Dec. 13, 1960
Financing Information +
other project Info. +
Correspondence

Contour Survey

Proposed Reservoir Site

The Cons. Home Supply
Ditch & Res. Co.
Estes Park Rte.
Loveland, Colo.
Mr. W. R. Keirnes - Home Supply Watershed
Mr. John H. Sloan - "   "   "
Mr. Gus G. Abrams - Handy Ditch Company
Mr. Neil Hamilton, Pres. - Big Thompson Soil Conservation Dist.

Gentlemen:

Mr. Fred A. Mark, State Conservationist of the Soil Conservation Service and the Watershed Party from Denver, Colorado, would like to meet with you on Wednesday, December 4th, at 9:30 A.M. in the Soil Conservation Service Office, 1312 East 14th Street, Loveland, Colorado.

The purpose of the meeting is to review changes that have been made by the Washington Office in relation to on the farm practices and A.C.P. cost sharing.

It is hoped that each Company will have a representative or their complete Board present at this time.

Sincerely yours,

Chris A. Weber, W.U.C.

cc - Mr. Fred A. Mark
Mr. R. G. Wilson
As made and entered into this 4th day of October, 1963, by and between the Consolidated Home Supply Ditch & Reservoir Company, a Corporation, party of the first part, hereinafter called lessor (whether one or more) and Charles O. Hile, Box 550, Boulder, Colorado, party of the second part, lessee.

Be it known and mutually agreed that for and in consideration of the premises it is hereby mutually agreed as follows:

1. The lessee shall have the right to use, free of cost, the water on the land by making his own connections with the well, the use of said water to be at the lessor's sole risk and expense.

2. The lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor. When requested by lessor, lessee shall bury his pipe lines below plow depth.

3. The lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor. When requested by lessor, lessee shall bury his pipe lines below plow depth.

4. The lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor. When requested by lessor, lessee shall bury his pipe lines below plow depth.

5. The lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor. When requested by lessor, lessee shall bury his pipe lines below plow depth.

6. The lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor. When requested by lessor, lessee shall bury his pipe lines below plow depth.

7. The lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor. When requested by lessor, lessee shall bury his pipe lines below plow depth.

8. If the lessee shall commence to drill a well within the term of this lease or any extension thereof, the lessee shall have the right to drill such well with the like effect as if such well had been completed within the term of years herein first mentioned.

9. If the lease shall cease or terminate as to both parties, unless or until operations for the drilling of a well shall be commenced by the lessor or the lessee, this lease shall not terminate, provided operations for the drilling of a well shall be commenced before or on the next ensuing rental paying date; or, provided the lessee begins or resumes the payment of rentals in the manner and amount above herein provided; and in this event the preceding paragraphs hereof governing the payment of rentals and the manner and effect thereof shall continue in force.

10. If the leased premises shall hereafter be owned in severalty, or in separate tracts, the premises, nevertheless, shall be held as a part or parts of said lands upon which the said lessee or any assignee hereof shall make due payment of said rentals.

11. If at any time there be as many as six parties (or more) entitled to receive royalties under this lease, lessor may withhold payment thereof unless and until the lessee has tendered to the lessee the rents from the premises hereunder as tendered or payable hereunder.

12. The lessee agrees that all operations shall be conducted in such a manner as not to affect or impair the use of the water in the reservoir of the lessor for irrigation or domestic purposes. Lessor further agrees to pay all damages resulting from such affect or impairment of use.

13. If at any time any of the above named lessors, in the manner herein stated, shall not conduct drilling operations therein and shall not produce oil or gas or casinghead gas, to be a part of all oil produced and saved from the leased premises, or at the lessee's option, may pay to the lessor for such one-eighth (%) royalty the market price of the recovered gas and oil or casinghead gas.

14. Lessor hereby warrants and agrees to defend the title to the land herein described and agrees that the lessee, at its expense, shall have the right to unitize, pool, or combine all or any part of the above described lands with other lands for the purpose of developing the oil and gas deposited or to be deposited thereon to the extent hereby provided for.

15. If the lessee shall not commence to drill a well within the term of this lease or any extension thereof, the lessee shall hereafter be operated upon such cooperative or unit plan of development or operation whereby the production thereon is allocated to different owners in the proportion that the acreage covered hereby is reduced by said release or releases, and the lessee shall pay to the lessor for such one-eighth (%) royalty the market price of the recovered gas and oil or casinghead gas.

16. If within the primary term of this lease production on the leased premises shall cease from any cause, this lease shall not terminate, provided operations for the drilling of a well shall be commenced by the next ensuing paying date, or provided the lessee begins or resumes the payment of rentals in the manner provided above shall be binding on the heirs, devisees, executors and administrators of such lessee.

17. If at any time any of the above named lessors, in the manner herein stated, shall not conduct drilling operations therein and shall not produce oil or gas or casinghead gas, to be a part of all oil produced and saved from the leased premises, or at the lessee's option, may pay to the lessor for such one-eighth (%) royalty the market price of the recovered gas and oil or casinghead gas.

18. If at any time any of the above named lessors, in the manner herein stated, shall not conduct drilling operations therein and shall not produce oil or gas or casinghead gas, to be a part of all oil produced and saved from the leased premises, or at the lessee's option, may pay to the lessor for such one-eighth (%) royalty the market price of the recovered gas and oil or casinghead gas.

19. If at any time any of the above named lessors, in the manner herein stated, shall not conduct drilling operations therein and shall not produce oil or gas or casinghead gas, to be a part of all oil produced and saved from the leased premises, or at the lessee's option, may pay to the lessor for such one-eighth (%) royalty the market price of the recovered gas and oil or casinghead gas.

20. If at any time any of the above named lessors, in the manner herein stated, shall not conduct drilling operations therein and shall not produce oil or gas or casinghead gas, to be a part of all oil produced and saved from the leased premises, or at the lessee's option, may pay to the lessor for such one-eighth (%) royalty the market price of the recovered gas and oil or casinghead gas.

21. The lessee agrees that all operations shall be conducted in such a manner as not to affect or impair the use of the water in the reservoir of the lessor, and shall not terminate the lease for the drilling of a well shall be commenced or on the next ