexington, NC	45,4	1153,2	6,66	17,2494	août-31	avr-36	4,6	45,5	0,69	685	240	SCS
1254	7-15	Lexington	Leonards Cr	Lexington, NC	45,4	1153,2	6,66	17,2494	avr-36	mai-47	11,1	45,5	0,30	296	104	SCS
1255	6-9	Burlington Munic	Stoney Cr	Burlington, NC	45,5	1155,7	105	271,95	juin-24	mai-34	10,0	63,0	0,16	213	75	SCS
1256	16-6	Daring Coal Co Pond	Trib. of Wolf Creek	Eldorado Ill	45,5	1155,7	0,206	0,53354	1919	Oct. 1949	30,0	76	2,64	4370	1530	IWS
1257	16-7	Eldorado	Wolf Creek	Eldorado Ill	45,5	1155,7	1,87	4,8433	Oct. 1920	Oct. 1949	29,0	67	2,18	3180	1113	IWS
1258	4-21	E Br Clarion R Lake	E. Br Clarion R	Wilcox, PA	45,6	1158,2	70,3	182,077	juin-48	mai-67	18,9	66,3	0,64	924	323	CE
1259	21-36	East Branch	E.Br.Cuyahoga River	Burton Ohio	45.6	########	16,88	43,7192	1939	mai-1945	9,7	40	0,759	661	231	ODW
1260	6-4	High Point	Deep R	High Point, NC	45,7	1160,8	62,3	161,357	août-34	avr-38	3,8	50,6	0,42	458	160	SCS
1261	6-4	High Point	Deep R	High Point, NC	45,7	1160,8	62,3	161,357	janv-28	août-34	6,5	50,6	0,54	596	209	SCS
1262	21-49a	Havard Mason	Salem Fork	Salem W.Va	45,8	1163,3	0,29	0,7511	sept-1950	sept-1952	2,0	60	1,13	1477	517	SCS
1263	21-49a	Havard Mason	Salem Fork	Salem W.Va	45,8	1163,3	0,29	0,7511	sept-1952	sept-1954	2,0	60	0,32	420	147	SCS
1264	21-49a	Havard Mason	Salem Fork	Salem W.Va	45,8	1163,3	0,29	0,7511	sept-1954	nov-1956	2,2	60	0,28	358	125	SCS
1265	21-58	Salem Fork No.11A	Varner Hollow	Salem W.Va	45,8	1163,3	0,287	0,74333	Dec. 1960	mai-1958	1,6		0,443	579	203	SCS
1266	21-58	Salem Fork No.11A	Varner Hollow	Salem W.Va	45,8	1163,3	0,287	0,74333	Oct.1954	Oct.1956	2,0	60	1,307	1708	598	SCS
1267	21-58	Salem Fork No.11A	Varner Hollow	Salem W.Va	45,8	1163,3	0,287	0,74333	Oct.1956	sept-1954	2,0		0,348	455	159	SCS
1268	21-58	Salem Fork No.11A	Varner Hollow	Salem W.Va	45,8	1163,3	0,287	0,74333	sept-1954	Dec. 1960	2,2		0,16	209	73	SCS
1269	16-2	Mountain Lake	Trib. of Rings Crek	Patterson Mo	45,9	1165,9	1,87	4,8433	1927	juin-35	12,0	54,8	0,213	254	89	SCS
1270	17-1	Huntinburg (Upper)	Trib. of Patoka Eiver	Huntingburg Ind.	45,9	1165,9	0,63	1,6317	July 1894	Oct. 1940	46,3	40	0,617	538	188	SCS
1271	49-12	Wister Lake	Poteau River	Wister, Okla.	45,9	1165,9	957	2478,63	Oct. 1949	July. 1972	22,8	66,3	0,51	74	26	CE

1272	20-14	Norris	Clinch R	Norris, TN	46,0	1168,4	2823	7311,57	juin-50	août-56	6,1	55,0	0,16	191	67	TVA
1273	20-14	Norris	Clinch R	Norris, TN	46,0	1168,4	2823	7311,57	juin-42	juin-50	8	55,0	0,21	256	90	TVA
1274	20-14	Norris	Clinch R	Norris, TN	46,0	1168,4	2823	7311,57	août-56	juin-66	9,8	55,0	0,31	366	128	TVA
1275	20-14	Norris	Clinch R	Norris, TN	46,0	1168,4	2823	7311,57	mars-32	juin-42	10,3	55,0	0,32	379	133	TVA
1276	49-9	Century Lake	Sulphur River	Sulphur Spr., Tex.	46	1168,4	51,46	133,281	1953	Sep. 1962	9,0	85	1,53	2 832	991	SCS
1277	51-35	Upper Lake FK. Wshd.	Sabine River	Sulphur Spr., Tax.	46	1168,4	8,8	22,792	Aug.1962	Oct.1967	5,2		0,45	652	228	SCS
1278	16-4	Loch Mary	Brown Creek	Earlington Ky	46,1	1170,9	3,65	9,4535	1888	Dec. 1908	20,0	60	0,6	784	274	SCS
1279	17-21	Beaver Lake	Beaver Creek	Dubois Ind.	46,1	1170,9	3,56	9,2204	Oct. 1955	Oct. 1964	9,0	55	2,38	2851	998	SCS
1280	49-1a	Lake Crook	Pine Creek	Paris, Tex.	46,1	1170,9	49,6	128,464	Feb.1923	Mar. 1936	13,1	36,4	0,81	642	225	SCS
1281	49-1a	Lake Crook	Pine Creek	Paris, Tex.	46,1	1170,9	49,6	128,464	Mar. 1936	July. 1956	19,7	1,702		1,54	1	SCS
1282	49-2a	Lake Gibbons	Trib. of Pine Creek	Paris, Tex.	46,1	1170,9	1,26	3,2634	Mar. 1936	July. 1956	20,3	31,5	1,52	1 043	365	SCS
1283	49-5	Gordon Country Club	Ans Creek	Paris, Tex	46,1	1170,9	49,6	128,464	Feb.1923	Mar. 1936	13,1	36,4	1,62	1 169	409	SCS
1284	19-62	Sutton Lake	Elk River	Sutton W. Va.	46,2	1173,5	530,9	1375,03	Feb. 1960	Jan. 1973	12,9	60	0,16	209	73	CE
1285	7-2	Lancaster	Turkey Quarter Cr	Lancaster, SC	46,3	1176,0	9,34	24,1906	févr-21	juin-34	13,4	65,3	0,42	593	208	SCS
1286	7-11	Lake Lee	Richardson Cr	Monroe, NC	46,3	1176,0	50,34	130,381	avr-23	juin-34	11,1	61,8	0,30	406	142	SCS
1287	17-23	Cagles Mill (Cataract L)	Mill Creek	Cloverdale Ind.	46,3	1176,0	287	743,33	Dec. 1952	Feb. 1962	9,2	62,8	0,54	739	259	CE
1288	21-25a	Tygart river	Tygart River	Grafton W.Va.	46,3	1176,0	1179	3053,61	Feb.1945	Mar.1959	14,0	65	0,075	106	37	CE
1289	4-1	Loch Raven Res	Gunpowder Falls R	Towson, MD	46,4	1178,6	219,4	568,246	sept-39	juin-57	18	57,3	0,187	233	82	SCS
1290	19-48	Brush Creek Reservoir	Brush Creek	Butlerville Ind.	46,4	1178,6	13,11	33,9549	Dec. 1953	juin-59	9,6	48	1,47	1536	538	SCS
1291	4-10	Columbia Dam	Paulins Kill R	Columbia, NJ	46,5	1181,1	171	442,89	juil-37	juil-57	20	64	0,02	28	10	SCS
1292	2-7	Westfield	Moose Mntain	Westfield, MA	46,6	1183,6	2,52	6,5268	1874	sept-51	77	50	0,094	102	36	SCS
1293	16-12	Killarnay	Big Creek	Annapolis MO	46,6	1183,6	51	132,09	1910	1939	29,0	60	0,133	174	61	SCS
1294	6-2	Franklinton	Sallie Keaney Cr	Franklinton, NC	46,8	1188,7	1,12	2,9008	janv-21	mai-34	13,3	67,0	0,51	743	260	SCS
1295	7-16	Third Cr #7	Third Cr	Statesville, NC	46,8	1188,7	4,74	12,2766	août-53	mars-58	3,0	62,2	0,18	826	289	SCS
1296	7-16	Third Cr #7	Third Cr	Statesville, NC	46,8	1188,7	4,74	12,2766	mars-58	févr-61	4,1	62,2	0,14	244	85	SCS
1297	7-16	Third Cr #7	Third Cr	Statesville, NC	46,8	1188,7	4,74	12,2766	févr-61	mars-65	4,5	62,2	0,61	190	67	SCS
1298	7-20	L Moultrie	W Br Cooper R	Moncks Corner, SC	46,8	1188,7	200	518	nov-37	nov-80	43,0	97,0	0,50	1056	370	GS
1299	51-29	Lake Cherokee	Sabine River	Longvie, Tex.	47	1193,8	163,77	424,164	Oct.1948	Apr. 1960	11,5	83,12	1,37	2 480	868	SCS
1300	4-25	Green Dreher PA446	Taylor Cr	South Sterling, PA	47,5	1206,5	4,7	12,173	juin-72	juil-82	10,1	86	0,118	152	53	SCS
1301	4-25	Green Dreher PA446	Taylor Cr	South Sterling, PA	47,5	1206,5	4,7	12,173	juil-59	juin-72	12,9	65	0,039	55	19	SCS
1302	16-33	Mud River FRS No. 14	Antioch Creek	Sharon Grove Ky.	47,5	1206,5	8,56	22,1704	Jan. 1964	avr-66	6,3	75,78	0,45	742	260	SCS
1303	21-46	Terra Alta Lake	Snowy River	Kingwood W.Va	47,5	1206,5	4,76	12,3284	1902	mai-1948	50,0	50	0,117	127	44	SCS
1304	44-13	Dardanelle Reservoir	Arkansas River	Dardanelle, Ark.	47,6	1209,0	11 333	29352,5	Oct. 1964	Oct. 1965	1,1	80	0,626	1 090	382	CE
1305	44-13	Dardanelle Reservoir	Arkansas River	Dardanelle, Ark.	47,6	1209,0	11 333	29352,5	Oct. 1965	Apr. 1968	2,5	80	0,321	560	196	CE
1306	21-4	Hinckston Run	Hinckston Run	Johnstown Pa	47,7	1211,6	10,57	27,3763	1905	août-33	32,0	60	0,408	533	187	SCS
1307	21-6	Salt Lick	Salt Lick Run	Johnstown Pa	47,7	1211,6	11,76	30,4584	1914	août-33	23,0	60	0,22	287	100	SCS
1308	7-13	Salem	Salem Cr	Winston Salem, NC	48,0	1219,2	27,26	70,6034	nov-15	sept-35	19,8	38,0	0,44	367	128	SCS
1309	8-8	Twelve Mile Cr 12	Rice's Cr	Easley, SC	48,0	1219,2	0,69	1,7871	nov-50	déc-70	20,1	80,6	0,70	1194	418	SCS
1310	51-43	Warren Ranch Lake	Rock Hollow	Hockley, Tex.	48	1219,2	3,09	8,0031	1952	1971	19,0	38	2,47	2 044	715	SCS
1311	16-32a	Obion Creek FRS #24	Unnamed Trib. Little Cr	Fancy Farm Ky	48,5	1231,9	0,35	0,9065	Nov. 1960	Nov. 1965	5,0	80	0,89	1543	540	SCS
1312	18-13	Upper Green R	South Fork	Stanford, KY	48,6	1234,4	1,41	3,6519	Apr. 1966	mai-67	5,2		1,3	1670	585	SCS
1313	18-13	Upper Green R	South Fork	Stanford, KY	48,6	1234,4	1,41	3,6519	août-51	Apr. 1966	10,5	59,9	0,28	364	127	SCS
1314	18-13	Upper Green R	South Fork	Stanford, KY	48,6	1234,4	1,41	3,6519	mai-67	May-79	12,0	60,0	0,60	953	334	SCS
1315	12-2	White Manganese 6	Pettit Cr	Cartersville, GA	48,7	1237,0	11	28,49	oct-25	nov-32	9,2	63,7	1,20	1660	581	SCS

1316	1-1	Little R Res #2	Little R	Belfast, ME	48,8	1239,5	13,8	35,742	sept-09	sept-65	56	100	0,15	326	114	SCS
1317	18-14	E. Fork Pd Res 5A	Buck Cr	Hopkinsville, KY	48,9	1242,1	20,58	53,3022	Apr. 1970	Apr. 1975	5,0	60	0,21	273	96	SCS
1318	18-19	E. Fork Pd Res 5A	Buck Cr	Hopkinsville, KY	48,9	1242,1	7,09	18,3631	1970	1983	13,0	68,0	0,48	706	247	
1319	18-2	Lake Tandy	Little R	Hopkinsville, KY	48,9	1242,1	6	15,54	Jan. 1941	mai-55	18,5	43	0,495	463	162	SCS
1320	18-2	Lake Tandy	Little R	Hopkinsville, KY	48,9	1242,1	6	15,54	1907	Jan. 1941	34,0	43	1	936	328	SCS
1321	15-10	Lake Woodland	Trib. of Camp Creek	Olive Branch, Miss	49	1244,6	0,4797	1,24242	janv 1941	janv 1947	6,0	39,9	5,52	4 800	1680	SCS
1322	15-16	G.y.so Lake	Trib. of Mississippi	Horn Lake, Mis	49	1244,6	0,2047	0,53017	janv 1938	janv 1947	9,0	51,85	3,13	3 530	1236	SCS
1323	20-3	Boone	S. Fk Holston R	Kingsport, TN	49,2	1249,7	662	1714,58	Dec. 1952	mai-54	5,5	55	284	340	119	TVA
1324	20-3	Boone	S. Fk Holston R	Kingsport, TN	49,2	1249,7	662	1714,58	mai-54	août-60	6,3	55	0,52	623	218	TVA
1325	20-4	Port Patrick Henry	S. Fk. Holston R	Kingsport, TN	49,2	1249,7	62	160,58	Oct. 1953	mai-55	5,6	55	468	561	196	TVA
1326	21-62	Polk Creek Site #6	White Oak Run	Weston W.Va	49,6	1259,8	0,47	1,2173	août-61	Apr.1971	5,7	72	1,34	101	35	SCS
1327	49-4	Jenkins Pond	Trib, of Lewis Creek	Mansfield, La	49,6	1259,8	0,32	0,8288	Sept. 1925	Sept.1954	29,0	68,6	0,78	1 165	408	SCS
1328	72-1a	Ridgewood (Walker)	Walker Creek	Willits, Calif.	49,7	1262,4	5,6	14,504	1930	June. 1966	36,0	77,5	0,48	1 063	372	SCS
1329	72-2a	Morris	Davis Creek	Willits, Calif.	49,7	1262,4	5,03	13,0277	May. 1960	May. 1966	6,0	50,3	0,56	642	225	SCS
1330	72-2a	Morris	Davis Creek	Willits, Calif.	49,7	1262,4	5,03	13,0277	1927	May. 1960	36,0	50	0,63	686	240	SCS
1331	18-7	Pickwick Landing	Tennessee R	Pickwick, TN	49,8	1264,9	1997	5172,23	mai-47	mai-52	5,1	53	0,125	144	50	TVA
1332	18-7	Pickwick Landing	Tennessee R	Pickwick, TN	49,8	1264,9	1997	5172,23	mai-52	Aug. 1961	5,2	53	1,113	1285	450	TVA
1333	18-7	Pickwick Landing	Tennessee R	Pickwick, TN	49,8	1264,9	1997	5172,23	Feb. 1938	août-42	8,6	53	0,811	936	328	TVA
1334	2-5	Wallingford	Pine River	Wallingford, CT	49,9	1267,5	8,98	23,2582	sept-37	sept-47	10	50	0,04	44	15	SCS
1335	11-6	Bull Cr #4	Cooper Cr	Columbus, GA	50,4	1280,2	1,3	3,367	1977	1985	8,0	56,0	0,60	747	261	SCS
1336	20-24	Hales Bar	Tennessee R	Jasper, TN	50,5	1282,7	990	2564,1	Oct. 1940	juin-43	6,7	61	0,102	135	47	TVA
1337	8-2	Lloyd Shoals	Ocmulgee River	Jackson, GA	51,4	1305,6	1407	3644,13	déc-06	mars-31	24,3	60,0	0,41	533	187	SCS
1338	18-12	Rough R Res	Rough R	Falls of Rough, KY	51,7	1313,2	437,56	1133,28	déc-55	juil-64	9,8	70,3	0,77	1170	410	CE
1339	18-3	Great Falls	Caney Fork R	Rock Island, TN	51,8	1315,7	1671	4327,89	août-31	Aug. 1947	12,0	70	0,127	166	58	TVA
1340	15-2	Lake Winona	Alum Fork Salim River	Little Rock, Ark.	51,9	1318,3	41,3	106,967	sept 1933	avr 1946	12,6	50	0,37	403	141	SCS
1341	18-5	Wheeler	Tennessee R	Town Cr AL	52,0	1320,8	5,033	13,0355	mai-52	Aug. 1961	5,1	55	0,417	500	175	TVA
1342	18-5	Wheeler	Tennessee R	Town Cr AL	52,0	1320,8	5,033	13,0355	mai-43	avr-49	6,0	55	0,341	408	143	TVA
1343	18-8	Kentucky	Tennessee R	Gilbertsville, KY	52,0	1320,8	7131	18469,3	Aug. 1946	avr-47	4,7	53	0,719	830	291	TVA
1344	18-8	Kentucky	Tennessee R	Gilbertsville, KY	52,0	1320,8	7131	18469,3	avr-47	juin-52	5,2	53	1,107	1278	447	TVA
1345	18-8	Kentucky	Tennessee R	Gilbertsville, KY	52,0	1320,8	7131	18469,3	juin-52	Oct. 1961	5,2	53	0,635	733	257	TVA
1346	15-31	Enid Reservoir	Yocona River	Enid Miss	52,2	1325,9	516	1336,44	1951	avr-57	9,8	60	0,558	729	255	CE
1347	20-13	Caryville	Cove Cr	Caryville, TN	52,2	1325,9	35,65	92,3335	nov-32	nov-34	2	62,0	1,04	1402	491	TVA
1348	20-13	Caryville	Cove Cr	Caryville, TN	52,2	1325,9	35,65	92,3335	juil-66	août-71	5,1	62,0	0,56	693	243	TVA
1349	20-13	Caryville	Cove Cr	Caryville, TN	52,2	1325,9	35,65	92,3335	févr-50	août-56	6,4	62,0	0,25	338	118	TVA
1350	20-13	Caryville	Cove Cr	Caryville, TN	52,2	1325,9	35,65	92,3335	déc-42	mars-50	7,1	62,0	0,92	1238	433	TVA
1351	20-13	Caryville	Cove Cr	Caryville, TN	52,2	1325,9	35,65	92,3335	oct-34	janv-43	8,2	62,0	0,25	338	118	TVA
1352	20-13	Caryville	Cove Cr	Caryville, TN	52,2	1325,9	35,65	92,3335	août-56	juil-66	9,9	62,0	0,49	658	230	TVA
1353	20-28	Upper Ollis cr Res	Ollis Cr	La Follette, TN	52,2	1325,9	10,75	27,8425	Oct. 1970	août-67	0,9	62	0,052	207	72	TVA
1354	20-28	Upper Ollis cr Res	Ollis Cr	La Follette, TN	52,2	1325,9	10,75	27,8425	Oct. 1972	Oct. 1973	1,0	62	1,219	475	166	TVA
1355	20-28	Upper Ollis cr Res	Ollis Cr	La Follette, TN	52,2	1325,9	10,75	27,8425	Oct. 1973	Oct. 1974	1,0	62	0,605	1108	388	TVA
1356	20-28	Upper Ollis cr Res	Ollis Cr	La Follette, TN	52,2	1325,9	10,75	27,8425	Oct. 1974	Oct. 1975	1,0	62	0,363	506	177	TVA
1357	20-28	Upper Ollis cr Res	Ollis Cr	La Follette, TN	52,2	1325,9	10,75	27,8425	août-67	Oct. 1972	1,1	62	0,905	336	118	TVA
1358	20-28	Upper Ollis cr Res	Ollis Cr	La Follette, TN	52,2	1325,9	10,75	27,8425	Apr. 1964	Oct. 1970	5,5	62	0,166	224	78	TVA
1359	11-1	Newnam	Bolton Mill Cr	Newnan, GA	52,3	1328,4	1,34	3,4706	oct-33	janv-41	7,3	50,0	0,41	446	156	SCS

1360	11-1	Newnam	Bolton Mill Cr	Newnan, GA	52,3	1328,4	1,34	3,4706	mai-20	oct-33	13,4	50,0	1,45	1580	553	SCS
1361	51-33	Dam B Reservoir	Neches	Jasper, Tex.	52,7	1338,6	7 546,60	19545,7	1951	Feb. 1960	8,8	60,9	0,025	33	12	SCS
1362	15-32	Grenada Reservoir	Yalobusha River	Grenada Miss	52,9	1343,7	1219	3157,21	juin-49	avr-61	11,8	60	1,205	1575	551	CE
1363	8-1	Lake Issaqueena	Six Mile Cr	Clemson, SC	53,2	1351,3	13,64	35,3276	juin-34	avr-37	2,9	49,8	2,22	2410	844	SCS
1364	8-1	Lake Issaqueena	Six Mile Cr	Clemson, SC	53,2	1351,3	13,64	35,3276	avr-37	sept-45	8,5	50,9	1,03	1140	399	SCS
1365	20-27	Melton Hill	Clinch R	Clinton, TN	53,2	1351,3	422	1092,98	juin-59	avr-66	7,0	55	109	131	46	TVA
1366	15-22	A. S. Kyle Pond	Trib. of Tallahatchie	Batesville Miss	53,3	1353,8	0,0398	0,10308	Mar. 1945	Mar. 1951	6,0	52,04	3,14	3560	1246	SCS
1367	15-27b	W. W. Murphy Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,8	0,2	0,518	Nov. 1963	nov-71	12,1	77	1,55	1683	589	ARS
1368	15-29b	Andrew Smith Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,8	0,3	0,777	avr-52	août-55	3,3	90	2,15	4217	1476	ARS
1369	15-29b	Andrew Smith Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,8	0,3	0,777	août-55	Nov. 1963	4,1	90	1,9	3734	1307	ARS
1370	15-29b	Andrew Smith Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,8	0,3	0,777	Nov. 1963	Dec. 1975	12,1	79	2,06	2927	1024	ARS
1371	20-5	Cherokee	Holston R	Jefferson City, TN	53,6	1361,4	1477	3825,43	mai-55	mai-60	5,0	55	0,276	331	116	TVA
1372	20-5	Cherokee	Holston R	Jefferson City, TN	53,6	1361,4	1477	3825,43	Apr. 1954	mai-55	5,1	55	0,241	289	101	TVA
1373	20-5	Cherokee	Holston R	Jefferson City, TN	53,6	1361,4	1477	3825,43	Dec. 1941	Apr. 1949	7,4	55	0,34	407	142	TVA
1374	12-6	Carroll L	Curtis Cr	Carrollton, GA	53,7	1364,0	7,18	18,5962	oct-44	mai-53	8,5	42,5	2,00	1851	648	SCS
1375	13-2	Lake Harris	Yellow Creek	Tuscaloosa, Ala	53,7	1364,0	30	77,7	févr-25	nov-31	6,8	59,9	0,11	144	50	SCS
1376	18-4	Guntersville	Tennessee R	Guntersville, AL	53,8	1366,5	2550	6604,5	avr-52	juin-57	5,1	55	0,687	823	288	TVA
1377	18-4	Guntersville	Tennessee R	Guntersville, AL	53,8	1366,5	2550	6604,5	Nov. 1940	mai-43	6,6	55	0,979	1173	411	TVA
1378	18-4	Guntersville	Tennessee R	Guntersville, AL	53,8	1366,5	2550	6604,5	mai-43	avr-52	8,9	55	0,341	408	143	TVA
1379	15-24	A. L. Rodman Pond	Trib. of Arkabutla	Arkabutla Miss	53,9	1369,1	0,1458	0,37762	août-41	Mar. 1951	5,5	50	1,95	2120	742	SCS
1380	15-26b	Arkabutla Reservoir	Coldwater River	Arkabutla Miss	53,9	1369,1	948	2455,32	Apr. 1939	Dec. 1947	6,3	60	0,627	819	287	CE
1381	15-26b	Arkabutla Reservoir	Coldwater River	Arkabutla Miss	53,9	1369,1	948	2455,32	Dec. 1947	avr-58	14,4	60	0,62	810	284	CE
1382	15-17	Ben 0. Pettis Pond	Trib. of Toby Tubby Cr.	Oxford, Miss	54	1371,6	0,0067	0,01735	janv 1912	janv 1947	35,0	58,72	2,39	3 060	1071	SCS
1383	15-18	C. D. Williams	Trib. of Hudson	Oxford, Miss	54	1371,6	0,0418	0,10826	févr 1924	févr 1947	23,0	55,72	3,35	4 070	1425	SCS
1384	15-20	Henry W. Ramsey Pond	Trib. of Sarter	Oxford, Miss	54	1371,6	0,1289	0,33385	déc 1928	févr 1947	18,2	41,75	2,61	2 370	830	SCS
1385	15-21	Dr. Bramlett Pond	Trib. of Pumpkin	Oxford, Miss	54	1371,6	0,8131	2,10593	Jan. 1937	Mar. 1951	14,2	37	1,12	913	320	SCS
1386	15-28b	Powerline Dan	East Goose Creek	Oxford Miss	54	1371,6	0,477	1,23543	mai-56	Aug. 1962	2,2	70	3,88	743	260	ARS
1387	15-28b	Powerline Dan	East Goose Creek	Oxford Miss	54	1371,6	0,477	1,23543	Aug. 1962	août-63	5,0	70	0,38	582	204	ARS
1388	15-28b	Powerline Dan	East Goose Creek	Oxford Miss	54	1371,6	0,477	1,23543	août-63	Jan. 1976	8,4	75	0,79	1292	452	ARS
1389	15-30a	Sardis Reservoir	Little Tallahatchie	Sardis Miss	54	1371,6	1454	3765,86	Mar.1937	avr-56	20,6	60	0,687	898	314	CE
1390	20-8	Fort Loudon	Tennessee R	Lenoir City, TN	54,0	1371,6	1556	4030,04	nov-42	juin-47	4,6	55,0	0,21	256	90	TVA
1391	20-8	Fort Loudon	Tennessee R	Lenoir City, TN	54,0	1371,6	1556	4030,04	mai-47	avr-52	4,8	55,0	0,18	217	76	TVA
1392	20-8	Fort Loudon	Tennessee R	Lenoir City, TN	54,0	1371,6	1556	4030,04	mars-52	mai-57	5,1	55,0	0,67	807	282	TVA
1393	16-36	Beach Lake	Beach River	Lexington Tenn.	54,6	1386,8	14,36	37,1924	Apr. 1964	Oct. 1972	8,5	65	1,38	1954	684	TVA
1394	16-37	Cedar Lake	Haley Creek	Lexington Tenn.	54,6	1386,8	14,36	37,1924	Apr. 1964	Oct. 1972	8,5	65	0,398	563	197	TVA
1395	16-40	Lost Creek Detention	Lost Creek	Lexington Tenn.	54,6	1386,8	4,29	11,1111	Apr. 1964	Oct. 1972	8,5	65	0,741	1049	367	TVA
1396	16-42	Pine Lake	Pine Creek	Lexington Tenn.	54,6	1386,8	6,86	17,7674	Apr. 1965	Oct. 1972	7,5	65	0,389	551	193	TVA
1397	16-44	Sycamore Lake	do	Lexington Tenn	54,6	1386,8	2,45	6,3455	Apr. 1965	Oct. 1972	7,5	65	2,5	3539	1239	TVA
1398	16-34	Caney Creek MPS #2	Bennett Fork	Caneyville Ky	54,8	1391,9	5,65	14,6335	Nov. 1965	avr-66	4,5	77,75	1,01	1710	599	SCS
1399	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	juin-41	Nov. 1946	1,3	64	2,312	3223	1128	TVA
1400	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Nov. 1946	Aug. 1948	1,8	64	1,646	2294	803	TVA
1401	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Oct. 1960	mai-58	1,8	64	1,388	1865	653	TVA
1402	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Aug. 1948	Aug. 1950	2,0	64	1,373	1914	670	TVA
1403	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Oct. 1958	Oct. 1960	2,0	54	1,608	2242	785	TVA

1404	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	juin-49	Oct. 1955	2,1	54	1,183	1649	577	TVA
1405	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	août-61	Mar. 1968	2,6	64	0,916	1278	447	TVA
1406	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Aug. 1942	juin-41	2,9	64	2,114	2947	1031	TVA
1407	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Aug. 1950	juin-49	3,0	64	1,46	2035	712	TVA
1408	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Oct. 1955	Oct. 1958	3,0	64	1,516	2253	789	TVA
1409	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	mai-58	août-61	3,2	64	0,753	1050	368	TVA
1410	20-21	Ocoee #3	Ocoee R	Ducktown, TN	55,1	1399,5	263	681,17	Mar. 1968	mai-68	4,2	64	0,133	1755	614	TVA
1411	20-22	Ocoee #1	Ocoee R	Parksville, TN	55,1	1399,5	96	248,64	Aug. 1954	mai-55	4,9	54	0,974	1358	475	TVA
1412	20-22	Ocoee #1	Ocoee R	Parksville, TN	55,1	1399,5	96	248,64	mai-55	Apr. 1968	8,8	64	0,406	566	198	TVA
1413	20-23	Chicamauga	Tennessee R	Chattanooga, TN	55,2	1402,1	1805	4674,95	Aug. 1954	avr-52	1,8	60	1481	1935	677	TVA
1414	20-23	Chicamauga	Tennessee R	Chattanooga, TN	55,2	1402,1	1805	4674,95	avr-52	mai-57	5,1	60	0,168	220	77	TVA
1415	15-1	Lake Hamilton	Ouachita River	Hot Springs, Ark	55,5	1409,7	1413,4	3660,71	nov 1926	avr 1946	19,4	50	0,11	120	42	SCS
1416	20-15	Watts Bar	Tennessee R	Spring City, TN	55,8	1417,3	2925	7575,75	oct-43	juin-47	4,7	55,0	0,16	186	65	TVA
1417	20-15	Watts Bar	Tennessee R	Spring City, TN	55,8	1417,3	2925	7575,75	juin-47	avr-52	4,8	55,0	0,67	799	280	TVA
1418	20-15	Watts Bar	Tennessee R	Spring City, TN	55,8	1417,3	2925	7575,75	avr-52	juin-57	5,1	55,0	0,59	706	247	TVA
1419	8-9	Twelve Mile Cr 16	Rice's Cr	Pickens, SC	56,2	1427,5	8,16	21,1344	nov-51	déc-70	19,1	69,5	0,93	1408	493	SCS
1420	12-8	High Pine Dam 5	Tr High Pine	Roanoke, AL	56,6	1437,6	1,55	4,0145	mars-57	5/2/197/	9,2	54,0	0,32	376	132	SCS
1421	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,6	1135	2939,65	Dec. 1928	Dec. 1931	3,0	53	0,479	552	193	TVA
1422	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,6	1135	2939,65	août-42	mai-47	4,7	53	0,12	138	48	TVA
1423	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,6	1135	2939,65	mai-47	mai-52	5,0	53	0,401	462	162	TVA
1424	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,6	1135	2939,65	Dec. 1931	Dec. 1936	5,0	53	0,49	565	198	TVA
1425	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,6	1135	2939,65	mai-52	Aug. 1961	5,1	53	1,274	1471	515	TVA
1426	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,6	1135	2939,65	Dec. 1936	août-42	9,8	53	0,12	138	48	TVA
1427	20-11	Fontana	Little Tenn. R	Fontana, NC	56,8	1442,7	1571	4068,89	févr-46	août-50	4,5	55,0	0,27	324,6	114	TVA
1428	20-11	Fontana	Little Tenn. R	Fontana, NC	56,8	1442,7	1571	4068,89	août-50	mai-55	4,7	55,0	0,35	418,1	146	TVA
1429	20-11	Fontana	Little Tenn. R	Fontana, NC	56,8	1442,7	1571	4068,89	oct-40	févr-46	5,4	55,0	0,35	416,9	146	TVA
1430	20-11	Fontana	Little Tenn. R	Fontana, NC	56,8	1442,7	1571	4068,89	mai-55	oct-63	8,3	55,0	0,43	511	179	TVA
1431	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,0	207	536,13	mai-57	avr-61	4	55,0	0,09	104	36	TVA
1432	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,0	207	536,13	août-45	avr-51	5,7	55,0	0,76	908	318	TVA
1433	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,0	207	536,13	avr-51	mai-57	6	55,0	0,44	521	182	TVA
1434	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,0	207	536,13	janv-38	août-45	7,6	55,0	0,42	497	174	TVA
1435	12-11	Mill Cr #7	Mill Cr	Dalton, GA	57,0	1447,8	9,38	24,2942	1976	1982	6,0	46,0	0,65	647	226	SCS
1436	20-18	Hiwassee	Hiwassee R	Murphy, NC	57,0	1447,8	539	1396,01	mai-49	juin-54	5	55,0	0,54	642	225	TVA
1437	20-18	Hiwassee	Hiwassee R	Murphy, NC	57,0	1447,8	539	1396,01	août-43	mai-49	5,8	55,0	0,10	125	44	TVA
1438	20-18	Hiwassee	Hiwassee R	Murphy, NC	57,0	1447,8	539	1396,01	juin-54	mai-61	6,9	55,0	0,18	218	76	TVA
1439	20-19	Appalachia	Hiwassee R	Farner, TN	57,1	1450,3	48	124,32	févr-39	août-46	7,5	55,0	0,94	1124	393	TVA
1440	20-19	Appalachia	Hiwassee R	Farner, TN	57,1	1450,3	48	124,32	juil-42	sept-52	10,1	55,0	0,88	1058	370	TVA
1441	20-20	Blue Ridge	Toccoa R	Blue Ridge, GA	57,3	1455,4	227	587,93	juil-45	août-50	5	55,0	0,88	1055	369	TVA
1442	20-20	Blue Ridge	Toccoa R	Blue Ridge, GA	57,3	1455,4	227	587,93	août-60	août-45	5,3	55,0	1,12	1340	469	TVA
1443	20-20	Blue Ridge	Toccoa R	Blue Ridge, GA	57,3	1455,4	227	587,93	sept-55	avr-64	8,8	55,0	0,31	368	129	TVA
1444	20-25	Kanuga L	Little Mud Cr	Hendersonville, NC	57,5	1460,5	1,5	3,885	1908	Oct. 1956	48,0	43,1	78	732	256	SCS
1445	20-26	Osceola L	Shepard Cr	Hendersonville, NC	57,5	1460,5	4,39	11,3701	1923	Oct. 1956	33,0	45,7	428	426	149	SCS
1446	72-5	Bullards Bar	North Yuba River	Camptonville, CA	57,9	1470,7	479	1240,61	Oct. 1919	Jan. 1939	19,2	70	0,284	433	152	SCS
1447	20-12	Cheoah	Little Tenn. R	Tapoco, NC	58,3	1480,8	1607	4162,13	août-26	juil-37	10,9	55,0	0,23	273	96	TVA

1448	20-12	Cheoah	Little Tenn. R	Tapoco, NC	58,3	1480,8	1607	4162,13	nov-14	août-26	11,8	55,0	0,26	316	111	TVA
1449	72-8	Faulke Lake (False Lake)	N. Fk. Jenney	Shasta, Calif.	60,8	1544,3	0,68	1,7612	1951	Dec. 1945	94,0	54	0,147	173	61	SCS
1450	51-22	Lording Lake	Trib. Herrican	Zwolle, La.	60,9	1546,9	0,95	2,4605	Sept.1928	Sept.1954	26,0	85,08	1,62	3 992	1397	SCS
1451	8-3	N. Fork Broad 2	Denman's Cr	Toccoa, GA	61,1	1552,4	0,94	2,4346	janv-52	juin-55	3,4	55,1	0,56	676	237	SCS
1452	8-3	N. Fork Broad 2	Denman's Cr	Toccoa, GA	61,1	1552,4	0,94	2,4346	juin-55	avr-66	10,8	55,1	0,34	402	141	SCS
1453	8-6	N. Fork Br. 1	N. Fork Br R	Toccoa, GA	61,1	1552,4	3,7	9,583	juin-54	avr-66	11,9	63,2	0,21	282	99	SCS
1454	8-7	N.Fork Br. 14	Tom's Cr	Toccoa, GA	61,1	1552,4	1,191	3,08469	mars-58	avr-65	4,5	66,2	0,93	1341	469	SCS
1455	8-7	N.Fork Br. 14	Tom's Cr	Toccoa, GA	61,1	1552,4	1,191	3,08469	oct-50	mars-58	7,4	68,6	0,49	732	256	SCS
1456	20-9	Thorpe	W.Fk. Tuckasegee	Glenville, NC	62,9	1597,7	34,4	89,096	sept-46	juil-54	7,8	55,0	0,61	731	256	TVA
1457	20-9	Thorpe	W.Fk. Tuckasegee	Glenville, NC	62,9	1597,7	34,4	89,096	juin-54	mai-65	10,9	50,0	0,13	160	56	TVA
1458	20-16	Chatuga	Hiwassee R	Hayesville, NC	64,0	1625,6	178	461,02	sept-56	avr-61	4,6	55,0	0,59	707	247	TVA
1459	20-16	Chatuga	Hiwassee R	Hayesville, NC	64,0	1625,6	178	461,02	août-45	août-50	5	55,0	0,60	712	249	TVA
1460	20-16	Chatuga	Hiwassee R	Hayesville, NC	64,0	1625,6	178	461,02	août-50	sept-56	6	55,0	0,47	565	198	TVA
1461	20-16	Chatuga	Hiwassee R	Hayesville, NC	64,0	1625,6	178	461,02	févr-38	août-45	7,5	55,0	0,22	262	92	TVA
1462	11-2	Sly Lake	Tr Chicamuaga	Helen, GA	76,0	1930,4	2,31	5,9829	juin-21	mai-52	31,0	67,0	0,58	846	296	SCS
1463	75-27	Howard A. Hanson	Green R	Palmer, WA	88,3	2242,8	218	564,62	sept-57	sept-75	18,0	100,0	0,2900	627	219	CE

B/ Four-parameter database

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
No.	**Res. ID**	**Reservoir**	**Stream**	**Nearest town**	**Annual Rainfall**		**Dr Area**		**Land cover type**	**V factor**	**Slope**		**Date of survey**		**Surv. Per. (yrs)**	**Spec. Wt (lb/ft^3)**	**Specific degradation**			**Agcy suppl. data**
					(in)	**(mm)**	**(mi^2)**	**(km^2)**			**degree**	**(%)**	**Starts**	**Ends**			**(AF/mi^2 yr)**	**(T/mi^2 yr)**	**(T/km^2 yr)**	
1	15-31	Enid Reservoir	Yocona River	Enid Miss	52,2	1325,88	516	1336,44	Cropland/Pasture	0,023	0,0288	0,05	1951	avr-57	9,8	60	0,558	729	255	CE
2	15-32	Grenada Reservoir	Yalobusha River	Grenada Miss	52,9	1343,66	1219	3157,21	Cropland/Pasture	0,023	0,0288	0,05	juin-49	avr-61	11,8	60	1,205	1575	551	CE
3	71-7	Davis	Shaw Creek	Stockton, Calif	13,9	353,06	7,62	19,7358	Cropland/Pasture	0,023	0,0502	0,09	1917	Sept. 1945	28,0	63	0,251	344	120	SCS
4	17-3	Shafar Lake	Tippecanoe River	Monticello Ind.	36,2	919,48	1698	4397,82	Cropland/Pasture	0,023	0,1401	0,24	mai-19	Aug. 1940	17,2	75	0,023	38	13	SCS
5	24-27	Schmidt Pond	Unnamed	Chatham, Ill	35	889,00	1,3	3,367	Cropland/Pasture	0,023	0,1669	0,29	1943	Aug. 1952	9,0	41,2	0,022	197	69	IWs
6	24-4a	Lake Decatur	Sangamon River	Decatur, Ill.	40,2	1021,08	902	2336,18	Cropland/Pasture	0,023	0,1669	0,29	July. 1936	June. 1946	10,0	51,7	0,26	224	78	SCS
7	24-4a	Lake Decatur	Sangamon River	Decatur, Ill.	40,2	1021,08	902	2336,18	Cropland/Pasture	0,023	0,1669	0,29	1956	1966	10,0		0,11	154	54	SCS
8	24-26	Aschauer Pond	Unnamed	Riverton, Ill	35,2	894,08	0,518	1,34162	Cropland/Pasture	0,023	0,1669	0,29	1939	Aug. 1952	13,0	56,2	1,31	1 603	561	IWS
9	24-6	Lake Springfield	Sugar and Lick Creeks	Springfield, Ill.	35,2	894,08	258	668,22	Cropland/Pasture	0,023	0,1669	0,29	Jan. 1934	Aug. 1948	14,6	73	0,705	660	231	IWS
10	24-21	Woodbine Country Club L.	Unnamed	Greenfield, Ill	38,3	972,82	0,32	0,8288	Cropland/Pasture	0,023	0,1669	0,29	1926	July. 1952	26,0	54,4	1,81	2 144	750	IWS
11	24-22	Dale Cole Pond	Unnamed	Greenfield, Ill	38,3	972,82	0,221	0,57239	Cropland/Pasture	0,023	0,1669	0,29	1924	July. 1952	28,0	53,7	1,72	2 012	704	IWS
12	24-25	Knapp	Unnamed	Springfield, Ill	35,2	894,08	3,43	8,8837	Cropland/Pasture	0,023	0,1669	0,29	1907	Aug. 1952	45,0	38,7	0,431	363	127	IWS
13	24-30	C B & Q R. R. Lake	Trib. of Sangamon	Tallula, Ill	35	889,00	0,84	2,1756	Cropland/Pasture	0,023	0,1669	0,29	1902	July. 1952	50,0	49,3	0,09	419	147	IWS
14	17-6	Ridge Lake	Trib. of Embarrass R.	Charleston Ill.	39,7	1008,38	1,38	3,5742	Cropland/Pasture	0,023	0,1821	0,32	Apr. 1941	août-43	6,4	72,4	1,75	2760	966	IWS
15	17-19	Stevenson's Lake	Trib. of Kettering Br.	Martinsville Ill.	40,6	1031,24	0,327	0,84693	Cropland/Pasture	0,023	0,1821	0,32	1950	mai-55	9,0	48	1,89	1975	691	IWS
16	17-9	Craig & Davidson's Lake	Trib. of Raccoon Creek	Martinsville Ill	38,2	970,28	0,427	1,10593	Cropland/Pasture	0,023	0,1821	0,32	1947	mai-55	12,0	33,14	2,46	1775	621	IWS
17	24-18	Waverly City	Unnamed	Waverly, Ill	35	889,00	9,16	23,7244	Cropland/Pasture	0,023	0,1959	0,34	Oct. 1938	July. 1952	13,8	42,4	0,551	509	178	IWS
18	24-32	Ethcheson's Lake	Trib. Kaskaskia River	Vandalia, Ill	36,6	929,64	0,26	0,6734	Cropland/Pasture	0,023	0,1959	0,34	1943	Aug. 1958	15,0	55,66	0,93	1 127	394	IWS
19	16-18	Marion	Limb Branch	Marion Ill	45,2	1148,08	0,316	0,81844	Cropland/Pasture	0,023	0,1959	0,34	1919	1951	32,0	56,6	0,61	458	160	TWS
20	17-15	Patterson Lake	Trib. of Dismal Creek	Edgewood Ill.	35,1	891,54	0,912	2,36208	Cropland/Pasture	0,023	0,1959	0,34	1926	juin-55	33,0	48,54	1,18	1247	436	IWS
21	24-19	Whitehall City	Unnamed	White Hall, Ill	36,1	916,94	0,92	2,3828	Cropland/Pasture	0,023	0,1959	0,34	1897	July. 1952	55,0	43,1	1,02	957	335	IWS
22	24-34	I. C. at Kinmundy	Trib. E. Fk. Kaskaskia R.	Kinmundy,ill	40,3	1023,62	0,581	1,50479	Cropland/Pasture	0,023	0,1959	0,34	1902	July. 1959	57,0	35,5	0,756	584	204	IWS
23	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,52	0,51	1,3209	Cropland/Pasture	0,023	0,1994	0,35	1959	1954	5,0	46,24	2,9	2 921	1022	IWS
24	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,52	25,79	66,7961	Cropland/Pasture	0,023	0,1994	0,35	June. 1949	July. 1954	5,1	65,7	0,365	521	182	IWS
25	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,52	25,79	66,7961	Cropland/Pasture	0,023	0,1994	0,35	July. 1954	Sept. 1959	5,1	62,4	0,302	480	168	IWS
26	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,52	0,51	1,3209	Cropland/Pasture	0,023	0,1994	0,35	1954	1961	7,0	46,24	1,25	1 259	441	IWS
27	24-3b	Lake Carlinvillee	Honey Creek	Carlinville, Ill.	38,8	985,52	25,79	66,7961	Cropland/Pasture	0,023	0,1994	0,35	June. 1939	June. 1949	10,4	59,1	0,934	1 200	420	IWS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
28	24-1a	L. Williamson (Artic Pd)	Trib. of Honey Creek	Carlinville, Ill.	38,8	985,52	0,51	1,3209	Cropland/Pasture	0,023	0,1994	0,35	1922	1959	27,0	46,24	1,18	1 188	416	IWS
29	24-20	Roodhose Pk. District L.	Unnamed	Roodhouse, Ill	36,1	916,94	0,439	1,13701	Cropland/Pasture	0,023	0,1994	0,35	1917	July. 1952	35,0	42,4	0,5	462	162	IWS
30	24-15a	Langdon Pond	Unnamed	Franklin, Ill	35	889,00	0,348	0,90132	Cropland/Pasture	0,023	0,1994	0,35	1907	July. 1952	45,0	31,8	0,78	540	189	IWS
31	24-16	Franklin Outing Club L.	Unnamed	Franklin, Ill	35	889,00	0,414	1,07226	Cropland/Pasture	0,023	0,1994	0,35	1905	July. 1925	47,0	52,4	1,43	1 632	571	IWS
32	24-41	Macoupin County L. Club	Trib. Hurrican Creek	Carlinville, Ill	38,8	985,52	0,26	0,6734	Cropland/Pasture	0,023	0,1994	0,35	1904	June. 1958	54,0	37,13	1,76	1 423	498	IWS
33	24-2b	Lake Bloomington	Money Creek	Hudson, Ill.	34,7	881,38	60	155,4	Cropland/Pasture	0,023	0,2218	0,39	Aug. 1952	July. 1955	2,9	46	0,242	243	85	IWS
34	24-2b	Lake Bloomington	Money Creek	Hudson, Ill.	34,7	881,38	60	155,4	Cropland/Pasture	0,023	0,2218	0,39	Aug. 1948	Aug. 1952	4,0	41,5	0,656	592	207	IWS
35	24-2b	Lake Bloomington	Money Creek	Hudson, Ill.	34,7	881,38	60	155,4	Cropland/Pasture	0,023	0,2218	0,39	Dec. 1929	Aug. 1948	18,7	41,5	0,528	477	167	IWS
36	25-3	Lake Calhoun	Fitch Creek	Galva, Ill	37,4	949,96	13	33,67	Cropland/Pasture	0,023	0,23	0,40	Aug. 1936	July. 1947	11,0	56	1,12	1 370	480	IWS
37	25-3	Lake Calhoun	Fitch Creek	Galva, Ill	37,4	949,96	13	33,67	Cropland/Pasture	0,023	0,23	0,40	Sept. 1924	Aug. 1936	11,9		0,977	1 190	417	IWS
38	11-5	Bridge-Ochlocknee8	Big Cr	Moultrie, GA	40,6	1031,24	0,99	2,5641	Cropland/Pasture	0,023	0,2405	0,42	1974	1981	7,0	34,0	0,74	553	194	SCS
39	15-24	A. L. Rodman Pond	Trib. of Arkabutla Cr.	Arkabutla Miss	53,9	1369,06	0,1458	0,37762	Cropland/Pasture	0,023	0,2498	0,44	août-41	Mar. 1951	5,5	50	1,95	2120	742	SCS
40	15-10	Lake Woodland	Trib. of Camp Creek	Olive Branch, Miss	49	1244,60	0,4797	1,24242	Cropland/Pasture	0,023	0,2498	0,44	janv 1941	janv 1947	6,0	39,9	5,52	4 800	1680	SCS
41	15-22	A. S. Kyle Pond	Trib. of Tallahatchie R.	Batesville Miss	53,3	1353,82	0,0398	0,10308	Cropland/Pasture	0,023	0,2498	0,44	Mar. 1945	Mar. 1951	6,0	52,04	3,14	3560	1246	SCS
42	15-26b	Arkabutla Reservoir	Coldwater River	Arkabutla Miss	53,9	1369,06	948	2455,32	Cropland/Pasture	0,023	0,2498	0,44	Apr. 1939	Dec. 1947	6,3	60	0,627	819	287	CE
43	15-16	G.y.so Lake	Trib. of Mississippi R.	Horn Lake, Mis	49	1244,60	0,2047	0,53017	Cropland/Pasture	0,023	0,2498	0,44	janv 1938	janv 1947	9,0	51,85	3,13	3 530	1236	SCS
44	16-22a	Lake Ashley	Trib. of kuddy River	Ashley Ill	39,1	993,14	1,22	3,1598	Cropland/Pasture	0,023	0,2498	0,44	juil-37	Aug. 1954	14,0	44,5	0,69	692	242	IWS
45	15-26b	Arkabutla Reservoir	Coldwater River	Arkabutla Miss	53,9	1369,06	948	2455,32	Cropland/Pasture	0,023	0,2498	0,44	Dec. 1947	avr-58	14,4	60	0,62	810	284	CE
46	25-13	Springbook	Spring Brook	Guthrie Center, Ia.	33,9	861,06	2,1	5,439	Cropland/Pasture	0,023	0,253	0,44	1936	1946	10,0	50	0,638	395	138	SCS
47	25-11	C M St. P &P RR Res	Trib. of Big Creek	Madrid, Iowa	31,7	805,18	2,52	6,5268	Cropland/Pasture	0,023	0,253	0,44	1903	1918	15,0	70	0,476	726	254	SCS
48	17-7	Vermilion Lake	N. Fork Vermilion R.	Danville Ill.	38,7	982,98	266	688,94	Cropland/Pasture	0,023	0,2697	0,47	mai-11	Oct. 1940	25,3	70	0,179	273	96	SCS
49	24-11a	Mt. Sterling	Trib. Of Shelby Creek	Mt. Sterling, Ill.	38,3	972,82	1,75	4,5325	Cropland/Pasture	0,023	0,2765	0,48	1935	1951	16,0	60	2,05	2679	938	IWS
50	24-8	Lake Bracken	Brush Creek	Galesburg, Ill.	36,5	927,10	8,65	22,4035	Cropland/Pasture	0,023	0,2813	0,49	Dec. 1923	Aug. 1936	12,7		1,57	2 251	788	IWS
51	24-31	Edwards Lake	Trib. of Cahokia Creek	Gillespie, Ill	38,3	972,82	0,4	1,036	Cropland/Pasture	0,023	0,2926	0,51	1949	Aug. 1958	9,0	46,86	1,72	1 755	614	IWS
52	24-35	King's Lake	Trib. of Cahokia Creek	Eagarville, Ill	38,3	972,82	0,44	1,1396	Cropland/Pasture	0,023	0,2926	0,51	1921	June. 1958	37,0	54,42	1,17	1 387	485	IWS
53	24-50	Walton Club Lake	Long Branch	Litchfield, Ill	38,3	972,82	2,67	6,9153	Cropland/Pasture	0,023	0,2926	0,51	1862	July. 1959	97,0	48,4	0,73	770	270	IWS
54	19-53	Middle Fork Reservoir	M. Fk. of E. Fk. White Wzter	Richmond Ind.	39,9	1013,46	47,87	123,983	Cropland/Pasture	0,023	0,3477	0,61	Jan. 1962	Oct. 1957	5,5	49,6	0,79	850	298	SCS
55	19-49	Whitewater Lake	SilverCreek	Liberty Ind	41,2	1046,48	19	49,21	Cropland/Pasture	0,023	0,3477	0,61	août-50	juin-59	8,8	67,5	1,04	1529	535	SCS
56	25-5	McCraney Cr. New Desilting	McCraney Creek	Kinderhook, Ill	37,3	947,42	50,2	130,018	Cropland/Pasture	0,023	0,3822	0,67	Dec. 1936	Dec. 1939	3,0	85	1,06	1 960	686	SCS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
57	25-8	Hadley Cr. NEw Desilting basin	Hadley Creek	New Canton, Ill	37,3	947,42	72,7	188,293	Cropland/Pasture	0,023	0,3822	0,67	Dec. 1936	Dec. 1939	3,0	85	2,41	4 460	1561	SCS
58	25-9	Kiser Cr. Desilting Basin	Kiser Creek	New Canton, Ill	37,3	947,42	59,6	154,364	Cropland/Pasture	0,023	0,3822	0,67	Dec. 1936	Dec. 1939	3,0	85	2,65	5 280	1848	SCS
59	25-7	Hadley Cr. New Desilting Basin	Hadley Creek	New Canton, Ill	37,3	947,42	72,7	188,293	Cropland/Pasture	0,023	0,3822	0,67	1921	1936	15,0	85	2,41	4 460	1561	SCS
60	25-19a	Coralville	Iowa River	Iowa City, Iowa	36,3	922,02	3 076	7966,84	Cropland/Pasture	0,023	0,383	0,67	Jan. 1964	Apr. 1968	4,3	45	0,397	443	155	CE
61	25-19a	Coralville	Iowa River	Iowa City, Iowa	36,3	922,02	3 076	7966,84	Cropland/Pasture	0,023	0,383	0,67	Sept. 1958	Jan. 1964	5,3	40	0,402	350	123	CE
62	25-16	Bloomfield	Unnamed	Bloomfield, Iowa	37	939,80	2,13	5,5167	Cropland/Pasture	0,023	0,3862	0,67	Sept. 1937	Sept. 1951	14,0	60	2,16	2 823	988	SCS
63	24-56	Hambaugh-Martin #1	Fondulac Creek	Versailles,Ill	45,1	1145,54	2,034	5,26806	Cropland/Pasture	0,023	0,4139	0,72	Sept. 1961	Feb. 1972	10,5	51,6	2,38	2,38	1	CE
64	24-49a	Virginia	Job's Creek	Virginia, Ill	38,1	967,74	0,799	2,06941	Cropland/Pasture	0,023	0,4139	0,72	1933	1950	17,0	40	2,7	2 352	823	IWS
65	24-17	Anderson Lake	Unnamed	Concord, Ill	37,9	962,66	0,6	1,554	Cropland/Pasture	0,023	0,4139	0,72	1909	July. 1952	43,0	36,2	1,28	1 009	353	IWS
66	35-8	Otto Goslar	Trib. Middle Soldier R.	Charter Oak, Iowa	29,9	759,46	0,086	0,22274	Cropland/Pasture	0,023	0,4216	0,74	May.1940	Mar.1949	8,8	68,8	2,5	3 750	1313	SCS
67	31-24	Honey Creek No. A-2	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,274	0,70966	Cropland/Pasture	0,023	0,4318	0,75	Oct. 1958	Sept. 1959	0,9	66	0,74	1 100	385	SCS
68	31-28	Honey Creek No.I-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,495	1,28205	Cropland/Pasture	0,023	0,4318	0,75	Oct. 1958	Sep. 1959	0,9	66	2,22	3 200	1120	SCS
69	31-26	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	1,2	3,108	Cropland/Pasture	0,023	0,4318	0,75	Oct. 1958	Oct. 1959	1,0	66	2,02	2 900	1015	SCS
70	31-24	Honey Creek No. A-2	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,274	0,70966	Cropland/Pasture	0,023	0,4318	0,75	Oct.1956	Oct. 1958	2,0	66	0,71	1 000	350	SCS
71	31-26	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	1,2	3,108	Cropland/Pasture	0,023	0,4318	0,75	Nov. 1955	Oct. 1958	2,9	66	0,77	1 100	385	SCS
72	31-28	Honey Creek No.I-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,495	1,28205	Cropland/Pasture	0,023	0,4318	0,75	Nov. 1955	Oct. 1958	2,9	66	0,85	1 200	420	SCS
73	31-16	Centerville No. 2	Manson's Branch	Centerville, Iowa	35,5	901,70	2,62	6,7858	Cropland/Pasture	0,023	0,4318	0,75	1926	1937	11,0	60	2,12	2 760	966	SCS
74	31-15	Allerton	South Chariton River	Allerton, Iowa	36,6	929,64	4,82	12,4838	Cropland/Pasture	0,023	0,4318	0,75	1913	Nov. 1939	25,5	60	0,894	1 170	410	SCS
75	25-12a	Fairfield No. 3	Crow Creek	Fairfield, Iowa	35,9	911,86	2	5,18	Cropland/Pasture	0,023	0,4392	0,77	1927	1946	10,0	50	0,638	695	243	SCS
76	36-7	Nepper Main	Unnamed	Mapleton, Iowa	28,5	723,90	0,169	0,43771	Cropland/Pasture	0,023	0,4709	0,82	Dec. 1949	Sept. 1950	0,8	77,7	1,25	2 070	725	SCS
77	36-11	Theobold Lateral D.	Unnamed	Anthon, Iowa	26	660,40	0,089	0,23051	Cropland/Pasture	0,023	0,4709	0,82	July. 1950	May. 1951	0,8	73,1	2,56	4 560	1596	SCS
78	36-10	Theobold Lateral C.	Unnamed	Anthon, Iowa	26	660,40	0,234	0,60606	Cropland/Pasture	0,023	0,4709	0,82	July. 1950	May. 1951	0,8	67,9	1,06	1 597	559	SCS
79	36-10	Theobold Lateral C.	Unnamed	Anthon, Iowa	26	660,40	0,234	0,60606	Cropland/Pasture	0,023	0,4709	0,82	May. 1951	May. 1952	0,9	67,9	3,6	5 324	1863	SCS
80	36-9	Theobold Main	Unnamed	Anthon, Iowa	26	660,40	0,442	1,14478	Cropland/Pasture	0,023	0,4709	0,82	June. 1949	Aug. 1950	1,2	72,3	1,36	2 142	750	SCS
81	36-11	Theobold Lateral D.	Unnamed	Anthon, Iowa	26	660,40	0,089	0,23051	Cropland/Pasture	0,023	0,4709	0,82	May. 1951	Oct. 1952	1,4	73,1	0,72	1 146	401	SCS
82	36-2a	C. A. Stiles	Unnamed	Washta, Iowa	30,8	782,32	0,572	1,48148	Cropland/Pasture	0,023	0,4709	0,82	Mar. 1949	Sept. 1950	1,5	57,8	1,82	2 300	805	SCS
83	36-2a	C. A. Stiles	Unnamed	Washta, Iowa	30,8	782,32	0,572	1,48148	Cropland/Pasture	0,023	0,4709	0,82	Sept. 1950	Feb. 1953	2,4	57,8	0,98	1 240	434	SCS
84	36-2a	C. A. Stiles	Unnamed	Washta, Iowa	30,8	782,32	0,572	1,48148	Cropland/Pasture	0,023	0,4709	0,82	Dec. 1940	Mar. 1949	8,3	46,9	1,54	1 580	553	SCS
85	31-2	Carl Chinquist	Trib. West Nodaway R.	Stanton, Iowa	35,5	901,70	0,163	0,42217	Cropland/Pasture	0,023	0,5277	0,92	June. 1938	May. 1949	10,9	49,9	3,87	4 200	1470	SCS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
86	31-25	Honey Creek No. A-4	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,346	0,89614	Cropland/Pasture	0,023	0,528	0,92	Oct. 1958	Aug. 1959	0,8	66	0,71	1 000	350	SCS
87	31-25	Honey Creek No. A-4	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,346	0,89614	Cropland/Pasture	0,023	0,528	0,92	Aug. 1957	Oct. 1958	1,2	66	3,52	5 100	1785	SCS
88	31-27	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,47	1,2173	Cropland/Pasture	0,023	0,528	0,92	June. 1958	Sept. 1959	1,3	66	2,61	3 800	1330	SCS
89	31-27	Honey Creek No. E-1	Trib. of Honey Creek	Russell, Iowa	35,1	891,54	0,47	1,2173	Cropland/Pasture	0,023	0,528	0,92	July. 1955	June. 1958	2,9	66	1,35	1 900	665	SCS
90	26-2	Backbone L . (Forestville	Maquoketa River	Strawberry Pt., Ia.	32,9	835,66	116	300,44	Cropland/Pasture	0,023	0,528	0,92	Feb. 1942	Feb. 1949	7,0	75,1	0,082	134	47	SCS
91	26-2	Backbone L . (Forestville	Maquoketa River	Strawberry Pt., Ia.	32,9	835,66	116	300,44	Cropland/Pasture	0,023	0,528	0,92	July. 1934	Feb. 1942	7,6		0,076	127	44	SCS
92	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,368	0,95312	Cropland/Pasture	0,023	0,5723	1,00	Oct.1956	Sept.1957	0,9	69,5	2,55	3 900	1365	SCS
93	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,368	0,95312	Cropland/Pasture	0,023	0,5723	1,00	Jan.1960	Dec.1960	0,9	55,3	1,55	1 900	665	SCS
94	35-45b	Mule Creek "A"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,177	0,45843	Cropland/Pasture	0,023	0,5723	1,00	Dec.1960	Feb.1962	1,0	60,3	2,99	3 940	1379	SCS
95	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,368	0,95312	Cropland/Pasture	0,023	0,5723	1,00	Jan.1964	Jan.1965	1,0	51,8	4,92	5 550	1943	SCS
96	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,323	0,83657	Cropland/Pasture	0,023	0,5723	1,00	Jan.1964	Jan.1965	1,0	65,44	11,49	1 048	367	SCS
97	35-48b	Mule Creek "P"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,58	0,6	1,554	Cropland/Pasture	0,023	0,5723	1,00	Sept.1957	Sept.1958	1,0	72,8	1,5	2 400	840	SCS
98	35-45b	Mule Creek "A"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,177	0,45843	Cropland/Pasture	0,023	0,5723	1,00	Sept.1957	Oct.1958	1,1	72,3	3,11	4 900	1715	SCS
99	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,368	0,95312	Cropland/Pasture	0,023	0,5723	1,00	Sept.1957	Oct.1958	1,1	59,2	3,64	4 700	1645	SCS
100	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,323	0,83657	Cropland/Pasture	0,023	0,5723	1,00	Sept.1957	Oct.1958	1,1	59,8	3,9	5100	1785	SCS
101	35-48b	Mule Creek "P"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,58	0,6	1,554	Cropland/Pasture	0,023	0,5723	1,00	Dec.1960	Feb.1962	1,2	56,5	2,67	3 300	1155	SCS
102	35-45b	Mule Creek "A"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,177	0,45843	Cropland/Pasture	0,023	0,5723	1,00	Oct.1958	Jan.1960	1,3	58,7	2,99	3 800	1330	SCS
103	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,323	0,83657	Cropland/Pasture	0,023	0,5723	1,00	Oct.1958	Jan.1960	1,3	61,9	1,98	2 700	945	SCS
104	35-48b	Mule Creek "P"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,58	0,6	1,554	Cropland/Pasture	0,023	0,5723	1,00	Sept.1958	Jan.1960	1,3	44,5	5,83	5 600	1960	SCS
105	35-46b	Mule Creek "B"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,368	0,95312	Cropland/Pasture	0,023	0,5723	1,00	Aug.1954	Oct.1956	2,2	72,6	3,31	5 200	1820	SCS
106	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,323	0,83657	Cropland/Pasture	0,023	0,5723	1,00	July.1954	Oct.1956	2,3	53,9	3,28	3 900	1365	SCS
107	35-47b	Mule Creek "C"	Trib. Nishnabotna	Malvern, Iowa	32,7	830,58	0,323	0,83657	Cropland/Pasture	0,023	0,5723	1,00	Jan.1965	Mar.1969	4,2	65,44	1,71	112	39	SCS
108	35-49c	Mule Creek "R"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,58	0,796	2,06164	Cropland/Pasture	0,023	0,5723	1,00	Feb. 1960	Jan. 1974	4,9	66,29	0,4	582	204	SCS
109	35-20b	Max Miller No. 5	Trib. W. Nishnabotna R.	Macedonia, Iowa	33,2	843,28	0,218	0,56462	Cropland/Pasture	0,023	0,5723	1,00	Nov.1941	May.1949	7,5	65,2	1,23	1 996	699	SCS
110	35-49c	Mule Creek "R"	Trib. of Mule Creek	Malvern, Iowa	32,7	830,58	0,796	2,06164	Cropland/Pasture	0,023	0,5723	1,00	Oct. 1955	Jan. 1967	11,3	49,9	2,63	2 858	1000	SCS
111	24-12	Lake Jacksonville	Sandy Creek	Jacksonville, Ill.	37,7	957,58	10,1	26,159	Cropland/Pasture	0,023	0,6245	1,09	1939	June. 1952	12,0	32,5	1,51	1 069	374	IWS
112	24-8	Lake Bracken	Brush Creek	Galesburg, Ill.	36,5	927,10	8,65	22,4035	Cropland/Pasture	0,023	0,6245	1,09	Aug. 1936	June. 1949	12,9	52	1,82	2 061	721	IWS
113	24-13	Mauvaisse Terre Lake	Mauvaisse Terre Creek	Jacksonville, Ill.	37,7	957,58	32,2	83,398	Cropland/Pasture	0,023	0,6245	1,09	1921	June. 1952	31,0	48,2	0,61	640	224	IWS
114	24-14a	Morgan Lake	Unnamed	Jacksonville, Ill	37,7	957,58	2,72	7,0448	Cropland/Pasture	0,023	0,6245	1,09	1900	June. 1952	52,0	41,2	0,38	341	119	IWS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
115	24-47	Robinson Pond	Terre Creek	Jacksonville, Ill	39,3	998,22	0,304	0,78736	Cropland/Pasture	0,023	0,6245	1,09	1900	July. 1952	52,0	46,8	0,7	714	250	IWS
116	35-11b	Jones Creek	Jones Creek	Pisgah, Iowa	28	711,20	2,23	5,7757	Cropland/Pasture	0,023	0,649	1,13	Jan.1949	Sept.1950	1,7	61,8	2,68	3 620	1267	SCS
117	35-11b	Jones Creek	Jones Creek	Pisgah, Iowa	28	711,20	2,23	5,7757	Cropland/Pasture	0,023	0,649	1,13	Sept.1950	Jan.1953	2,3	61,8	2,4	3 230	1131	SCS
118	35-11b	Jones Creek	Jones Creek	Pisgah, Iowa	28	711,20	2,23	5,7757	Cropland/Pasture	0,023	0,649	1,13	Feb.1942	Jan.1949	6,9	47,8	2,11	2 197	769	SCS
119	35-12a	Emma La Frontz	Trib. of Boyer River	Denison, Iowa	29,9	759,46	0,139	0,36001	Cropland/Pasture	0,023	0,649	1,13	Dec.1938	Apr.1949	10,8	63,8	1,41	1 904	666	SCS
120	35-18a	Wilbur Meyer	Trib. of Boyer River	Denison, Iowa	29,9	759,46	0,139	0,36001	Cropland/Pasture	0,023	0,649	1,13	Dec.1938	Apr.1949	10,8	63,8	2,88	3 520	1232	SCS
121	35-21a	Barney Mondt	Trib. of Boyer River	Denison, Iowa	29,9	759,46	0,139	0,36001	Cropland/Pasture	0,023	0,649	1,13	Dec.1938	Apr.1949	10,8	63,8	3,67	4 440	1554	SCS
122	35-4	G & A . Evers Lower Res.	Trib. of Boyer River	Denison, Iowa	29,9	759,46	0,139	0,36001	Cropland/Pasture	0,023	0,649	1,13	Dec.1938	Apr.1949	10,8	63,8	3,75	5 700	1995	SCS
123	24-9	Pittsfield	Trib. of Panther Creek	Pittsfield, Ill.	33,3	845,82	1,77	4,5843	Cropland/Pasture	0,023	1,1382	1,99	June. 1925	Dec. 1946	21,5	40	3,55	3 090	1082	SCS
124	71-42	Isabella Reservoir	Kern River	Isabella, Calif	12,9	327,66	2 074	5371,66	Cropland/Pasture	0,023	1,5002	2,62	June. 1953	Sept. 1956	3,3	62	0,074	100	35	CE
125	71-12	La Grange	Tuolumne River	Modesto, Calif	12,1	307,34	1 501	3887,59	Cropland/Pasture	0,023	1,5002	2,62	Sept. 1895	Oct. 1905	10,1	70	0,083	127	44	SCS
126	71-42	Isabella Reservoir	Kern River	Isabella, Calif	12,9	327,66	2 074	5371,66	Cropland/Pasture	0,023	1,5002	2,62	Sept. 1956	Dec. 1968	12,2	62	0,186	252	88	CE
127	71-9	Exchequer	Merced River	Merced, Calif	15,2	386,08	1 022,40	2648,02	Cropland/Pasture	0,023	1,5002	2,62	Sept. 1926	Mar. 1946	19,6	62	0,167	226	79	SCS
128	71-8	Don Pedro	Tuolumne River	Modesto, Calif	12,1	307,34	996,5	2580,94	Cropland/Pasture	0,023	1,5002	2,62	Mar.1923	Nov. 1945	22,7	62	0,21	284	99	SCS
129	71-36	Pine Flat	Kings River	Sanger, Calif	10	254,00	1 542	3993,78	Cropland/Pasture	0,023	1,7409	3,04	May.1952	Feb.1954	1,8	62	0,04	54	19	CE
130	71-36	Pine Flat	Kings River	Sanger, Calif	10	254,00	1 542	3993,78	Cropland/Pasture	0,023	1,7409	3,04	Feb.1954	Nov.1956	3,0	62	0,29	392	137	CE
131	72-21	Leo Trentadue	Trib. of Dry Creek	Geyserville, CA	30	762,00	0,037	0,09583	Cropland/Pasture	0,023	1,7409	3,04	Aug. 1961	Oct. 1965	4,0	66	2,97	4 269	1494	SCS
132	72-22	Hazel Hill	Trib. of Dry Creek	Geyserville, CA	30	762,00	0,173	0,44807	Cropland/Pasture	0,023	1,7409	3,04	Oct. 1960	Oct. 1965	5,0	65	0,52	736	258	SCS
133	71-43	L, Kaweah (Terminus Dam)	Kaweah River	Lemon Cove, Calif.	13,8	350,52	560	1450,4	Cropland/Pasture	0,023	1,7409	3,04	Nov. 1961	Nov. 1967	6,0	62	745	1 006	352	CE
134	71-11	Hume	Ten mile Creek	Fresno, Calif	10,6	269,24	24,1	62,419	Cropland/Pasture	0,023	1,7409	3,04	June. 1909	June. 1946	37,0	62	0,03	40	14	SCS
135	71-6	Crane Valley	N. Fk. San Joaquin R	Madera, Calif	11,1	281,94	52,7	136,493	Cropland/Pasture	0,023	1,7409	3,04	1901	June. 1946	45,0	62	0,161	217	76	SCS
136	71-14	McCarty	Trib. of Johnny Creek	San Andreas, CAlif	27,6	701,04	0,32	0,8288	Cropland/Pasture	0,023	2,1579	3,77	Dec. 1937	Sept. 1945	7,7	45	0,3	294	103	SCS
137	71-16	Salt Springs Valley	Rock Creek	San Andreas, Calif	27,6	701,04	18,4	47,656	Cropland/Pasture	0,023	2,1579	3,77	1882	July. 1945	63,0	50	0,201	219	77	SCS
138	71-15	Pardee	Mokelumne River	Lodi, Calif	17,1	434,34	383,5	993,265	Cropland/Pasture	0,023	2,6332	4,60	1929	Aug. 1943	14,0	62	0,152	205	72	SCS
139	71-19	ST. Mary's	Walnut Creek	Walnut Creek, CA	17,2	436,88	2,97	7,6923	Cropland/Pasture	0,023	3,0157	5,27	1928	1951	11,0	45	0,66	647	226	SCS
140	71-20	Black Valley Creek	Green Valley Creek	.Danville, Calif	18,7	474,98	0,76	1,9684	Cropland/Pasture	0,023	3,0157	5,27	1880	1951	71,0	46	0,11	110	39	SCS
141	72-6	Combie (Van Geisen)	Bear River	Auburn, Calif.	38,5	977,90	129	334,11	Cropland/Pasture	0,023	3,1004	5,41	June. 1928	Oct. 1935	7,3	70	0,749	1 140	399	SCS
142	72-4	Blodgett	Trib. Cosumnes River	Sacramento, Calif.	18,6	472,44	3,05	7,8995	Cropland/Pasture	0,023	3,4297	5,99	Mar. 1940	Oct. 1945	5,6	46	0,217	217	76	SCS
143	71-41	Success Lake	Tule River	Porterville, Calif.	11	279,40	393	1017,87	Cropland/Pasture	0,023	4,0237	7,03	Nov. 1967	Dec. 1968	1,1	62	0,163	219	77	CE

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
144	71-41	Success Lake	Tule River	Porterville, Calif.	11	279,40	393	1017,87	Cropland/Pasture	0,023	4,0237	7,03	Nov. 1965	Nov. 1967	2,0	62	3,244	4 383	1534	CE
145	71-4b	Santa Margarita Lake	Salinas River	Pozo, Calif,	21,5	546,10	110	284,9	Cropland/Pasture	0,023	4,6573	8,14	Nov. 1947	Aug.1953	6,0	40	0,41	357	125	GS
146	71-37	Salinas Boys Ranch	Trib. Natividad Creek	Salinas, Calif.	21,5	546,10	0,13	0,3367	Cropland/Pasture	0,023	4,6573	8,14	Oct. 1953	Sep. 1964	11,0	65	0,23	326	114	SCS
147	71-30	North Fork	Pacheco Creek	Hollister, Calif	13,8	350,52	0,66	1,7094	Cropland/Pasture	0,023	4,6573	8,14	1938	Apr. 1951	12,4	45	0,12	118	41	SCS
148	71-37	Roy Alexander	Trib. Natividad Creek	Salinas, Calif.	21,5	546,10	0,203	0,52577	Cropland/Pasture	0,023	4,6573	8,14	04-mai	août-60	13,0	65	0,1	142	50	SCS
149	71-4b	Santa Margarita Lake	Salinas River	Pozo, Calif,	21,5	546,10	110	284,9	Cropland/Pasture	0,023	4,6573	8,14	Aug.1953	July. 1975	22,0	58	0,98	1 627	569	GS
150	71-2	Atascadero Park Lake	Atascadero Creek	Atascadero, Calif	12	304,80	1	2,59	Cropland/Pasture	0,023	4,6573	8,14	1918	Nov. 1947	29,0	60	0,48	627	219	SCS
151	24-4a	Lake Decatur	Sangamon River	Decatur, III.	40,2	1021,08	902	2336,18	Cropland/Woodland	0,037	0,1669	0,29	June. 1946	1956	10,0		0,09	141	49	SCS
152	24-4a	Lake Decatur	Sangamon River	Decatur, III.	40,2	1021,08	902	2336,18	Cropland/Woodland	0,037	0,1669	0,29	Apr. 1922	July. 1936	14,2		0,22	192	67	SCS
153	16-16	Baker's Lake	Unnamed	Marion III	45,2	1148,08	0,25	0,6475	Cropland/Woodland	0,037	0,1959	0,34	1937	1951	14,0	36,8	0,64	512	179	IWS
154	24-46	Raccoon Lake	Raccoon Creek	Centralia, Ill	41,7	1059,18	47,3	122,507	Cropland/Woodland	0,037	0,1959	0,34	1943	Sept. 1959	16,0	39,7	0,47	406	142	IWS
155	16-14a	Lake Miller	Casey Fork	Mt. Vernon III	42	1066,80	4,43	11,4737	Cropland/Woodland	0,037	0,1959	0,34	Feb. 1944	mai-56	16,3	34	1,2	888	311	IWS
156	16-25	W. F. Farrell	Trib. of Harper Creek	Mt. Vernon	42	1066,80	4,43	11,4737	Cropland/Woodland	0,037	0,1959	0,34	Feb. 1944	mai-56	16,3	34	1,06	1189	416	IWS
157	16-15	Flucks Lake	Unnamed	Marion III	45,2	1148,08	0,316	0,81844	Cropland/Woodland	0,037	0,1959	0,34	1919	1951	32,0	56,6	1,11	1368	479	IWS
158	16-21	Knights of Pythias Lake	Unnamed	Marion III	45,2	1148,08	0,316	0,81844	Cropland/Woodland	0,037	0,1959	0,34	1919	1951	32,0	56,6	1,22	1671	585	IWS
159	16-23	Christopher	Trib. of King Creek	Christopher III.	42,9	1089,66	0,858	2,22222	Cropland/Woodland	0,037	0,1959	0,34	1925	juin-56	35,0	37,1	1,01	816	286	IWS
160	16-20	Herrin Reservoir No. 1	Unnamed	Herrin III	40,9	1038,86	1,7	4,403	Cropland/Woodland	0,037	0,1959	0,34	1913	1951	38,0	27,5	0,32	192	67	IWS
161	24-48	Salem City	Trib. of Crooked Creek	Salem III	40,7	1033,78	3,9	10,101	Cropland/Woodland	0,037	0,1959	0,34	1912	Aug. 1960	48,0	40,8	0,36	320	112	IWS
162	17-14a	Olney Reservoir (New)	Trib. of East Fork	Olney III.	42,6	1082,04	3,15	8,1585	Cropland/Woodland	0,037	0,2642	0,46	août-50	Aug. 1960	6,9	30,3	1,7	1460	511	IWS
163	24-36	Lake Coulterville	South Fork Mud Creek	Coulterville, III	41,7	1059,18	1,18	3,0562	Cropland/Woodland	0,037	0,2642	0,46	1940	Aug. 1954	14,0	34	0,73	541	189	IWS
164	17-18	Stainer Lake	Trib. of Pond Creek	Fairfield III.	42,3	1074,42	0,295	0,76405	Cropland/Woodland	0,037	0,2642	0,46	1945	mai-56	15,0	41,3	1,15	1034	362	IWS
165	24-39	Lake Nashville	Nashville Creek	Nashville, Ill	39,1	993,14	1,33	3,4447	Cropland/Woodland	0,037	0,2642	0,46	1936	Aug.1954	19,0	35,3	1,19	913	320	IWS
166	16-24	Lake DuQuoin	Reese Creek	Du Quoin III	42,5	1079,50	10,35	26,8065	Cropland/Woodland	0,037	0,2642	0,46	1937	juin-53	20,0	38,3	0,64	534	187	IWS
167	17-12a	ICRR at Bluford	Fourmile Creek	Bluford III.	42	1066,80	3,199	8,28541	Cropland/Woodland	0,037	0,2642	0,46	1926	mai-56	34,0	43,5	0,565	493	173	IWS
168	16-28	Valiier Outing Club	Andy Creek	Valier III	44,1	1120,14	2,37	6,1383	Cropland/Woodland	0,037	0,2642	0,46	1922	Aug. 1957	35,0	41,17	0,59	530	186	IWS
169	24-37	Lake Bunker Hill	Wood River	Bunker Hill, III	38,3	972,82	7,15	18,5185	Cropland/Woodland	0,037	0,2926	0,51	1937	June. 1954	17,0	79,2	0,8	1 380	483	IWS
170	17-5	Greendale Lake	Connor's Branch	Xenia III.	40,6	1031,24	25	64,75	Cropland/Woodland	0,037	0,339	0,59	Aug. 1927	août-36	13,1	70	0,14	213	75	SCS
171	25-6	Pine Lake	Pine Creek	Eldora, Iowa	33,5	850,90	13,8	35,742	Cropland/Woodland	0,037	0,339	0,59	May. 1934	Sept. 1947	13,3	60	1,52	1 990	697	SCS
172	24-7	Spring Lake	Spring Creek	Macomb, III.	36,9	937,26	20,1	52,059	Cropland/Woodland	0,037	0,339	0,59	Apr. 1927	Sept. 1947	20,4	59,7	0,701	911	319	IWS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
173	17-8	Brown Park Lake	Trib. of Raccoon Creek	Flora Ill.	40,6	1031,24	1,33	3,4447	Cropland/Woodland	0,037	0,339	0,59	1938	mai-55	21,0	58,6	0,4	510	179	IWS
174	16-7	Eldorado	Wolf Creek	Eldorado Ill	45,5	1155,70	1,87	4,8433	Cropland/Woodland	0,037	0,339	0,59	Oct. 1920	Oct. 1949	29,0	67	2,18	3180	1113	IWS
175	16-6	Daring Coal Co Pond	Trib. of Wolf Creek	Eldorado Ill	45,5	1155,70	0,206	0,53354	Cropland/Woodland	0,037	0,339	0,59	1919	Oct. 1949	30,0	76	2,64	4370	1530	IWS
176	17-20	Vevay Park Lake	Trib. of Range Creek	Greenup Ill.	40,6	1031,24	0,278	0,72002	Cropland/Woodland	0,037	0,339	0,59	1906	mai-55	53,0	47,61	0,87	902	316	IWS
177	24-5	Shaefer Pond	Trib. of Cahokia Creek	Edwardsville, Ill.	38,5	977,90	0,83	2,1497	Cropland/Woodland	0,037	0,3657	0,64	Nov. 1937	July. 1949	11,8	50	2,65	2 890	1012	IWS
178	24-40	Lake Staunton	East Creek	Staunton, Ill	38,3	972,82	3,54	9,1686	Cropland/Woodland	0,037	0,3657	0,64	1926	July. 1954	28,0	28,1	1,09	667	233	IWS
179	16-29	West Frankfort (New)	Stevens Creek	West Frankfort Ill.	40,7	1033,78	7,288	18,8759	Cropland/Woodland	0,037	0,3892	0,68	1945	juin-56	15,0	35,9	2,41	1884	659	IWS
180	16-26a	ICRR at Thompsonville	Trib of Ewing Creek	Thompsonville Ill.	44,1	1120,14	1,725	4,46775	Cropland/Woodland	0,037	0,3892	0,68	1926	Aug. 1960	34,0	48,7	0,88	934	327	IWS
181	16-27	Lake Johnston City	Lake Creek	Johnston City Ill	44,1	1120,14	3,75	9,7125	Cropland/Woodland	0,037	0,3892	0,68	1922	Aug. 1957	35,0	48,3	0,59	620	217	IWS
182	4-12	Palington Res	Powder Cr	Spring Grove, PA	40,7	1033,78	2,9	7,511	Cropland/Woodland	0,037	0,4491	0,78	avr-37	avr-39	1,6	33,2	0,669	483	169	SCS
183	16-17	Crab Orchard Lake	Crab Orchard Creek	Carbondale, Ill	44	1117,60	160	414,4	Cropland/Woodland	0,037	0,6438	1,12	avr-36	juin-47	11,2	47,5	1,91	1976	692	IWS
184	16-19	Little Grassy Lake	Little Grassy	Carbondale,Ill	44	1117,60	160	414,4	Cropland/Woodland	0,037	0,6438	1,12	avr-36	juin-47	11,2	47,5	2,85	2402	841	IWS
185	16-5	Carbondale	Piles Fork	Carbondale Ill	44	1117,60	2,77	7,1743	Cropland/Woodland	0,037	0,6438	1,12	Aug. 1926	août-44	22,1	73,9	3,15	5070	1775	IWS
186	72-32	Black Vutte	Stony Creek	Orland, Calif.	20,1	510,54	433	1121,47	Cropland/Woodland	0,037	0,9377	1,64	July. 1963	May. 1966	3,0	62	2,1	2 836	993	CE
187	72-32	Black Vutte	Stony Creek	Orland, Calif.	20,1	510,54	433	1121,47	Cropland/Woodland	0,037	0,9377	1,64	May. 1966	Apr. 1973	7,0	62	3,14	4 244	1485	CE
188	72-7b	East Park	Little Stony Creek	Stonyford, Calif.	19,9	505,46	98,9	256,151	Cropland/Woodland	0,037	2,5684	4,48	Dec. 1910	Nov. 1962	52,0	55	0,37	443	155	GS
189	72-31	M. S. Wilson	Bourns Gulch	Gualala, Calif.	40,9	1038,86	0,283	0,73297	Cropland/Woodland	0,037	2,6933	4,70	July. 1952	July. 1967	15,0	60	0,24	314	110	SCS
190	72-30	Appleton	Unnamed	Healdsburg, Calif.	42,2	1071,88	0,161	0,41699	Cropland/Woodland	0,037	2,6933	4,70	Aug. 1950	Aug. 1967	17,0	59	0,37	475	166	SCS
191	17-1	Huntinburg (Upper)	Trib. of Patoka Eiver	Huntingburg Ind.	45,9	1165,86	0,63	1,6317	Deciduous Br. Forest	0,037	0,2414	0,42	July 1894	Oct. 1940	46,3	40	0,617	538	188	SCS
192	2-5	Wallingford	Pine River	Wallingford, CT	49,9	1267,46	8,98	23,2582	Deciduous Br. Forest	0,037	0,253	0,44	sept-37	sept-47	10	50	0,04	44	15	SCS
193	5-4b	Greenbelt Lake	Trib. of Indian Creek	Greenbelt Md	39	990,60	0,79	2,0461	Deciduous Br. Forest	0,037	0,3007	0,52	Aug. 1957	mai 1964	10,8	80	1,52	1945	681	SCS
194	5-4b	Greenbelt Lake	Trib. of Indian Creek	Greenbelt Md	39	990,60	0,79	2,0461	Deciduous Br. Forest	0,037	0,3007	0,52	Feb. 1938	Aug. 1957	19,5	60	2,27	2970	1040	SCS
195	17-23	Cagles Mill (Cataract L)	Mill Creek	Cloverdale Ind.	46,3	1176,02	287	743,33	Deciduous Br. Forest	0,037	0,3619	0,63	Dec. 1952	Feb. 1962	9,2	62,8	0,54	739	259	CE
196	19-48	Brush Creek Reservoir	Brush Creek	Butlerville Ind.	46,4	1178,56	13,11	33,9549	Deciduous Br. Forest	0,037	0,3619	0,63	Dec. 1953	juin-59	9,6	48	1,47	1536	538	SCS
197	17-4	Spring Mill	Mill Creek	Mitchell Ind.	43,2	1097,28	5,29	13,7011	Deciduous Br. Forest	0,037	0,3619	0,63	Oct. 1938	août-44	9,9	67	0,975	1420	497	SCS
198	16-1	Grisham	Lost Creek	Bismarck Mo	43,3	1099,82	0,45	1,1655	Deciduous Br. Forest	0,037	0,5907	1,03	Oct. 1930	juin-35	8,8	75,4	1,133	1860	651	SCS
199	16-2	Mountain Lake	Trib. of Rings Crek	Patterson Mo	45,9	1165,86	1,87	4,8433	Deciduous Br. Forest	0,037	0,6217	1,08	1927	juin-35	12,0	54,8	0,213	254	89	SCS
200	17-21	Beaver Lake	Beaver Creek	Dubois Ind.	46,1	1170,94	3,56	9,2204	Deciduous Br. Forest	0,037	0,6341	1,11	Oct. 1955	Oct. 1964	9,0	55	2,38	2851	998	SCS
201	17-22	Scotteburg Lake	Trib. of Muscatatuck	Scottsburg Ind.	42,9	1089,66	2,98	7,7182	Deciduous Br. Forest	0,037	0,6341	1,11	Fall 1949	Oct. 1961	12,0	60,8	1	1324	463	SCS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
202	17-25	Lake Salinda	Hoggatt Br. (Blue R.)	Salem Ind.	44,4	1127,76	5,525	14,3098	Deciduous Br. Forest	0,037	0,6341	1,11	Jan. 1949	Apr. 1971	22,2	57,8	1,02	1279	448	SCS
203	16-10	Pineview (Middle)	South Fork Ionaca Creek	Farmington Mo	40,9	1038,86	0,06	0,1554	Deciduous Br. Forest	0,037	0,6973	1,22	1930	1939	9,0	60	3,3	4310	1509	SCS
204	16-11	Pineview Upper	South Fork Ionaca Creek	Farmington Mo	40,9	1038,86	0,48	1,2432	Deciduous Br. Forest	0,037	0,6973	1,22	1928	1938	10,0	65	0,583	825	289	SCS
205	5-3	Burnt Mills	N. W. Br. Anacostia R.	Silver Spring Md	39	990,60	26,97	69,8523	Deciduous Br. Forest	0,037	0,7268	1,27	avr 1926	Mar. 1938	7,8	6	0,408	533	187	SCS
206	5-11	Rocky Gorge	Patuxent River	Laurel Md	39	990,60	50,14	129,863	Deciduous Br. Forest	0,037	0,7268	1,27	Mar. 1954	Aug. 1964	10,4	67	1,15	1678	587	SCS
207	4-1	Loch Raven Res	Gunpowder Falls R	Towson, MD	46,4	1178,56	219,4	568,246	Deciduous Br. Forest	0,037	0,7268	1,27	sept-39	juin-57	18	57,3	0,187	233	82	SCS
208	5-la	Lake Barcroft	Trib. of Potomac River	Falls Church Va	39	990,60	14,3	37,037	Deciduous Br. Forest	0,037	0,7268	1,27	Feb. 1938	Aug. 1957	19,5		0,728	950	333	SCS
209	5-la	Lake Barcroft	Trib. of Potomac River	Falls Church Va	39	990,60	14,3	37,037	Deciduous Br. Forest	0,037	0,7268	1,27	Jan. 1915	Feb. 1938	23,1	60	0,257	336	118	SCS
210	4-1	Stony Brook 3	Baldwin Cr	Pennington, NJ	40,2	1021,08	219,4	568,246	Deciduous Br. Forest	0,037	0,7268	1,27	oct-10	oct-39	29	60	0,618	808	283	SCS
211	16-12	Killarnay	Big Creek	Annapolis MO	46,6	1183,64	51	132,09	Deciduous Br. Forest	0,037	0,7679	1,34	1910	1939	29,0	60	0,133	174	61	SCS
212	2-4	Southington Res	Budd River	Southington, CT	42,66	1083,56	1,08	2,7972	Deciduous Br. Forest	0,037	1,1382	1,99	1883	sept-51	68	50	0,1	109	38	SCS
213	21-24b	Crooked Creek	Crooked Creek	Ford City Pa.	40,5	1028,70	274	709,66	Deciduous Br. Forest	0,037	1,1532	2,01	août-1941	Aug.1964	18,9	51	0,277	308	108	CE
214	21-24b	Crooked Creek	Crooked Creek	Ford City Pa.	40,5	1028,70	274	709,66	Deciduous Br. Forest	0,037	1,1532	2,01	Apr.1940	août-1941	5,4	65	0,062	87	30	CE
215	21-23B	Mahoning Creek	Mahoning Creek	Dayton Pa	42,3	1074,42	336	870,24	Deciduous Br. Forest	0,037	1,3127	2,29	mai-1937	Aug.1948	7,2	65	162	229	80	CE
216	21-23B	Mahoning Creek	Mahoning Creek	Dayton Pa	42,3	1074,42	336	870,24	Deciduous Br. Forest	0,037	1,3127	2,29	Aug.1948	mai-1961	16,8	43	0,178	167	58	CE
217	2-1	Broad Brook	Broad Brook R	Broad Brook, CT	44,14	1121,16	5,13	13,2867	Deciduous Br. Forest	0,037	1,3742	2,40	sept-12	sept-47	35	50	0,33	359	126	SCS
218	44-13	Dardanelle Reservoir	Arkansas River	Dardanelle, Ark.	47,6	1209,04	11 333	29352,5	Deciduous Br. Forest	0,037	1,4376	2,51	Oct. 1964	Oct. 1965	1,1	80	0,626	1 090	382	CE
219	44-13	Dardanelle Reservoir	Arkansas River	Dardanelle, Ark.	47,6	1209,04	11 333	29352,5	Deciduous Br. Forest	0,037	1,4376	2,51	Oct. 1965	Apr. 1968	2,5	80	0,321	560	196	CE
220	21-21b	Tionesta Lake	Tionesta Creek	Tionesta Pa	42,7	1084,58	474	1227,66	Deciduous Br. Forest	0,037	1,4801	2,58	Feb.1941	août-1945	8,6	65	203	287	100	CE
221	21-21b	Tionesta Lake	Tionesta Creek	Tionesta Pa	42,7	1084,58	474	1227,66	Deciduous Br. Forest	0,037	1,4801	2,58	août-1945	avr-1967	21,7	66,3	0,02	31	11	CE
222	4-25	Green Dreher PA446	Taylor Cr	South Sterling, PA	47,5	1206,50	4,7	12,173	Deciduous Br. Forest	0,037	1,6014	2,79	juin-72	juil-82	10,1	86	0,118	152	53	SCS
223	4-25	Green Dreher PA446	Taylor Cr	South Sterling, PA	47,5	1206,50	4,7	12,173	Deciduous Br. Forest	0,037	1,6014	2,79	juil-59	juin-72	12,9	65	0,039	55	19	SCS
224	21-26b	Youghiogheny River Lake	Youghiogheny River	Confluence Pa.	44,3	1125,22	428	1108,52	Deciduous Br. Forest	0,037	1,8716	3,27	Oct.1943	Oct.1949	6,0	65	0,341	483	169	CE
225	21-26b	Youghiogheny River Lake	Youghiogheny River	Confluence Pa.	44,3	1125,22	428	1108,52	Deciduous Br. Forest	0,037	1,8716	3,27	Oct.1949	Oct.1973	24,0	50,6	0,493	516	181	CE
226	21-16	Gorleys Lake	Trib.Youghiogheny R	Uniontown Pa.	42,2	1071,88	2,97	7,6923	Deciduous Br. Forest	0,037	1,8716	3,27	1908	mai-1935	30,0	60	135	176	62	SCS
227	21-22b	Loyalhanna	Loyalhanna Creek	Saltsburg Pa.	42,3	1074,42	285	738,15	Deciduous Br. Forest	0,037	1,918	3,35	Oct.1948	août-1949	4,9	44	0,326	312	109	CE
228	21-22b	Loyalhanna	Loyalhanna Creek	Saltsburg Pa.	42,3	1074,42	285	738,15	Deciduous Br. Forest	0,037	1,918	3,35	mai-1938	Oct.1948	6,3	44	0,358	343	120	CE
229	21-22b	Loyalhanna	Loyalhanna Creek	Saltsburg Pa.	42,3	1074,42	285	738,15	Deciduous Br. Forest	0,037	1,918	3,35	août-1949	Apr.1962	8,6	44	0,284	272	95	CE
230	4-23	Martin Cr PA467	Trib Martin Cr	Kingsley, PA	41,3	1049,02	0,79	2,0461	Deciduous Br. Forest	0,037	1,9638	3,43	sept-63	sept-71	8	67,3	0,09	132	46	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
231	4-23	Martin Cr PA467	Trib Martin Cr	Kingsley, PA	41,3	1049,02	0,79	2,0461	Deciduous Br. Forest	0,037	1,9638	3,43	sept-71	mai-81	9,7	90,1	0,2	614	215	SCS
232	19-56	Bluestone Lake	New River	Hinton W. Va.	38,5	977,90	2221	5752,39	Deciduous Br. Forest	0,037	2,0662	3,61	juin-45	avr-61	15,8	55	0,15	180	63	CE
233	4-21	E Br Clarion R Lake	E. Br Clarion R	Wilcox, PA	45,6	1158,24	70,3	182,077	Deciduous Br. Forest	0,037	2,1352	3,73	juin-48	mai-67	18,9	66,3	0,64	924	323	CE
234	64-2	South Soda Crook Weir	South Soda Crook	Steamboat Springs Colo	23,4	594,36	3,4	8,806	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1967	Oct. 1968	1,0	135	0,005	13	5	FS
235	64-2	South Soda Crook Weir	South Soda Crook	Steamboat Springs Colo	23,4	594,36	3,4	8,806	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1969	Oct. 1970	1,0	135	0,005	15	5	FS
236	64-3	North Fish Creek Weir	North Fish Crook	Steamboat Springs Colo	23,4	594,36	2,24	5,8016	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1968	Oct. 1969	1,0	35	1	2	1	FS
237	64-3	North Fish Creek Weir	North Fish Crook	Steamboat Springs Colo	23,4	594,36	2,24	5,8016	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1969	Oct. 1970	1,0	135	0,004	12	4	FS
238	64-4	West Walton Crook Weir	Trib. Walton Creek	Steamboat Springs Colo	23,4	594,36	1,33	3,4447	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1967	Oct. 1968	1,0	110	0,16	38	13	FS
239	64-4	West Walton Crook Weir	Trib. Walton Creek	Steamboat Springs Colo	23,4	594,36	1,33	3,4447	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1968	Oct. 1969	1,0	110	0,006	15	5	FS
240	64-4	West Walton Crook Weir	Trib. Walton Creek	Steamboat Springs Colo	23,4	594,36	1,33	3,4447	Deciduous Br. Forest	0,037	2,4606	4,30	Oct. 1969	Oct. 1970	1,0	110	0,02	48	17	FS
241	5-10	Savage River Dam	Savage River	Bloomington Md	36	914,40	104,44	270,5	Deciduous Br. Forest	0,037	3,2942	5,75	Mar. 1952	Mar. 1956	4,0	60	0,643	840	294	SCS
242	21-32	Ticky Pon	Unnamed	Peninsula Ohio	32,4	822,96	0,16	0,4144	Evergreen Br. Forest	0,037	0,1401	0,24	1949	Apr. 1951	2,0	60	0,1	131	46	SCS
243	5-15	E. Fork Falling R.Site 7	Mulberry Crook	Appomattox Va	42,5	1079,50	5,03	13,0277	Evergreen Br. Forest	0,037	0,3289	0,57	juin 1954	avr 1967	12,7	60	0,17	226	79	SCS
244	5-16	E.Fork.Fallinq R. Site35	Caldwell's Creek	Appomattox Va	42,5	1079,50	3,54	9,1686	Evergreen Br. Forest	0,037	0,3289	0,57	Aug. 1956	avr 1967	14,6	60	0,14	181	63	SCS
245	1-1	Little R Res #2	Little R	Belfast, ME	48,8	1239,52	13,8	35,742	Evergreen Br. Forest	0,037	0,9474	1,65	sept-09	sept-65	56	100	0,15	326	114	SCS
246	6-12	Philpott	Smith R	Bassett, VA	44,3	1124,20	185,7	480,963	Evergreen Br. Forest	0,037	1,1899	2,08	déc-47	nov-56	8,9	46,2	2,1	2103	736	CE
247	5-6	Jackson	Occoquan Creek	Manassas Va	39	990,60	336,4	871,276	Evergreen Br. Forest	0,037	1,2218	2,13	juin 1926	Aug. 1937	7,2	60	141	184	64	SCS
248	19-2	Radford	Little River	Radford Va	39,2	995,68	329	852,11	Evergreen Br. Forest	0,037	2,3379	4,08	Aug. 1934	juin-40	10,0	70	0,191	291	102	SCS
249	20-30	Clear Cr L	Clear Cr	Bristol, VA	42,5	1079,50	5,68	14,7112	Evergreen Br. Forest	0,037	2,606	4,55	Dec. 1965	Aug. 1971	5,8	62	0,152	205	72	TVA
250	34-4a	Lake Cheesman	South Platte R. and Goose or	Deckers, Colo.	17,1	434,34	1 460	3781,4	Evergreen Br. Forest	0,037	2,7854	4,86	Oct. 1900	Sept. 1931	31,0	70	0,025	37	13	BR
251	71-3	Hawkins	N. Fk. Los Viboras Creek	Hollister, Calif	13,8	350,52	4,01	10,3859	Evergreen Br. Forest	0,037	3,0157	5,27	1912	May. 1940	28,0	60	0,15	196	69	SCS
252	72-24	Nielson	Trib. Santa Rosa Creek	Santa Rosa, Calif.	30,3	769,62	0,184	0,47656	Evergreen Br. Forest	0,037	3,4297	5,99	Nov. 1960	Nov. 1964	4,0	65	0,96	1 359	476	SCS
253	72-2a	Morris	Davis Creek	Willits, Calif.	49,7	1262,38	5,03	13,0277	Evergreen Br. Forest	0,037	3,4297	5,99	May. 1960	May. 1966	6,0	50,3	0,56	642	225	SCS
254	72-33	Highland Creek Dam	Highland Creek	Kelseyville, Calif.	25,1	637,54	13,4	34,706	Evergreen Br. Forest	0,037	3,4297	5,99	Dec. 1965	Apr. 1972	6,3	70	42	640	224	SCS
255	72-23	Babe Wood	Trib. of Dry Creek	Cloverdale, Calif.	43	1092,20	1,68	4,3512	Evergreen Br. Forest	0,037	3,4297	5,99	Oct. 1958	Nov. 1965	7,0	78,9	0,69	1 186	415	SCS
256	72-34	Matanzas	Matanzas	Santa Rosa, Calif.	30,3	769,62	11,5	29,785	Evergreen Br. Forest	0,037	3,4297	5,99	Mar. 1972		9,0	90	0,86	1 686	590	SCS
257	72-28	McGuire	Virgin Creek	Fort Bragg, Calif.	40,2	1021,08	0,083	0,21497	Evergreen Br. Forest	0,037	3,4297	5,99	July. 1954	July. 1957	13,0	60	0,21	274	96	SCS
258	72-1a	Ridgewood (Walker)	Walker Creek	Willits, Calif.	49,7	1262,38	5,6	14,504	Evergreen Br. Forest	0,037	3,4297	5,99	1930	June. 1966	36,0	77,5	0,48	1 063	372	SCS
259	72-2a	Morris	Davis Creek	Willits, Calif.	49,7	1262,38	5,03	13,0277	Evergreen Br. Forest	0,037	3,4297	5,99	1927	May. 1960	36,0	50	0,63	686	240	SCS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
260	72-13	L. Pillsbury (Scott Dam)	Eel River	Potter Valley, CA	44,8	1137,92	284	735,56	Evergreen Br. Forest	0,037	3,4297	5,99	Dec. 1921	May. 1959	37,5	73	0,71	1 129	395	GS
261	34-2	Kenwood	Cherry Creek	Denver, Colo.	17,9	454,66	386	999,74	Evergreen Br. Forest	0,037	3,6393	6,36	June. 1938	June. 1939	1,0		0,741	1 220	427	SCS
262	34-2	Kenwood	Cherry Creek	Denver, Colo.	17,9	454,66	386	999,74	Evergreen Br. Forest	0,037	3,6393	6,36	Mar. 1936	June. 1938	2,3	75,6	0,106	175	61	SCS
263	34-1	Castlewood	Cherry Creek	Denver, Colo.	17	431,80	166,9	432,271	Evergreen Br. Forest	0,037	3,6393	6,36	1890	Aug. 1933	43,0	77,5	0,099	167	58	SCS
264	72-12	Misselbeck	n. Fk. Cottonwood	Redding, Calif.	33,3	845,82	11,8	30,562	Evergreen Br. Forest	0,037	3,8267	6,69	May. 1920	Dec. 1945	25,5	75	0,711	1 161	406	SCS
265	72-8	Faulke Lake (False Lake)	N. Fk. Jenney Creek	Shasta, Calif.	60,8	1544,32	0,68	1,7612	Evergreen Br. Forest	0,037	3,8267	6,69	1951	Dec. 1945	94,0	54	0,147	173	61	SCS
266	71-40	Santa Felicia	Piru Creek	Piru, Calif,	16,7	424,18	425	1100,75	Evergreen Br. Forest	0,037	4,3526	7,61	Oct. 1955	Oct. 1965	10,0	52	0,58	658	230	GS
267	72-5	Bullards Bar	North Yuba River	Camptonville, CA	57,9	1470,66	479	1240,61	Evergreen Br. Forest	0,037	4,7132	8,24	Oct. 1919	Jan. 1939	19,2	70	0,284	433	152	SCS
268	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1954	Oct. 1955	1,0		0,003	6	2	FS
269	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1955	Oct. 1956	1,0		0,012	27	9	FS
270	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1956	Oct. 1957	1,0		0,016	36	13	FS
271	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1957	Oct. 1958	1,0		0,006	3	1	FS
272	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1958	Oct. 1959	1,0		0,004	8	3	FS
273	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1959	Oct. 1960	1,0		0,004	8	3	FS
274	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1960	Oct. 1961	1,0		0,001	2	1	FS
275	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1961	Oct. 1962	1,0		0,009	20	7	FS
276	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	sept-59	Oct: 1964	1,0		0,001	2	1	FS
277	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	Oct: 1964	Oct. 1965	1,0		0,005	11	4	FS
278	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	sept-63	sept-64	1,0		0,001	2	1	FS
279	63-18	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Evergreen Br. Forest	0,037	5,7594	10,08	sept-64	sept-65	1,0		0,002	3	1	FS
280	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1951	Oct. 1952	1,0		0,032	65	23	FS
281	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1952	Oct. 1953	1,0		0,016	33	12	FS
282	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1955	Oct. 1956	1,0		26	53	19	FS
283	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1956	Oct. 1957	1,0		0,051	102	36	FS
284	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1957	Oct. 1958	1,0		0,031	62	22	FS
285	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1958	Oct. 1959	1,0		0,006	12	4	FS
286	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1959	Oct. 1960	1,0		0,01	20	7	FS
287	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1960	Oct. 1961	1,0		0,004	9	3	FS
288	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1961	Oct. 1962	1,0		0,012	24	8	FS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
289	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1964	Oct. 1965	1,0		0,018	36	13	FS
290	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1965	Oct. 1966	1,0		0,004	8	3	FS
291	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1966	Oct. 1967	1,0		0,005	10	4	FS
292	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1967	sept-64	1,0		8	18	6	FS
293	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	sept-64	Oct: 1969	1,0		0,01	22	8	FS
294	63-17	Fool Creek Debri Basin	Fool Creek	Fraser Colo	26,5	673,10	1,11	2,8749	Evergreen Br. Forest	0,037	5,7594	10,08	Oct: 1969	Oct. 1970	1,0		0,011	25	9	FS
295	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1955	Got. 1956	1,0		0,005	10	4	FS
296	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Got. 1956	Oct. 1957	1,0		0,009	18	6	FS
297	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1957	Oct. 1958	1,0		0,011	21	7	FS
298	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1958	Oct. 1959	1,0		0,002	4	1	FS
299	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1959	Oct. 1960	1,0		0,002	4	1	FS
300	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1961	Oct. 1962	1,0		0,005	9	3	FS
301	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1963	Oct. 1964	1,0		0,002	3	1	FS
302	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1964	Oct. 1965	1,0		0,003	6	2	FS
303	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1965	oat. 1966	1,0		0,002	2	1	FS
304	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	oat. 1966	Oct. 1967	1,0		0,001	2	1	FS
305	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1967	Oct. 1968	1,0		0,001	2	1	FS
306	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1968	Oct. 1969	1,0		0,001	2	1	FS
307	63-19	Lexen Creek Weir	Loxen Creek	Fraser Colo	26,5	673,10	0,48	1,2432	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1969	Oct. 1970	1,0		0,002	4	1	FS
308	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,10	3,1	8,029	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1964	Oct. 1965	1,0			5	2	FS
309	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,10	3,1	8,029	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1966	Oct. 1967	1,0	100	0,002	3	1	FS
310	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,10	3,1	8,029	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1967	Oct. 1968	1,0	100	0,002	4	1	FS
311	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,10	3,1	8,029	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1968	Oct. 1969	1,0	100	0,001	3	1	FS
312	63-20	East St. Louis Cr. Weir	East St. Louis Crook	Fraser Colo	26,5	673,10	3,1	8,029	Evergreen Br. Forest	0,037	5,7594	10,08	Oct. 1969	Oct. 1970	1,0	100	0,002	4	1	FS
313	15-28b	Powerline Dan	East Goose Creek	Oxford Miss	54	1371,60	0,477	1,23543	Evergreen Br. Forest	0,037	0,195	0,34	mai-56	Aug. 1962	2,2	70	3,88	743	260	ARS
314	15-28b	Powerline Dan	East Goose Creek	Oxford Miss	54	1371,60	0,477	1,23543	Evergreen Br. Forest	0,037	0,195	0,34	Aug. 1962	août-63	5,0	70	0,38	582	204	ARS
315	15-28b	Powerline Dan	East Goose Creek	Oxford Miss	54	1371,60	0,477	1,23543	Evergreen Br. Forest	0,037	0,195	0,34	août-63	Jan. 1976	8,4	75	0,79	1292	452	ARS
316	15-21	Dr. Bramlett Pond	Trib. of Pumpkin Creek	Oxford, Miss	54	1371,60	0,8131	2,10593	Evergreen Br. Forest	0,037	0,195	0,34	Jan. 1937	Mar. 1951	14,2	37	1,12	913	320	SCS
317	15-20	Henry W. Ramsey Pond	Trib. of Sarter Creek.	Oxford, Miss	54	1371,60	0,1289	0,33385	Evergreen Br. Forest	0,037	0,195	0,34	déc 1928	févr 1947	18,2	41,75	2,61	2 370	830	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
318	15-18	C. D. Williams Pond	Trib. of Hudson Creek	Oxford, Miss	54	1371,60	0,0418	0,10826	Evergreen Br. Forest	0,037	0,195	0,34	févr 1924	févr 1947	23,0	55,72	3,35	4 070	1425	SCS
319	15-17	Ben 0. Pettis Pond	Trib. of Toby Tubby Cr.	Oxford, Miss	54	1371,60	0,0067	0,01735	Evergreen Br. Forest	0,037	0,195	0,34	janv 1912	janv 1947	35,0	58,72	2,39	3 060	1071	SCS
320	8-2	Lloyd Shoals	Ocmulgee River	Jackson, GA	51,4	1305,56	1407	3644,13	Evergreen Br. Forest	0,037	0,4327	0,75	déc-06	mars-31	24,3	60,0	0,41	533	187	SCS
321	8-3	N. Fork Broad 2	Denman's Cr	Toccoa, GA	61,1	1552,45	0,94	2,4346	Evergreen Br. Forest	0,037	0,4647	0,81	janv-52	juin-55	3,4	55,1	0,56	676	237	SCS
322	8-7	N.Fork Br. 14	Tom's Cr	Toccoa, GA	61,1	1552,45	1,191	3,08469	Evergreen Br. Forest	0,037	0,4647	0,81	mars-58	avr-65	4,5	66,2	0,93	1341	469	SCS
323	12-11	Mill Cr #7	Mill Cr	Dalton, GA	57,0	1447,80	9,38	24,2942	Evergreen Br. Forest	0,037	0,4647	0,81	1976	1982	6,0	46,0	0,65	647	226	SCS
324	8-7	N.Fork Br. 14	Tom's Cr	Toccoa, GA	61,1	1552,45	1,191	3,08469	Evergreen Br. Forest	0,037	0,4647	0,81	oct-50	mars-58	7,4	68,6	0,49	732	256	SCS
325	8-3	N. Fork Broad 2	Denman's Cr	Toccoa, GA	61,1	1552,45	0,94	2,4346	Evergreen Br. Forest	0,037	0,4647	0,81	juin-55	avr-66	10,8	55,1	0,34	402	141	SCS
326	8-6	N. Fork Br. 1	N. Fork Br R	Toccoa, GA	61,1	1552,45	3,7	9,583	Evergreen Br. Forest	0,037	0,4647	0,81	juin-54	avr-66	11,9	63,2	0,21	282	99	SCS
327	15-29b	Andrew Smith Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,82	0,3	0,777	Evergreen Br. Forest	0,037	0,4723	0,82	avr-52	août-55	3,3	90	2,15	4217	1476	ARS
328	15-29b	Andrew Smith Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,82	0,3	0,777	Evergreen Br. Forest	0,037	0,4723	0,82	août-55	Nov. 1963	4,1	90	1,9	3734	1307	ARS
329	15-27b	W. W. Murphy Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,82	0,2	0,518	Evergreen Br. Forest	0,037	0,4723	0,82	Nov. 1963	nov-71	12,1	77	1,55	1683	589	ARS
330	15-29b	Andrew Smith Pond	Trib. of Jones Creek	Holly Springs Miss.	53,3	1353,82	0,3	0,777	Evergreen Br. Forest	0,037	0,4723	0,82	Nov. 1963	Dec. 1975	12,1	79	2,06	2927	1024	ARS
331	15-30a	Sardis Reservoir	Little Tallahatchie R.	Sardis Miss	54	1371,60	1454	3765,86	Evergreen Br. Forest	0,037	0,4723	0,82	Mar.1937	avr-56	20,6	60	0,687	898	314	CE
332	15-1	Lake Hamilton	Ouachita River	Hot Springs, Ark	55,5	1409,70	1413,4	3660,71	Evergreen Br. Forest	0,037	0,476	0,83	nov 1926	avr 1946	19,4	50	0,11	120	42	SCS
333	15-2	Lake Winona	Alum Fork Salim River	Little Rock, Ark.	51,9	1318,26	41,3	106,967	Evergreen Br. Forest	0,037	0,4767	0,83	sept 1933	avr 1946	12,6	50	0,37	403	141	SCS
334	11-1	Newnam	Bolton Mill Cr	Newnan, GA	52,3	1328,42	1,34	3,4706	Evergreen Br. Forest	0,037	0,524	0,91	oct-33	janv-41	7,3	50,0	0,41	446	156	SCS
335	11-6	Bull Cr #4	Cooper Cr	Columbus, GA	50,4	1280,16	1,3	3,367	Evergreen Br. Forest	0,037	0,524	0,91	1977	1985	8,0	56,0	0,60	747	261	SCS
336	11-1	Newnam	Bolton Mill Cr	Newnan, GA	52,3	1328,42	1,34	3,4706	Evergreen Br. Forest	0,037	0,524	0,91	mai-20	oct-33	13,4	50,0	1,45	1580	553	SCS
337	12-8	High Pine Dam 5	Tr High Pine	Roanoke, AL	56,6	1437,64	1,55	4,0145	Evergreen Br. Forest	0,037	0,5557	0,97	mars-57	5/2/197/	9,2	54,0	0,32	376	132	SCS
338	18-4	Guntersville	Tennessee R	Guntersville, AL	53,8	1366,52	2550	6604,5	Evergreen Br. Forest	0,037	0,6079	1,06	avr-52	juin-57	5,1	55	0,687	823	288	TVA
339	18-4	Guntersville	Tennessee R	Guntersville, AL	53,8	1366,52	2550	6604,5	Evergreen Br. Forest	0,037	0,6079	1,06	Nov. 1940	mai-43	6,6	55	0,979	1173	411	TVA
340	13-2	Lake Harris	Yellow Creek	Tuscaloosa, Ala	53,7	1363,98	30	77,7	Evergreen Br. Forest	0,037	0,6079	1,06	févr-25	nov-31	6,8	59,9	0,11	144	50	SCS
341	18-4	Guntersville	Tennessee R	Guntersville, AL	53,8	1366,52	2550	6604,5	Evergreen Br. Forest	0,037	0,6079	1,06	mai-43	avr-52	8,9	55	0,341	408	143	TVA
342	12-6	Carroll L	Curtis Cr	Carrollton, GA	53,7	1363,98	7,18	18,5962	Evergreen Br. Forest	0,037	0,7831	1,37	oct-44	mai-53	8,5	42,5	2,00	1851	648	SCS
343	12-7	Temple res	Wesbster Branch	Temple, GA	35,3	896,11	0,61	1,5799	Evergreen Br. Forest	0,037	1,132	1,97	juin-50	mai-53	3,0	44,2	2,74	2638	923	SCS
344	12-2	White Manganese 6	Pettit Cr	Cartersville, GA	48,7	1236,98	11	28,49	Evergreen Br. Forest	0,037	1,132	1,97	oct-25	nov-32	9,2	63,7	1,20	1660	581	SCS
345	4-5	Lake Williams	Codoros Cr	York, PA	40,7	1033,78	42,6	110,334	Grassland	0,019	0,783	1,37	avr-08	avr-35	27	49,1	0,394	421	147	SCS
346	4-22	Kaercher Cr PA476	Kaercher Cr	Hamburg, PA	44,2	1122,68	0,49	1,2691	Grassland	0,019	1,1557	2,02	déc-61	sept-71	9,8	57,7	0,22	277	97	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
347	4-22	Kaercher Cr PA476	Kaercher Cr	Hamburg, PA	44,2	1122,68	0,49	1,2691	Grassland	0,019	1,1557	2,02	sept-71	juin-81	9,8	70,1	0,28	598	209	SCS
348	21-46	Terra Alta Lake	Snowy River	Kingwood W.Va	47,5	1206,50	4,76	12,3284	Grassland	0,019	3,2086	5,60	1902	mai-1948	50,0	50	0,117	127	44	SCS
349	33-8a	Reichelt Stock Pond	Unnamed	Julesburg, Colo.	16,9	429,26	0,71	1,8389	Grassland	0,019	0,5843	1,02	Oct. 1950	Nov.1957	7,0	80,4	0,28	490	172	SCS
350	48-5	Teller	Turkey Cr	Pueblo, CO	11,61	294,89	78,5	203,315	Grassland	0,019	1,5373	2,68	mars-11	févr-40	28,9	75,4	0,68	1117	391	SCS
351	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,34	18 102	46884,2	Grassland	0,019	1,7347	3,03	Dec. 1943	Sept. 1944	0,7	75,7	0,443	730	256	CE
352	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,34	18 102	46884,2	Grassland	0,019	1,7347	3,03	Sept. 1966	Aug. 1968	1,9	75,7	0,362	597	209	CE
353	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,34	18 102	46884,2	Grassland	0,019	1,7347	3,03	May. 1948	Oct. 1951	3,4	75,7	0,21	346	121	CE
354	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,34	18 102	46884,2	Grassland	0,019	1,7347	3,03	Sept. 1944	May. 1948	3,7	75,7	0,129	213	75	CE
355	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,34	18 102	46884,2	Grassland	0,019	1,7347	3,03	Mar. 1962	Sept. 1966	4,5	75,7	0,147	242	85	CE
356	48-1	John Martin Res.	Arkansas R	Hasty, CO	12,1	307,34	18 102	46884,2	Grassland	0,019	1,7347	3,03	Oct. 1951	Aug. 1957	5,7	75,7	178	293	103	CE
357	34-9	Round Butte	Colo Creek	Wellington, Colo.	16	406,40	11,6	30,044	Grassland	0,019	2,2165	3,87	1905	June. 1965	60,0	69	0,07	105	37	SCS
358	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,02	207	536,13	Mixed Forest	0,027	1,5887	2,77	mai-57	avr-61	4	55,0	0,09	104	36	TVA
359	20-20	Blue Ridge	Toccoa R	Blue Ridge, GA	57,3	1455,42	227	587,93	Mixed Forest	0,027	1,5887	2,77	juil-45	août-50	5	55,0	0,88	1055	369	TVA
360	20-20	Blue Ridge	Toccoa R	Blue Ridge, GA	57,3	1455,42	227	587,93	Mixed Forest	0,027	1,5887	2,77	août-60	août-45	5,3	55,0	1,12	1340	469	TVA
361	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,02	207	536,13	Mixed Forest	0,027	1,5887	2,77	août-45	avr-51	5,7	55,0	0,76	908	318	TVA
362	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,02	207	536,13	Mixed Forest	0,027	1,5887	2,77	avr-51	mai-57	6	55,0	0,44	521	182	TVA
363	20-17	Nottley	Nottely R	Blairsville, GA	56,9	1446,02	207	536,13	Mixed Forest	0,027	1,5887	2,77	janv-38	août-45	7,6	55,0	0,42	497	174	TVA
364	20-20	Blue Ridge	Toccoa R	Blue Ridge, GA	57,3	1455,42	227	587,93	Mixed Forest	0,027	1,5887	2,77	sept-55	avr-64	8,8	55,0	0,31	368	129	TVA
365	11-2	Sly Lake	Tr Chicamuaga Cr	Helen, GA	76,0	1930,40	2,31	5,9829	Mixed Forest	0,027	1,5887	2,77	juin-21	mai-52	31,0	67,0	0,58	846	296	SCS
366	4-7	Atkisson Res	Winter's Run	Bel Air, MD	42,89	1089,41	45,35	117,457	Savanna	0,016	0,4491	0,78	avr-50	Apr-61	11	60,1	0,177	232	81	SCS
367	4-7	Atkisson Res	Winter's Run	Bel Air, MD	42,89	1089,41	45,35	117,457	Savanna	0,016	0,4491	0,78	avr-38	avr-50	12	60	0,351	459	161	SCS
368	4-7	Atkisson Res	Winter's Run	Bel Air, MD	42,89	1089,41	45,35	117,457	Savanna	0,016	0,4491	0,78	Apr-61	Apr-76	15	60,1	0,59	773	271	SCS
369	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,64	1135	2939,65	Savanna	0,016	0,5456	0,95	Dec. 1928	Dec. 1931	3,0	53	0,479	552	193	TVA
370	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,64	1135	2939,65	Savanna	0,016	0,5456	0,95	août-42	mai-47	4,7	53	0,12	138	48	TVA
371	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,64	1135	2939,65	Savanna	0,016	0,5456	0,95	Dec. 1931	Dec. 1936	5,0	53	0,49	565	198	TVA
372	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,64	1135	2939,65	Savanna	0,016	0,5456	0,95	mai-47	mai-52	5,0	53	0,401	462	162	TVA
373	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,64	1135	2939,65	Savanna	0,016	0,5456	0,95	mai-52	Aug. 1961	5,1	53	1,274	1471	515	TVA
374	18-6	Wilson	Tennessee R	Florence, AL	56,6	1437,64	1135	2939,65	Savanna	0,016	0,5456	0,95	Dec. 1936	août-42	9,8	53	0,12	138	48	TVA
375	61-8	Thomas Tank II	Trib. Perkins Spr. Draw	Snowflake, Ariz.	12,6	320,04	0,1	0,259	Shrubland	0,037	0,7698	1,34	June. 1964	July. 1968	4,0	89,3	0,1	194	68	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
376	61-4	Thomas Tank I	Trib Cottonwd Wshd	Snowflake, AZ	12,6	320,04	0,549	1,42191	Shrubland	0,037	0,7698	1,34	1947	June. 1968	21,0	77,9	0,15	250	88	SCS
377	61-7	West Hall Tank	Trib. Cottonwood	Snowflake, Ariz.	12,6	320,04	0,32	0,8288	Shrubland	0,037	0,7698	1,34	1944	June. 1968	24,0	93,4	0,02	41	14	SCS
378	61-3	Stockyard Tank	Trib Cottonwd Wshd	Snowflake, AZ	12,6	320,04	0,476	1,23284	Shrubland	0,037	0,7698	1,34	1943	May. 1968	25,0	101,6	0,17	376	132	SCS
379	61-6	New Tank	Trib. Cottonwood	Snowflake, Ariz.	12,6	320,04	2,45	6,3455	Shrubland	0,037	0,7698	1,34	1938	May. 1968	30,0	87,7	0,014	27	9	SCS
380	60-18	Magma No. 2	Magma Wash	Florence, Ariz	10,5	266,70	0,38	0,9842	Shrubland	0,037	0,8074	1,41	Feb. 1954	May. 1959	5,4	85	0,15	278	97	SCS
381	60-15	Homestead	Trib. of Gila River	Florence, Ariz	10,5	266,70	0,9	2,331	Shrubland	0,037	0,8074	1,41	1954	June. 1960	6,0	90	0,78	1 530	536	SCS
382	60-19a	Magma No. 3	Magma Wash	Florence, Ariz	10,5	266,70	7	18,13	Shrubland	0,037	0,8074	1,41	1949	May. 1959	10,0	75	0,03	49	17	SCS
383	60-22	Whitlow Old Tank	Trib. of Gila River	Florence, Ariz.	10,5	266,70	0,74	1,9166	Shrubland	0,037	0,8074	1,41	1950	June. 1960	10,0	85	0,23	426	149	SCS
384	60-17	Magma No. 1	Magma Wash	Florence, Ariz	10,5	266,70	1,78	4,6102	Shrubland	0,037	0,8074	1,41	1948	May. 1959	11,0	80	0,15	261	91	SCS
385	60-28a	Williams-Chandler Pd. #	Trib. of Queen Creek	Florence Junction, Ariz.	10,5	266,70	0,65	1,6835	Shrubland	0,037	0,8074	1,41	1944	July. 1961	17,0	60	0,13	174	61	SCS
386	60-14	Halfmoon	Trib. of Gila River	Florence, Ariz	10,5	266,70	0,2	0,518	Shrubland	0,037	0,8074	1,41	1941	June. 1960	19,0	85	0,75	1 388	486	SCS
387	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,04	39,7	102,823	Shrubland	0,037	0,8655	1,51	juin-59	juin-62	3	67	0,7	1007	352	SCS
388	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,04	39,7	102,823	Shrubland	0,037	0,8655	1,51	June. 1959	June. 1962	3,0	67	0,69	1 012	354	SCS
389	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,04	39,7	102,823	Shrubland	0,037	0,8655	1,51	June. 1962	June. 1966	4,0	80	0,89	1 693	593	SCS
390	61-2	Millet Swale Res	Trib Silver Cr	Taylor, AZ	12,6	320,04	39,7	102,823	Shrubland	0,037	0,8655	1,51	June. 1966	July. 1972	6,0	83,6	0,63	1 215	425	SCS
391	61-5	Ellsworth Tank	Trib. Show Low Creek	Taylor Ariz	12,6	320,04	0,249	0,64491	Shrubland	0,037	0,8655	1,51	1948	Aug. 1968	20,0	80	0,044	79	28	SCS
392	60-32	New Tank	Trib. Centennail Wash	Tonopah, Ariz.	7,7	195,58	1,88	4,8692	Shrubland	0,037	1,0545	1,84	1945	May. 1965	20,0	77,12	0,094	158	55	SCS
393	60-47	Galleta Tank	Trib. Cent. Wash	Tonopah, Ariz.	7,7	195,58	0,645	1,67055	Shrubland	0,037	1,0545	1,84	June. 1939	Apr. 1967	27,9	74,8	0,21	342	120	SCS
394	76-12	Ed Galloway Pd	Palouse R	Deary, ID	25,3	642,62	0,01	0,03626	Shrubland	0,037	1,1152	1,95	sept-40	sept-47	7,0	70,0	0,6400	976	342	SCS
395	76-11	Johanna Nelson Pd	Palouse R	Deary, ID	25,3	642,62	0,01	0,03108	Shrubland	0,037	1,1152	1,95	sept-39	sept-47	8,0	70,0	2,0000	3050	1068	SCS
396	76-9	Henry Kortemeier Pd	Palouse R	Potlatch, ID	25,3	642,62	0,02	0,0518	Shrubland	0,037	1,1152	1,95	sept-39	sept-47	8,0	70,0	1,2000	1830	641	SCS
397	76-10	George Hoidal Pd	Palouse R	Harvard, ID	25,3	642,62	0,04	0,10878	Shrubland	0,037	1,1152	1,95	sept-40	sept-47	10,0	70,0	0,1900	290	102	SCS
398	76-13	A. K. Tweedy Pd	Palouse R	Deary, ID	25,3	642,62	0,01	0,03626	Shrubland	0,037	1,1152	1,95	sept-27	sept-47	20,0	70,0	0,6400	976	342	SCS
399	60-27	Williams-Chandler Pd. #1	Trib. of Queen Creek	Florence Junction, Ariz.	10,5	266,70	1,09	2,8231	Shrubland	0,037	1,1989	2,09	1931	July. 1961	30,0	60	0,033	43	15	SCS
400	60-35	Harquahala Mt. Tank # 1	Trib. Brown's Canyon Wash	Aguila, Ariz	9,6	243,84	0,11	0,2849	Shrubland	0,037	1,2328	2,15	June. 1958	Oct. 1964	6,3	50	0,18	196	69	SCS
401	60-34	Upper Twin Tank	Tiger Wash	Aguila, Ariz	9,6	243,84	1,83	4,7397	Shrubland	0,037	1,2328	2,15	Oct. 1944	Oct. 1964	20,0	46	0,015	15	5	SCS
402	60-33	West Tank	Trib. Centennail Wash	Salome, Ariz.	6,6	167,64	0,29	0,7511	Shrubland	0,037	1,4519	2,53	June. 1960	Oct. 1964	4,3	52,5	0,13	149	52	SCS
403	60-29	Big Horn Mt. Tank # 1	Trib. Centennail Wash	Tonopah, Ariz.	7,7	195,58	0,51	1,3209	Shrubland	0,037	1,4833	2,59	June. 1960	Oct. 1964	4,3	47,6	0,11	114	40	SCS
404	60-30	Big Horn Mt. Tank # 2	Trib. Centennail Wash	Tonopah, Ariz.	7,7	195,58	0,44	1,1396	Shrubland	0,037	1,4833	2,59	July. 1960	Oct. 1964	4,3	50	0,11	120	42	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
405	60-31	Centennial Wash Tank	Trib. Centennail Wash	Tonopah, Ariz.	7,7	195,58	0,6	1,554	Shrubland	0,037	1,4833	2,59	1954	May. 1965	11,0	91,97	0,09	180	63	SCS
406	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,073	0,18907	Shrubland	0,037	1,5068	2,63	Oct. 1964	Oct. 1965	1,0	110	0,14	328	115	FS
407	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,073	0,18907	Shrubland	0,037	1,5068	2,63	Oct. 1965	Oct. 1966	1,0	110	0,27	656	230	FS
408	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,073	0,18907	Shrubland	0,037	1,5068	2,63	Oct. 1967	Oct. 1968	1,0	110	0,14	328	115	FS
409	60-38a	Three Bar C Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,149	0,38591	Shrubland	0,037	1,5068	2,63	Oct. 1960	Oct. 1961	1,0	110	0,67	1 608	563	FS
410	60-38a	Three Bar C Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,149	0,38591	Shrubland	0,037	1,5068	2,63	Oct. 1961	Oct. 1962	1,0	110	0,67	1 608	563	FS
411	60-38a	Three Bar C Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,149	0,38591	Shrubland	0,037	1,5068	2,63	Oct. 1965	Oct. 1966	1,0	110	0,34	804	281	FS
412	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,126	0,32634	Shrubland	0,037	1,5068	2,63	Oct. 1961	Oct. 1962	1,0	110	0,63	1 521	532	FS
413	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,126	0,32634	Shrubland	0,037	1,5068	2,63	Oct. 1964	Oct. 1965	1,0	110	0,08	190	67	FS
414	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,126	0,32634	Shrubland	0,037	1,5068	2,63	Oct. 1965	Oct. 1966	1,0	110	0,08	190	67	FS
415	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,107	0,27713	Shrubland	0,037	1,5068	2,63	Oct. 1963	Oct. 1964	1,0	110	0,37	886	310	FS
416	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,107	0,27713	Shrubland	0,037	1,5068	2,63	Oct. 1964	Oct. 1965	1,0	110	0,09	224	78	FS
417	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,107	0,27713	Shrubland	0,037	1,5068	2,63	Oct. 1965	Oct. 1966	1,0	110	0,19	448	157	FS
418	60-40a	Three Bar F Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,107	0,27713	Shrubland	0,037	1,5068	2,63	Oct. 1969	Oct. 1970	1,0	110	0,08	2 016	706	FS
419	60-37a	Three Bar B Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,073	0,18907	Shrubland	0,037	1,5068	2,63	Oct. 1962	Oct. 1964	2,0	110	0,55	1 313	460	FS
420	60-39a	Three Bar D Debris Basin	Trib. of Rock Creek	Roosevelt, Ariz.	15,5	393,70	0,126	0,32634	Shrubland	0,037	1,5068	2,63	Oct. 1962	Oct. 1964	2,0	110	0,04	95	33	FS
421	60-49	Pouquette Tank	Trib. Cemetery Wash	Wickenburg, Ariz	12,2	309,88	0,129	0,33411	Shrubland	0,037	1,8228	3,18	May. 1965	Dec. 1970	5,6	88,2	0,1	192	67	SCS
422	60-48	Wellick Tank	Trib. Flying "E" Wash	Wickenburg, Ariz	12,2	309,88	0,77	1,9943	Shrubland	0,037	1,8228	3,18	May. 1956	Sept. 1970	14,3	94,1	0,16	328	115	SCS
423	60-42a	Cowan 7	Walnut Gulch	Tombstone, Ariz.	13,5	342,90	0,4	1,036	Shrubland	0,037	2,1697	3,79	June. 1963	June. 1967	4,0	75	0,12	196	69	SCS
424	60-41a	Bennett 14	Walnut Gulch	Tombstone, Ariz.	13,5	342,90	0,6	1,554	Shrubland	0,037	2,1697	3,79	June. 1961	June. 1967	6,0	75	0,33	539	189	SCS
425	60-41a	Bennett 14	Walnut Gulch	Tombstone, Ariz.	13,5	342,90	0,6	1,554	Shrubland	0,037	2,1697	3,79	June. 1967	June. 1973	6,0	75	0,2	327	114	SCS
426	60-42a	Cowan 7	Walnut Gulch	Tombstone, Ariz.	13,5	342,90	0,4	1,036	Shrubland	0,037	2,1697	3,79	June. 1967	Jan. 1973	6,0	75	0,25	408	143	SCS
427	78-8	Miller Smeed Pd	Little Willow Cr	Payette, ID	10,5	266,19	0,22	0,56203	Shrubland	0,037	2,2667	3,96	août-41	sept-47	6,0	70,0	0,1470	224	78	SCS
428	78-7	W. B. Winninger Pd	Trib of Wester R	Cambridge, ID	20,2	512,06	0,54	1,39342	Shrubland	0,037	2,2667	3,96	sept-39	août-47	8,0	70,0	0,2400	366	128	SCS
429	78-6	Milton Branch Pd	Trib of Wester R	Cambridge, ID	20,2	512,06	0,42	1,09816	Shrubland	0,037	2,2667	3,96	août-36	sept-47	11,0	70,0	0,2590	395	138	SCS
430	78-5	Andy Anderson Pd	Wester R	Cambridge, ID	20,2	512,06	0,59	1,5281	Shrubland	0,037	2,2667	3,96	oct-01	août-47	46,0	73,0	0,1360	207	72	SCS
431	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	Shrubland	0,037	2,4215	4,23	June. 1970	Oct. 1970	0,4	90	2,27	4 455	1559	GS
432	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Shrubland	0,037	2,4215	4,23	Nov. 1958	Nov. 1959	1,0	90	1,58	3095	1083	GS
433	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Shrubland	0,037	2,4215	4,23	Oct. 1971	Nov. 1972	1,0	90	0,53	1039	364	GS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
434	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Shrubland	0,037	2,4215	4,23	Nov. 1972	sept-69	1,0	90	0,53	39	14	GS
435	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1956	Oct. 1957	1,0	90	0,7	1365	478	GS
436	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1958	Nov. 1959	1,0	90	2,15	2840	994	GS
437	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1963	Nov. 1964	1,0	90	2,78	5459	1911	GS
438	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1964	Nov. 1965	1,0	90	1,9	3722	1303	GS
439	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1966	Oct. 1967	1,0	90	2,34	4590	1607	GS
440	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1972	sept-69	1,0	90	0,76	1490	522	GS
441	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1971	Nov. 1972	1,0	90	0,19	372	130	GS
442	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	oct-65	oct-57	1,0	90	1,46	2654	929	GS
443	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	Nov. 1969	Oct. 1970	1,0	90	1,04	2042	715	GS
444	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	Oct. 1970	Oct. 1971	1,0	90	2,08	4077	1427	GS
445	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	Oct. 1971	Nov. 1972	1,0	90	0,83	1627	569	GS
446	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	Nov. 1972	sept-69	1,0	90	1,04	2039	714	GS
447	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	oct-59	Nov. 1964	1,0	90	0,24	467	163	GS
448	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	Nov. 1966	Oct. 1967	1,0	90	2,02	3967	1388	GS
449	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	Nov. 1968	NOV. 1969	1,0	90	0,36	700	245	GS
450	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	Oct. 1970	Nov. 1971	1,0	90	0,12	235	82	GS
451	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	Nov. 1972	sept-69	1,0	90	36	706	247	GS
452	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	Shrubland	0,037	2,4215	4,23	Nov. 1958	Nov. 1959	1,0	90	2,73	5 346	1871	GS
453	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	Shrubland	0,037	2,4215	4,23	Oct. 1970	Oct. 1971	1,0	90	2,73	5 351	1873	GS
454	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	Shrubland	0,037	2,4215	4,23	Oct. 1971	Nov. 1972	1,0	90	1,36	2 666	933	GS
455	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,066	0,17094	Shrubland	0,037	2,4215	4,23	Nov. 1963	Nov. 1964	1,0	90	0,6	1 188	416	GS
456	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,066	0,17094	Shrubland	0,037	2,4215	4,23	Nov. 1966	Oct. 1967	1,0	90	2,41	4 752	1663	GS
457	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,066	0,17094	Shrubland	0,037	2,4215	4,23	Nov. 1972	Oct. 1973	1,0	90	1,66	3 254	1139	GS
458	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1958	Nov. 1959	1,0	90	1,49	2 914	1020	GS
459	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1964	Nov. 1965	1,0	90	2,23	4 371	1530	GS
460	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1971	Nov. 1972	1,0	90	1,01	1 980	693	GS
461	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1963	Nov. 1964	1,0	90	0,68	1329	465	GS
462	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1968	Nov. 1969	1,0	90	0,34	664	232	GS

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					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
463	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1969	Oct. 1970	1,0	90	2,38	4651	1628	GS
464	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Oct. 1970	Nov. 1971	1,0	90	0,68	1329	465	GS
465	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1971	Nov. 1972	1,0	90	0,68	1329	465	GS
466	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1972	Oct. 1973	1,0	90	1,19	2333	817	GS
467	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	Nov. 1958	oct-65	1,1	90	1,46	2859	1001	GS
468	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Shrubland	0,037	2,4215	4,23	Nov. 1959	Nov. 1961	2,0	90	0,53	1032	361	GS
469	63-11a	Windy Point (4-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,019	0,04921	Shrubland	0,037	2,4215	4,23	Nov. 1961	Nov. 1963	2,0	90	0,53	1032	361	GS
470	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1959	Nov. 1961	2,0	90	1,95	3846	1346	GS
471	63-12a	Yucca (2-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,158	0,40922	Shrubland	0,037	2,4215	4,23	Nov. 1961	Nov. 1963	2,0	90	0,95	1110	389	GS
472	63-13a	North Basin (3-B)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,048	0,12432	Shrubland	0,037	2,4215	4,23	oct-66	Nov. 1964	2,0	90	1,04	2042	715	GS
473	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	Nov. 1959	oct-57	2,0	90	1,9	3734	1307	GS
474	63-14a	Lover Hanks (IB)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,084	0,21756	Shrubland	0,037	2,4215	4,23	oct-57	oct-59	2,0	90	0,59	1283	449	GS
475	63-6b	Prairie Dog (4A)	Trib. Badger Wash	Mack, Colo.	9	228,60	0,022	0,05698	Shrubland	0,037	2,4215	4,23	Nov. 1961	Nov. 1963	2,0	90	2,27	4 900	1715	GS
476	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,066	0,17094	Shrubland	0,037	2,4215	4,23	Nov. 1959	Nov. 1961	2,0	90	2,73	5 198	1819	GS
477	63-8b	Upper Hanks (1A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,066	0,17094	Shrubland	0,037	2,4215	4,23	Nov. 1961	Nov. 1963	2,0	90	0,83	1 634	572	GS
478	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1961	Nov. 1963	2,0	90	1,15	2 252	788	GS
479	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1959	Nov. 1961	2,0	90	2,71	5482	1919	GS
480	63-9a	West Twin (2-A)	Trib, Badger Wash	Mack, Colo.	9	228,60	0,148	0,38332	Shrubland	0,037	2,4215	4,23	Nov. 1961	Nov. 1963	2,0	90	0,51	997	349	GS
481	63-26	Creek Retention Res	Indian Wash	Grand Junction Colo.	8,8	223,52	0,4	1,036	Shrubland	0,037	2,6232	4,58	1965	Oct. 1975	10,0	90	0,61	1190	417	SCS
482	60-10	"D" Mt. No. 5	Whitewater Draw	Douglas, Ariz	14,8	375,92	12,3	31,857	Shrubland	0,037	2,6537	4,63	1943	Nov. 1958	5,0	75	0,006	10	4	SCS
483	60-11	"D" Mt. Pond No. 6	Whitewater Draw	Douglass, Ariz.	14,8	375,92	5,68	14,7112	Shrubland	0,037	2,6537	4,63	1941	Nov. 1958	6,0	75	0,006	10	4	SCS
484	60-12	Dos Cabezas No. 4 SW	Trib. Wilcox Dry Lake	Dos Cabezas, Ariz.	13,2	335,28	0,6	1,554	Shrubland	0,037	2,6537	4,63	1949	Nov. 1960	11,0	90	0,29	559	196	SCS
485	60-9	"D" Mt. No. 4	Whitewater Draw	Douglas, Ariz	14,8	375,92	0,36	0,9324	Shrubland	0,037	2,6537	4,63	Mar. 1942	Nov. 1958	12,0	90	0,1	196	69	SCS
486	60-20	Riggs	Trib. Wilcox Dry Lake	Dos Cabezas, Ariz.	13,2	335,28	0,6	1,554	Shrubland	0,037	2,6537	4,63	1946	Oct. 1960	14,0	80	0,06	105	37	SCS
487	60-13a	Dos Cabezas No. 15	Trib. Wilcox Dry Lake	Dos Cabezas, Ariz.	13,2	335,28	0,38	0,9842	Shrubland	0,037	2,6537	4,63	1940	Oct. 1960	20,0	90	0,26	510	179	SCS
488	60-7	"D" Mt. No. 2	Whitewater Draw	Douglas, Ariz	14,8	375,92	10,92	28,2828	Shrubland	0,037	2,6537	4,63	1938	Nov. 1958	20,0	75	0,008	13	5	SCS
489	60-6	"D" Mt. Tank No. 1	Whitewater Draw	Douglas, Ariz	14,8	375,92	0,21	0,5439	Shrubland	0,037	2,6537	4,63	1917	Nov. 1958	41,0	75	0,05	82	29	SCS
490	64-1	Duck Fork	Ferron Creek	Ferron Utah	8,4	213,36	3,56	9,2204	Shrubland	0,037	2,7854	4,86	1942	Oct. 1962	20,0	60	0,14	183	64	SCS
491	70-10	Laguna	Trib, of Newport Bay	Orange, Calif.	8,5	215,90	0,72	1,8648	Shrubland	0,037	2,9384	5,13	Feb.1938	mai-35	2,0	40	5,56	4 840	1694	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
492	70-6	Bonita Canyon	Bonita Creek	Orange, Calif	8,5	215,90	4	10,36	Shrubland	0,037	2,9384	5,13	Jan.1938	mai-35	2,0	60	2,63	3 437	1203	SCS
493	60-36	Judia Wash Retarding Dam	Judia Wash	Solomon, Ariz.	9,7	246,38	4,57	11,8363	Shrubland	0,037	2,974	5,19	Jan. 1964	July. 1964	0,6	76,9	0,39	653	229	SCS
494	60-50	Frye Creek (No. 3)	Frye Creek	Thatcher, Ariz.	9,7	246,38	21,4	55,426	Shrubland	0,037	2,974	5,19	Apr. 1963	May. 1968	5,0	78,7	0,79	1 354	474	SCS
495	60-50	Frye Creek (No. 3)	Frye Creek	Thatcher, Ariz.	9,7	246,38	21,4	55,426	Shrubland	0,037	2,974	5,19	May. 1968	May. 1974	6,0	89,2	0,014	178	62	SCS
496	60-36	Judia Wash Retarding Dam	Judia Wash	Solomon, Ariz.	9,7	246,38	4,57	11,8363	Shrubland	0,037	2,974	5,19	Jan. 1957	Jan. 1964	7,0	76,9	0,14	234	82	SCS
497	62-4	Leroy Judd Tank	Trib. of Kanab Creek	Fredonia, Ariz.	10	254,00	0,38	0,9842	Shrubland	0,037	3,1846	5,56	1962	Aug. 1965	3,0	105,7	0,63	1 450	508	SCS
498	62-3	Riggs Flat Charco	Sandy Canyon Wash	Fredonia, Ariz.	10	254,00	57,83	149,78	Shrubland	0,037	3,1846	5,56	Oct. 1956	Sept. 1965	8,9	72	0,035	55	19	SCS
499	62-6	Jesse Judd Tank	Trib. of Kanab Creek	Fredonia, Ariz.	10	254,00	3,49	9,0391	Shrubland	0,037	3,1846	5,56	1955	Aug. 1965	10,0	80	0,12	209	73	SCS
500	70-3	Railroad Canyon	San Jacinto River	Elsinore, Calif.	16,8	426,72	651	1686,09	Shrubland	0,037	3,2088	5,60	May. 1928	June. 1939	11,0	60	0,03	39	14	SCS
501	70-2	Lake Hudges	San Diequito River	Escondido, Calif.	16,8	426,72	301	779,59	Shrubland	0,037	3,2088	5,60	July. 1935	July. 1948	13,0		0,332	470	165	SCS
502	70-2	Lake Hudges	San Diequito River	Escondido, Calif.	16,8	426,72	301	779,59	Shrubland	0,037	3,2088	5,60	Jan. 1919	July. 1935	16,5	65	0,365	517	181	SCS
503	70-15	Morena	Cottonwood Creek	San Diego, Calif.	10,6	269,24	109,4	283,346	Shrubland	0,037	3,2088	5,60	Mar.1910	Dec.1935	25,7	60	2,16	2 823	988	SCS
504	70-7	Bouquet Canyon	Bouquet Creek	San Fernando, CA	16,1	408,94	11,6	30,044	Shrubland	0,037	3,3949	5,93	Mar.1934	mai-35	0,5	40	1,1	958	335	SCS
505	71-26	F. J. Hoey Pond	Alhambra Creek	Brentwood, Calif	18,7	474,98	0,045	0,11655	Shrubland	0,037	3,3949	5,93	1947	Jan. 1953	5,0	55	0,578	692	242	SCS
506	71-27a	Lee Higgins Pond	Marsh Creek	Brentwood, Calif	18,7	474,98	0,199	0,51541	Shrubland	0,037	3,3949	5,93	1941	Jan. 1953	5,0	40	0,14	122	43	SCS
507	71-28a	Souza	Marsh Creek	Brentwood, Calif	18,7	474,98	0,283	0,73297	Shrubland	0,037	3,3949	5,93	1946	Jan. 1953	6,0	30	0,894	584	204	SCS
508	71-23	Englehart Pond	Marsh Creek	Brentwood, Calif	18,7	474,98	0,033	0,08547	Shrubland	0,037	3,3949	5,93	1945	Jan. 1953	7,0	60	0,088	115	40	SCS
509	71-24a	C. C. Anderson Pond	Marsh Creek	Brentwood, Calif	18,7	474,98	0,83	2,1497	Shrubland	0,037	3,3949	5,93	1945	Oct. 1952	7,0	65	0,096	136	48	SCS
510	71-29a	Ordwary	Marsh Creek	Brentwood, Calif	18,7	474,98	0,613	1,58767	Shrubland	0,037	3,3949	5,93	1945	Jan. 1953	7,0	70	0,19	290	102	SCS
511	71-25	Upper Walter Keller Pond	Marsh Creek	Brentwood, Calif	18,7	474,98	0,27	0,6993	Shrubland	0,037	3,3949	5,93	1943	Oct. 1952	9,0	40	0,682	594	208	SCS
512	71-18a	Wood Pond	Sycamore Creek	Danville Calif	18,7	474,98	0,3	0,777	Shrubland	0,037	3,3949	5,93	1940	1951	11,0	80	0,053	92	32	SCS
513	71-22	Contra Costa Country Club	Grayson Creek	Pacheco, Calif	12,8	325,12	0,2	0,518	Shrubland	0,037	3,3949	5,93	1934	1951	17,0	40	0,15	131	46	SCS
514	70-11	Encino	Encino Creek	Los Angeles, Calif.	14,8	375,92	1,3	3,367	Shrubland	0,037	3,3949	5,93	20-mai	mai-35	18,0	40	0,815	710	249	SCS
515	70-8a	Chatsworth	Trib. Los Angeles River	San Fernando, CA	16,1	408,94	4,45	11,5255	Shrubland	0,037	3,3949	5,93	Apr.1918	mai-35	21,0	40	0,51	444	155	SCS
516	70-4	Lake Sherwood	Triunfo Creek	Hollywood, Calif	12	304,80	15,7	40,663	Shrubland	0,037	3,3949	5,93	1905	Mar.1936	31,0	50	0,16	174	61	SCS
517	71-21	Lakewood	Walnut Creek	Concord, Calif	16,5	419,10	0,74	1,9166	Shrubland	0,037	3,3949	5,93	1913	1951	40,0	30	0,76	50	18	SCS
518	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,68	5 760	14918,4	Shrubland	0,037	3,5323	6,17	Dec. 1914	Oct. 1916	1,8	70	3,35	5 107	1787	BR
519	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,68	5 760	14918,4	Shrubland	0,037	3,5323	6,17	Jan. 1935	Jan. 1939	4,0	70	0,85	1 296	454	BR
520	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,68	5 760	14918,4	Shrubland	0,037	3,5323	6,17	May. 1909	Dec. 1914	5,7	70	0,819	1 248	437	BR

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
521	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,68	5 760	14918,4	Shrubland	0,037	3,5323	6,17	Jan. 1939	Jan. 1946	7,0	70	0,418	637	223	BR
522	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,68	5 760	14918,4	Shrubland	0,037	3,5323	6,17	Oct. 1916	Sept. 1925	8,9	70	0,67	1 021	357	BR
523	60-4	Roosevelt-Salt R. Proj.	Salt R. & Tonto Creek	Globe, Ariz	19,2	487,68	5 760	14918,4	Shrubland	0,037	3,5323	6,17	Sept. 1925	Jan. 1935	9,3	70	0,145	221	77	BR
524	34-10a	Q-51 Kiowa Creek Wshd.	Kiowa Creek	Elbert, Colo.	16,6	421,64	0,56	1,4504	Shrubland	0,037	3,6393	6,36	June. 1957	Jan. 1966	9,0	80	0,43	749	262	SCS
525	34-11	J-33 Kiowa Creek Wshd.	Kiowa Creek	Eastonville, Colo.	17,4	441,96	1,06	2,7454	Shrubland	0,037	3,6393	6,36	July. 1956	July. 1965	9,0	80	0,05	87	30	SCS
526	34-12	B-9 Kiowa Creek Wshd.	Kiowa Creek	Elbert, Colo.	16,6	421,64	0,64	1,6576	Shrubland	0,037	3,6393	6,36	Dec. 1955	July. 1965	9,5	80	0,09	157	55	SCS
527	34-8a	R-3 Kiowa Creek Wshd.	Kiowa Creek	Elbert, Colo.	16,6	421,64	2,89	7,4851	Shrubland	0,037	3,6393	6,36	July. 1956	Mar. 1966	10,0	80	0,32	557	195	SCS
528	78-9	Twin Puddles Pd	Trib of Boise R	Boise, ID	19,6	498,35	1,61	4,1699	Shrubland	0,037	5,1596	9,03	sept-37	sept-47	10,0	70,0	0,0200	30	11	SCS
529	78-2	Black Canyon	Payette R	Emmett, ID	13,5	342,39	1948	5045,32	Shrubland	0,037	5,1596	9,03	juin-20	juin-32	12,0	60,0	0,1390	303	106	SCS
530	78-4	Arrowrock-Boise Project	Boise R	Boise, ID	19,6	498,35	2170	5620,3	Shrubland	0,037	5,1596	9,03	févr-11	oct-43	32,6	60,0	0,1090	173	61	SCS
531	78-2	Black Canyon	Payette R	Emmett, ID	13,5	342,39	1948	5045,32	Shrubland	0,037	5,1596	9,03	juin-32	juin-67	35,0	60,0	0,1500	327	114	SCS
532	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,26	67,84	175,706	Shrubland	0,037	5,2299	9,15	Jan.1936	June. 1938	3,0		2,41	4 460	1561	SCS
533	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,26	67,84	175,706	Shrubland	0,037	5,2299	9,15	Oct.1943	Dec.1946	3,0		0,25	460	161	SCS
534	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,26	67,84	175,706	Shrubland	0,037	5,2299	9,15	June. 1938	Oct.1943	5,0		0,72	1 330	466	SCS
535	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,26	67,84	175,706	Shrubland	0,037	5,2299	9,15	Dec.1946	Oct.1951	5,0	85	0,15	278	97	SCS
536	70-13b	Little Rock Irrigation Dist.	Little Rock Creek	Palmdale, Calif	6,9	175,26	67,84	175,706	Shrubland	0,037	5,2299	9,15	Apr.1924	Jan.1936	11,0	85	0,1	185	65	SCS
537	76-8	Weldon Wassem Pd	Clearwater R	Nez Pierce, ID	21,2	538,99	0,01	0,03626	Shrubland	0,037	5,7103	9,99	sept-41	sept-47	6,0	70,0	2,1400	3263	1142	SCS
538	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Shrubland	0,037	5,7594	10,08	sept-62	Nov: 1967	1,0	90	0,73	142	50	GS
539	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Shrubland	0,037	5,7594	10,08	Nov: 1967	Nov. 1968	1,0	90	0,91	1780	623	GS
540	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Shrubland	0,037	5,7594	10,08	Nov. 1968	Nov. 1969	1,0	90	0,09	178	62	GS
541	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Shrubland	0,037	5,7594	10,08	Nov. 1969	Nov. 1970	1,0	90	0,36	710	249	GS
542	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Shrubland	0,037	5,7594	10,08	Nov. 1970	Oct. 1971	1,0	90	0,52	1019	357	GS
543	63-15a	Boco Mountain No. I	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,011	0,02849	Shrubland	0,037	5,7594	10,08	Oct. 1971	Nov. 1972	1,0	90	0,43	843	295	GS
544	63-16	Deadhorse Weir	Deadhorse Creek	Fraser Colo	26,5	673,10	1,04	2,6936	Shrubland	0,037	5,7594	10,08	sept-65	sept-66	1,0		0,005	11	4	FS
545	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Shrubland	0,037	5,7594	10,08	Oct. 1966	Nov. 1967	1,0	90	2,13	4165	1458	GS
546	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Shrubland	0,037	5,7594	10,08	Nov. 1968	Nov. 1969	1,0	90	2,25	4410	1544	GS
547	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Shrubland	0,037	5,7594	10,08	Nov. 1969	Nov. 1970	1,0	90	0,75	1470	515	GS
548	63-16a.	Boco Mountain No. 3	Trib. Alkali Creek	Wolcott Colo	12,2	309,88	0,008	0,02072	Shrubland	0,037	5,7594	10,08	Nov. 1970	Oct. 1971	1,0	90	2,38	4665	1633	GS
549	78-10	Lambkin Pd	Trib of Boise R	Mount.Home, ID	10,1	256,54	0,19	0,49469	Shrubland	0,037	6,5726	11,52	sept-37	sept-47	10,0	70,0	0,0500	76	27	SCS

No.	Res. ID	Reservoir	Stream	Nearest town	Annual Rainfall		Dr Area		Land cover type	V factor	Slope		Date of survey		Surv. Per. (yrs)	Spec. Wt (lb/ft^3)	Specific degradation			Agcy suppl. data
					(in)	(mm)	(mi^2)	(km^2)			degree	(%)	Starts	Ends			(AF/mi^2 yr)	(T/mi^2 yr)	(T/km^2 yr)	
550	78-11	Mud Springs Pd	Trib of Boise R	Mount.Home, ID	10,1	256,54	1,06	2,7454	Shrubland	0,037	6,5726	11,52	sept-35	sept-47	12,0	70,0	0,0300	46	16	SCS
551	78-12	J. J. Colton Pd	Trib of Boise R	Mount.Home, ID	10,1	256,54	0,48	1,25097	Shrubland	0,037	6,5726	11,52	sept-35	oct-47	12,0	70,0	0,0400	61	21	SCS

C/ The Langbein and Schumm dataset

Table 1: Group averages for data at sediment stations

Range in effective precipitation	**Number of records in each group**	**Average effective precipitation**	**Average yield**
(in)		(in)	Tons/mi^2
Less than 10	9	8	670
10 to 15	17	12.5	780
15 to 20	18	17.5	550
20 to 30	20	24	550
30 to 40	15	35	400
40 to 60	15	50	220

Table 2: Group averages for data at sediment stations

Range in effective precipitation	**Number of records in each group**	**Average effective precipitation**	**Average yield**	**Remarks**
(in)		**(in)**	**Tons/mi^2**	
8-9	31	8.5	2400	15 reservoirs in San Rafael Swell, Utah, and 16 in Badger Wash, Colo.
10	38	10	1180	26 reservoirs in Twenty mile Creek basin, Wyo., 7 in Cornfield

				Wash, N. Mex., and 5 general
11	12	11	1500	General
14-25	18	19	1130	General
25-30	10	27.5	1430	General, including debris basins in Southern Calif., considered as one observation
30-38	20	35.5	790	General
38-40	11	39	560	General
40-55	18	45	470	General
55-100	5	73	440	General

D/ The Fournier dataset

Stream	Location	Basin area (km^2)	Period of study	Specific degradation (t/km^2 year)
United States				
Atlantic tributaries				
St. Johns	At the mouth	19425	Mean annual value calculated using measurements taken before 1907	2.5
Penobscot	"	22015		2.8
Kennebec	"	15465		2.4
Merrimac	"	13000		2.4
Connecticut	"	28749		2.8
Hudson	"	36216		10
Delaware	"	34300		19
Passaic	"	2460		26
Raritan	"	2870		25.4
Susquehanna	"	71100		12.2
Potomac	"	37000		33.3
James	"	26936		33.1
Savannah	"	28749		81.2
Altamaha	"	36519		75.2
Golf of Mexico tributaries				
Apalachicola	"	48692		55.6
Mobile	"	109000		52.8
Sabine	Logansport, LA	12582	1932-1950	52.6
Neches	Rockland, TX	9166	1930-1950	46
Brazos	Richmond, TX	90157	1924-1950	350
Colorado	San Saba, TX	48433	1930-1950	85
Rio Grande	San Marcial,	64128	1897-1941	293

	NM			
Upper Mississippi Basin				
Minnesota	Shakopee, MN	41103	1932-1933	10
Sainte-Croix	Prescott, WI	19813	1932-1933	1
Chippewa	Durand, WI	23336	1932-1933	27
Black	Galesville, WI	5490	1932-1933	56.2
Root	Houston, MN	3315	1932-1933	249.5
Upper Iowa	New Albin, IA	2737	1932-1933	329
Iowa	Iowa City, IA	8598	Mean annual value calculated using measurements taken before 1907	26
Illinois	Kampsville, IL	69230		45
Mississippi Basin: Missouri Basin				
Marias	Loma, MT	23724	1929-1930	14.3
			1930-1931	10.6
Yellowstone	Glendive, MT	173271	1929-1930	130
			1930-1931	187.4
Cannonbal	Timmer, ND	9479	1929-1930	78
			1930-1931	4.5
Grand	Wakpala, SD	14669	1929-1930	50.8
			1930-1931	13.4
Niobrara	Verdel, NE	31857	1929-1930	27
			1930-1931	17.2
James	Scotland, SD	55814	1929-1930	41
			1930-1931	12
Little Sioux	Correctionville, IA	11033	1929-1930	36

			1930-1931	0.88
Elkorn	Waterloo, NE	16990	1929-1930	177.2
			1930-1931	280
Loup	Genoa, NE	35224	1929-1930	200
			1930-1931	127.7
Smoky Hill	Solomon, KS	49728	1929-1930	49.6
			1930-1931	22.4
Saline	Tescott, KS	7459	1929-1930	23.2
			1930-1931	46.3
Solomon	Nile, KS	17871	1929-1930	54.8
			1930-1931	40.8
Republican	Wakefield, KS	65527	1929-1930	76.1
			1930-1931	49.5
Big Blue	Randolf, KS	24242	1929-1930	216
			1930-1931	75.6
Grand	Gallatin, MO	5825	1929-1930	508
			1930-1931	82
Thompson	Trenton, MO	4351	1929-1930	907
			1930-1931	181.4
Mississippi Basin: Ohio Basin				
Allegheny	Brilliant, PA	28749	Mean annual	23
Youghiogeny	Mc. Keesport, PA	4584	Value calculated	142
Monongahela	At the confluence with Ohio	19735	Using measurements taken before 1907	78.3
Kanawha		28490		69.5
Big Sandy		10360		77.2
Scioto		16576		26.2

Linking		8547		85
Kentucky		20383		85
Mississippi Basin: Arkansas Basin				
Cimarron	Guthrie, OK	41440	1930-1931	127
Colorado Basin				
Colorado	Cisco, UT	62419	1930-1931	257
Green	Green River, UT	105154	1930-1941	243
San Juan	Bluff, UT	61901	1928-1941	853
	Mexico			
Rio San Juan	Santa Rosalia (Tamaulipas)	31113	1934-1941	156
France				
Seine	Paris	44400	1863-1866	17
Isere	Grenoble	5380	Annual studies	615
Drac	Grenoble	3590	discontinued	780
Garonne	Toulouse	10000	1839-1846	250
Italy				
Po	Casalmaggiore	53460	1928-1935	300
Adige	Trente	9763	1932-1935	160
Tibre	Roma	16545	1930-1935	473
Switzerland				
Alps Rhine	Lustenau	5800	1893-1912	843
Alps Rhone	Porte de Scex	5220	1904-1905	853
Hungary				
Tisza	Confluent with Danube?	156250	Mean annual value for an unknown time period	64
Iraq				

Tigris	Baghdad	80000	1918-1919	654
India				
Indus	Kotri	960000	1902-1925	455
Ganges	At the delta	1060000	1874-1879	1400
Irrawady	At the delta	873000	1869-1879	700
China				
Hoang-ho	Sanchow	715630	1934	2490
			1935	2163
Lo-ho	Loyang	10600	1934	1127
			1935	6068
Whei-ho	Huachow	145000	1935	3369
Hai-ho	Pengpu(?)	250000	Mean annual value for an unknown time period	
Yangtze-kiang	Chikiang	1025000	1912-1922(?)	420
Sikiang	Wuchow	400000	Mean annual value for an unknown period	660

E/ Discrepancy ratios calculations for equations with R as independent variable

Class	R (mm)			SD_{obs}	Predicted SD (t/km^2/yr)					Discrepancy Ratio, R				
	Lower rainfall bound	Upper rainfall bound	Avg.		Proposed Eq.	Langbein & Schumm res. Data	Langbein & Schumm sta. data	Wilson	Fournier	Proposed Eq.	Langbein & Schumm res. Data	Langbein & Schumm sta. Data	Wilson	Fournier
1	168	229	198	249	38	238	480	136	1141	0,15	0,96	1,93	0,55	4,58
2	229	246	237	431	60	272	549	163	1019	0,14	0,63	1,27	0,38	2,36
3	246	295	271	210	82	284	571	186	922	0,39	1,35	2,72	0,88	4,38
4	295	334	315	101	115	282	568	216	800	1,15	2,80	5,65	2,15	7,96
5	334	394	364	142	156	268	540	250	673	1,10	1,89	3,80	1,76	4,74
6	394	418	406	214	193	253	509	279	574	0,90	1,18	2,38	1,30	2,69
7	418	467	442	95	225	238	480	304	494	2,36	2,50	5,03	3,19	5,18
8	467	511	489	160	264	221	445	336	400	1,65	1,38	2,78	2,10	2,50
9	511	566	538	219	304	204	411	370	311	1,39	0,93	1,88	1,69	1,42
10	566	620	593	351	343	187	377	408	225	0,98	0,53	1,07	1,16	0,64
11	620	673	646	251	376	173	349	444	154	1,50	0,69	1,39	1,77	0,61
12	673	683	678	365	393	165	333	466	118	1,08	0,45	0,91	1,28	0,32
13	683	721	702	446	405	160	322	483	93	0,91	0,36	0,72	1,08	0,21
14	721	775	748	633	422	151	303	514	53	0,67	0,24	0,48	0,81	0,08
15	775	823	799	486	437	141	284	549	20	0,90	0,29	0,58	1,13	0,04
16	823	846	834	509	444	135	272	488	3	0,87	0,27	0,53	0,96	0,01
17	846	881	864	517	448	131	263	435	1	0,87	0,25	0,51	0,84	0,00
18	881	914	898	517	450	126	253	373	1	0,87	0,24	0,49	0,72	0,00
19	914	940	927	455	450	122	245	320	1	0,99	0,27	0,54	0,70	0,00
20	940	963	951	393	449	119	239	276	1	1,14	0,30	0,61	0,70	0,00
21	963	988	975	511	447	116	233	232	1	0,87	0,23	0,46	0,45	0,00
22	988	1016	1002	438	444	113	227	189	1	1,01	0,26	0,52	0,43	0,00
23	1016	1041	1029	322	440	110	221	214	11	1,37	0,34	0,69	0,67	0,03
24	1041	1089	1065	280	433	106	213	249	31	1,55	0,38	0,76	0,89	0,11
25	1089	1148	1119	388	419	101	203	299	71	1,08	0,26	0,52	0,77	0,18
26	1148	1207	1177	307	402	96	193	353	129	1,31	0,31	0,63	1,15	0,42
27	1207	1326	1266	261	371	89	179	436	246	1,42	0,34	0,69	1,67	0,94
28	1326	1400	1363	549	334	82	166	527	412	0,61	0,15	0,30	0,96	0,75
29	1400	2243	1821	256	167	61	123	784	1762	0,65	0,24	0,48	3,07	6,89

F/ Discrepancy ratios calculations for equations with A as independent variable

Class	Avg. A	Mean SD_{obs}	Proposed Eq.		Scott et al.		Fleming		Strand		Khosla		Joglekar		Lahlou1		Lahlou2	
			SD	R	SD	R	SD	R	SD	R	SD	R	SD	R	SD	R	SD	R
1	0,1	631	519	0,82	8368	13,26	156	0,25	6848	10,85	17756	28,14	29667	47,01	22253	35,26	3900	6,18
2	0,2	600	470	0,78	6591	10,99	149	0,25	5311	8,85	13013	21,69	22731	37,89	18223	30,38	3376	5,63
3	0,4	494	450	0,91	5936	12,01	146	0,30	4750	9,62	11354	22,98	20222	40,93	16693	33,79	3169	6,41
4	0,5	484	440	0,91	5634	11,64	145	0,30	4493	9,29	10607	21,92	19077	39,42	15979	33,02	3070	6,34
5	0,6	446	429	0,96	5303	11,89	143	0,32	4213	9,44	9803	21,98	17831	39,97	15190	34,05	2960	6,64
6	0,8	383	419	1,09	5003	13,07	141	0,37	3960	10,35	9088	23,74	16710	43,66	14468	37,80	2858	7,47
7	1,1	323	408	1,26	4708	14,59	140	0,43	3711	11,50	8395	26,02	15611	48,38	13748	42,61	2754	8,54
8	1,3	346	400	1,15	4479	12,94	138	0,40	3520	10,17	7869	22,73	14769	42,67	13188	38,10	2673	7,72
9	1,6	328	393	1,20	4311	13,13	137	0,42	3379	10,29	7485	22,80	14149	43,11	12771	38,91	2611	7,96
10	2,0	300	385	1,28	4092	13,65	136	0,45	3196	10,66	6994	23,33	13349	44,52	12225	40,77	2530	8,44
11	2,6	424	377	0,89	3902	9,21	135	0,32	3039	7,17	6575	15,52	12661	29,89	11750	27,74	2459	5,81
12	3,1	259	371	1,44	3754	14,51	134	0,52	2916	11,27	6251	24,17	12124	46,87	11374	43,97	2402	9,29
13	3,8	263	364	1,38	3575	13,61	132	0,50	2768	10,54	5866	22,34	11482	43,72	10919	41,58	2332	8,88
14	4,9	412	356	0,86	3394	8,24	131	0,32	2619	6,36	5482	13,31	10835	26,31	10454	25,39	2260	5,49
15	6,3	373	348	0,93	3215	8,63	130	0,35	2472	6,63	5109	13,71	10199	27,36	9991	26,80	2187	5,87
16	8,0	333	340	1,02	3049	9,14	128	0,38	2336	7,01	4767	14,30	9612	28,82	9556	28,66	2118	6,35
17	10,2	408	333	0,82	2896	7,09	127	0,31	2212	5,42	4458	10,92	9075	22,22	9153	22,41	2053	5,03
18	13,4	239	325	1,36	2730	11,41	125	0,52	2077	8,68	4129	17,26	8497	35,52	8712	36,42	1981	8,28
19	19,2	479	315	0,66	2528	5,28	124	0,26	1914	3,99	3735	7,80	7798	16,28	8169	17,05	1891	3,95
20	26,7	311	305	0,98	2356	7,57	122	0,39	1775	5,70	3407	10,95	7207	23,16	7700	24,74	1812	5,82
21	40,9	312	294	0,94	2148	6,89	120	0,38	1609	5,16	3022	9,69	6504	20,84	7129	22,85	1714	5,49
22	84,5	265	275	1,04	1839	6,95	116	0,44	1363	5,15	2468	9,32	5466	20,65	6257	23,64	1560	5,89
23	160,4	269	260	0,97	1602	5,96	113	0,42	1177	4,38	2062	7,67	4686	17,43	5576	20,73	1435	5,34
24	369,7	417	241	0,58	1339	3,21	109	0,26	972	2,33	1632	3,92	3835	9,21	4798	11,52	1288	3,09
25	764,7	224	226	1,01	1145	5,10	106	0,47	823	3,67	1332	5,93	3221	14,35	4209	18,75	1172	5,22
26	1664,7	162	211	1,30	969	5,96	102	0,63	689	4,24	1071	6,59	2673	16,45	3659	22,53	1059	6,52
27	3165,0	145	199	1,37	844	5,81	99	0,69	595	4,10	895	6,16	2291	15,78	3260	22,46	974	6,71
28	5784,8	151	188	1,25	741	4,90	97	0,64	518	3,43	756	5,00	1982	13,12	2924	19,35	901	5,96
29	48714,0	180	155	0,86	469	2,60	89	0,49	318	1,76	416	2,31	1189	6,59	1993	11,04	683	3,78

G/ Dataset used to validate the equation with R as independent variable

#	Source of data	Watershed	A		R	Obs. SD
			mi^2	km^2	mm	metric $t/km^2/yr$
1	USGS	USGS 09427520 COLORADO RIVER BELOW PARKER DAM, CA-AZ	178700	462833	76,2	0,05
2	USGS	USGS 09415230 Virgin R ab Halfway Wash nr Riverside, NV	5890	15255,1	105,4	17,50
3	USGS	USGS 11013500 TIJUANA R NR NESTOR CA	1695	4390,05	189,6	44,26
4	USGS	USGS 06853800 WHITE ROCK C NR BURR OAK, KS	227	587,93	201,4	186,93
5	USGS	USGS 08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM	23830	61719,7	201,4	137,12
6	USGS	USGS 08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM	19230	49805,7	201,4	8,78
7	USGS	USGS 11022500 SAN DIEGO R NR SANTEE CA	377	976,43	237,2	29,97
8	USGS	USGS 09306290 WHITE RIVER BELOW BOISE CREEK, NEAR RANGELY, CO.	2530	6552,7	242,5	38,79
9	USGS	USGS 09306300 WHITE RIVER ABOVE RANGELY, CO.	2773	7182,07	242,5	32,53
10	USGS	USGS 09306380 DOUGLAS CREEK AT RANGELY, CO.	425	1100,75	242,5	29,87
11	USGS	USGS 10256000 WHITEWATER R A WHITEWATER CA	57,5	148,925	254	13828,38
12	USGS	USGS 06365900 CHEYENNE RIVER NR DULL CENTER WY	1527	3954,93	320,2	81,13
13	USGS	USGS 09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NR. KREMMLING, CO	145	375,55	324,8	84,27
14	USGS	USGS 06323000 PINEY CREEK AT KEARNY, WYO.	118	305,62	327,1	79,64
15	USGS	USGS 09471550 SAN PEDRO RIVER NEAR TOMBSTONE, ARIZ.	1730	4480,7	342,9	14,41
16	USGS	USGS 09470000 GILA RIVER AT WINKELMAN, ARIZ.	382	989,38	350,9	379,39
17	USGS	USGS 09470000 GILA RIVER AT WINKELMAN, ARIZ.	382	989,38	350,9	379,40
18	USGS	USGS 11116000 NF MATILIJA C A MATILIJA HOT SPRINGS CA	15,6	40,404	354,3	15008,72
19	USGS	USGS 09310600 ECCLES CANYON NEAR SCOFIELD, UTAH	5,5	14,245	357,3	206,81
20	USGS	USGS 09310700 MUD CREEK BL WINTER QUARTERS CANYON AT SCOFIELD,UT	29,1	75,369	357,3	84,54
21	USGS	USGS 07126300 PURGATOIRE RIVER NEAR THATCHER, CO.	1779	4607,61	468	174,71
22	USGS	USGS 07124410 PURGATOIRE RIVER BELOW TRINIDAD LAKE, CO.	672	1740,48	468	588,57
23	USGS	USGS 09343000 RIO BLANCO NEAR PAGOSA SPRINGS, CO.	58	150,22	506,4	238,92
24	USGS	USGS 06848000 PRAIRIE DOG C AT NORTON, KS	684	1771,56	545,4	1396,41
25	USGS	USGS 16031000 WAIMEA RIVER NR WAIMEA, KAUAI, HI	57,8	149,702	609,3	252,03
26	USGS	USGS 11051500 SANTA ANA R NR MENTONE CA	210	543,9	772,6	206,88
27	USGS	USGS 10336672 WARD C TRIB NR TAHOE PINES CA	0,89	2,3051	817,6	899,45
28	USGS	USGS 10336660 BLACKWOOD C NR TAHOE CITY CA	11,2	29,008	817,6	1401,61
29	USGS	USGS 10336676 WARD C AT HWY 89 NR TAHOE PINES CA	9,7	25,123	817,6	1859,54
30	USGS	USGS 10336780 TROUT C NR TAHOE VALLEY CA	36,7	95,053	817,6	31,52
31	USGS	USGS 04026190 SAND RIVER NEAR RED CLIFF, WI	28,2	73,038	820,9	1404,10
32	USGS	USGS 06814000 TURKEY C NR SENECA, KS	276	714,84	844,4	5717,88
33	USGS	USGS 05387500 Upper Iowa River at Decorah, IA	511	1323,49	864,8	639,73
34	USGS	USGS 01595300 ABRAM CREEK AT OAKMONT, WV	42,6	110,334	931,9	339,11
35	USGS	USGS 01599500 NEW CREEK NEAR KEYSER, WV	46,5	120,435	931,9	518,81
36	USGS	USGS 01604500 PATTERSON CREEK NEAR HEADSVILLE, WV	211	546,49	931,9	879,38
37	USGS	USGS 03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IND	58,7	152,033	1020,8	495,76

#	Source of data	Watershed	A		R	Obs. SD
			mi^2	km^2	mm	metric $t/km^2/yr$
38	USGS	USGS 03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IND.	200	518	1020,8	334,28
39	USGS	USGS 03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IND	58	150,22	1020,8	495,76
40	USGS	USGS 03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IND.	200	518	1020,8	334,28
41	USGS	USGS 03276700 SOUTH HOGAN CREEK NEAR DILLSBORO, IND.	38,1	98,679	1037,3	12,60
42	USGS	USGS 03291780 INDIAN-KENTUCK CREEK NR CANAAN, IND.	27,5	71,225	1113,7	72,28
43	USGS	USGS 01331500 HOOSIC RIVER AT ADAMS, MA	46,7	120,953	1123,2	68,99
44	USGS	USGS 02132000 LYNCHES RIVER AT EFFINGHAM, S. C.	1030	2667,7	1156,4	1,15
45	USGS	USGS 01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA	258	668,22	1194,9	9,51
46	USGS	USGS 03568933 LOOKOUT CREEK NEAR NEW ENGLAND, GA	149	385,91	1320	140,31
47	USGS	USGS 02449000 TOMBIGBEE RIVER AT GAINESVILLE, AL	8632	22356,88	1350,9	71,10
48	USGS	USGS 02450000 MULBERRY FORK NEAR GARDEN CITY, AL.	365	945,35	1404,8	167,88
49	USGS	USGS 02236000 ST. JOHNS RIVER NR DELAND, FLA.	3070	7951,3	1423,6	1,22
50	USGS	USGS 03275000 WHITEWATER RIVER NEAR ALPINE, IN	522	1351,98	1522,2	251,86
51	USGS	USGS 10336630 EAGLE C NR CAMP RICHARDSON CA	6,38	16,5242	1742,1	44,99
52	USGS	USGS 50010500 RIO GUAJATACA AT LARES, PR	3,16	8,1844	2338,7	3,09
53	USGS	USGS 16717000 Honolii Stream nr Papaikou, HI	11,6	30,044	3526,4	19,62
54	USGS	USGS 12039300 NORTH FORK QUINAULT R NEAR AMANDA PARK, WASH.	74,1	191,919	3549,1	29,27
55	USGS	USGS 16618000 Kahakuloa Stream near Honokohau, Maui, HI	3,47	8,9873	3673,2	7,36

H/ Dataset used to validate the equation with A as independent variable

#	Source of data	River/Watershed	Station	A (km^2)	SD ($t/km^2/yr$)			
					Observed	Predicted	95% Lower limit	95% Upper limit
1	Jansen	Amazon	Mouth	7,E+06	129	99	9	388
2	Jansen	Mississippi	Mouth	4,E+06	77	105	9	417
3	Jansen	Congo	Mouth	4,E+06	19	105	9	419
4	Jansen	La Plata/Parana	Mouth	3,E+06	30	107	9	430
5	Jansen	Ob	Delta	3,E+06	5	107	9	430
6	Jansen	Nile	Mouth	3,E+06	28	108	9	432
7	Jansen	Yenissei	Mouth	3,E+06	4	109	9	437
8	Jansen	Lena	Mouth	2,E+06	5	109	9	442
9	Jansen	Amur	Mouth	2,E+06	25	111	9	449
10	Jansen	Yangtse Kiang	Mouth	2,E+06	278	112	9	457
11	Jansen	Wolga	Mouth	2,E+06	17	114	9	467
12	Jansen	Missouri	Mouth	1,E+06	143	115	9	471
13	Jansen	Zambesi	Mouth	1,E+06	77	116	10	475
14	Jansen	St. Lawrence	Mouth	1,E+06	8	116	10	475
15	Jansen	Niger	Mouth	1,E+06	36	117	10	485
16	Jansen	Murray-Darling	Mouth	1,E+06	27	117	10	485
17	Jansen	Ganges	Delta	1,E+06	1 500	118	10	490
18	Jansen	Indus	Mouth	1,E+06	417	119	10	493
19	Jansen	Orinoco	Mouth	1,E+06	95	119	10	493
20	Jansen	Orange River	Mouth	8,E+05	181	120	10	502
21	Jansen	Danube	Mouth	8,E+05	82	121	10	502
22	Jansen	Mekong	Mouth	8,E+05	100	121	10	504
23	Jansen	Hwang HO	Mouth	8,E+05	2 468	121	10	506
24	Jansen	Brahmaputra	Mouth	6,E+05	1 141	123	10	517
25	Jansen	Dnjepr	Mouth	5,E+05	3	127	10	538
26	Jansen	Irrawaddi	Mouth	4,E+05	732	128	10	546
27	Jansen	Rhine	Delta	4,E+05	2	130	10	554
28	Jansen	Magdalena (Columbia)	Calamar	3,E+05	786	133	10	571
29	Jansen	Vistula (Poland)	Mouth	2,E+05	8	137	10	599
30	Jansen	Kura (USSR)	Mouth	2,E+05	206	138	10	602
31	Jansen	Chao Phya (Thailand)	Mouth	2,E+05	69	140	11	611
32	Jansen	Oder (Germany/Poland)	Mouth	1,E+05	1	144	11	639
33	Jansen	Rhone (France)	Mouth	1,E+05	104	146	11	650
34	Jansen	Po (Italy)	Mouth	7,E+04	214	150	11	675
35	Jansen	Ishikari (Japan)	Mouth	2,E+04	375	172	12	806
36	Jansen	Tiber (Italy)	Mouth	1,E+04	138	175	12	826
37	Jansen	Tone (Japan)	Matsudo	1,E+04	250	176	12	834
38	Jansen	Waipapa (New Zealand)	Kanakanala	2,E+03	6 875	211	13	1062
39	USGS	USGS 09427520 COLORADO RIVER BELOW PARKER DAM, CA-AZ		462833	0,05	127	10	538

40	USGS	USGS 09415230 Virgin R ab Halfway Wash nr Riverside, NV		15255,1	17,50	172	12	810
41	USGS	USGS 11013500 TIJUANA R NR NESTOR CA		4390,05	44,26	193	13	941
42	USGS	USGS 06853800 WHITE ROCK C NR BURR OAK, KS		587,93	186,93	231	14	1197
43	USGS	USGS 08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM		61719,7	137,12	152	11	685
44	USGS	USGS 08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM		49805,7	8,78	155	11	703
45	USGS	USGS 11022500 SAN DIEGO R NR SANTEE CA		976,43	29,97	221	14	1127
46	USGS	USGS 09306290 WHITE RIVER BELOW BOISE CREEK, NEAR RANGELY, CO.		6552,7	38,79	186	12	897
47	USGS	USGS 09306300 WHITE RIVER ABOVE RANGELY, CO.		7182,07	32,53	185	12	887
48	USGS	USGS 09306380 DOUGLAS CREEK AT RANGELY, CO.		1100,75	29,87	219	14	1111
49	LAHLOU	GHRIB, ALGERIA		190	110,00	256	15	1371
50	USGS	USGS 10256000 WHITEWATER R A WHITEWATER CA		148,925	13828,38	262	15	1412
51	USGS	USGS 06365900 CHEYENNE RIVER NR DULL CENTER WY		3954,93	81,13	195	13	953
52	USGS	USGS 09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NR. KREMMLING, CO		375,55	84,27	241	14	1264
53	USGS	USGS 06323000 PINEY CREEK AT KEARNY, WYO.		305,62	79,64	245	14	1295
54	USGS	USGS 09471550 SAN PEDRO RIVER NEAR TOMBSTONE, ARIZ.		4480,7	14,41	193	13	938
55	LAHLOU	BOU HERTMA, ALGERIA		390	160,00	240	14	1258
56	USGS	USGS 09470000 GILA RIVER AT WINKELMAN, ARIZ.		989,38	379,39	221	14	1125
57	USGS	USGS 09470000 GILA RIVER AT WINKELMAN, ARIZ.		989,38	379,40	221	14	1125

58	USGS	USGS 11116000 NF MATILIJA C A MATILIJA HOT SPRINGS CA		40,404	15008,72	294	16	1651
59	USGS	USGS 09310600 ECCLES CANYON NEAR SCOFIELD, UTAH		14,245	206,81	323	17	1871
60	USGS	USGS 09310700 MUD CREEK BL WINTER QUARTERS CANYON AT SCOFIELD,UT		75,369	84,54	278	15	1532
61	LAHLOU	MOHAMED V, MOROCCO		49920	240,00	155	11	703
62	LAHLOU	AL MASSIRA, MOROCCO		28500	260,00	163	12	752
63	USGS	USGS 07126300 PURGATOIRE RIVER NEAR THATCHER, CO.		4607,61	174,71	192	13	935
64	USGS	USGS 07124410 PURGATOIRE RIVER BELOW TRINIDAD LAKE, CO.		1740,48	588,57	210	13	1051
65	USGS	USGS 09343000 RIO BLANCO NEAR PAGOSA SPRINGS, CO.		150,22	238,92	261	15	1410
66	USGS	USGS 06848000 PRAIRIE DOG C AT NORTON, KS		1771,56	1396,41	209	13	1049
67	LAHLOU	LALLA TAKERKOUST, MOROCCO		1710	350,00	210	13	1053
68	USGS	USGS 16031000 WAIMEA RIVER NR WAIMEA, KAUAI, HI		149,702	252,03	262	15	1411
69	USGS	USGS 11051500 SANTA ANA R NR MENTONE CA		543,9	206,88	233	14	1209
70	USGS	USGS 10336672 WARD C TRIB NR TAHOE PINES CA		2,3051	899,45	381	18	2328
71	USGS	USGS 10336660 BLACKWOOD C NR TAHOE CITY CA		29,008	1401,61	303	16	1718
72	USGS	USGS 10336676 WARD C AT HWY 89 NR TAHOE PINES CA		25,123	1859,54	307	16	1748
73	USGS	USGS 10336780 TROUT C NR TAHOE VALLEY CA		95,053	31,52	272	15	1490
74	USGS	USGS 04026190 SAND RIVER NEAR RED CLIFF, WI		73,038	1404,10	279	16	1538
75	USGS	USGS 06814000 TURKEY C NR SENECA, KS		714,84	5717,88	227	14	1170
76	USGS	USGS 05387500 Upper Iowa River at Decorah, IA		1323,49	639,73	215	13	1086

77	USGS	USGS 01595300 ABRAM CREEK AT OAKMONT, WV		110,334	339,11	269	15	1464
78	USGS	USGS 01599500 NEW CREEK NEAR KEYSER, WV		120,435	518,81	267	15	1448
79	USGS	USGS 01604500 PATTERSON CREEK NEAR HEADSVILLE, WV		546,49	879,38	233	14	1208
80	USGS	USGS 03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IND		152,033	495,76	261	15	1408
81	USGS	USGS 03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IND.		518	334,28	234	14	1216
82	USGS	USGS 03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IND		150,22	495,76	261	15	1410
83	USGS	USGS 03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IND.		518	334,28	234	14	1216
84	USGS	USGS 03276700 SOUTH HOGAN CREEK NEAR DILLSBORO, IND.		98,679	12,60	271	15	1483
85	USGS	USGS 03291780 INDIAN-KENTUCK CREEK NR CANAAN, IND.		71,225	72,28	280	16	1543
86	USGS	USGS 01331500 HOOSIC RIVER AT ADAMS, MA		120,953	68,99	267	15	1448
87	USGS	USGS 02132000 LYNCHES RIVER AT EFFINGHAM, S. C.		2667,7	1,15	202	13	999
88	USGS	USGS 01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA		668,22	9,51	229	14	1179
89	USGS	USGS 03568933 LOOKOUT CREEK NEAR NEW ENGLAND, GA		385,91	140,31	240	14	1259
90	USGS	USGS 02449000 TOMBIGBEE RIVER AT GAINESVILLE, AL		22356,9	71,10	167	12	774
91	USGS	USGS 02450000 MULBERRY FORK NEAR GARDEN CITY, AL.		945,35	167,88	222	14	1131
92	USGS	USGS 02236000 ST. JOHNS RIVER NR DELAND, FLA.		7951,3	1,22	183	12	876

93	GUYOT	MAMORE AT GUAYARAMERIN, BRAZIL		159100	290,00	140	11	611
94	USGS	USGS 03275000 WHITEWATER RIVER NEAR ALPINE, IN		1351,98	251,86	215	13	1084
95	GUYOT	MADEIRA AT VILLABELLA, BRAZIL		881900	320,00	120	10	498
96	GUYOT	MAMORE AT PUERTO VARADOR, BRAZIL		159100	220,00	140	11	611
97	USGS	USGS 10336630 EAGLE C NR CAMP RICHARDSON CA		16,5242	44,99	319	17	1838
98	GUYOT	ITENEZ AT VULETA GRANDE, BRAZIL		354300	110,00	130	10	555
99	GUYOT	ARIPUANA AT PRAINHA, BRAZIL		108600	110,00	145	11	640
100	USGS	USGS 50010500 RIO GUAJATACA AT LARES, PR		8,1844	3,09	340	17	2000
101	USGS	USGS 16717000 Honolii Stream nr Papaikou, HI		30,044	19,62	302	16	1711
102	USGS	USGS 12039300 NORTH FORK QUINAULT R NEAR AMANDA PARK, WASH.		191,919	29,27	256	15	1370
103	USGS	USGS 16618000 Kahakuloa Stream near Honokohau, Maui, HI		8,9873	7,36	337	17	1978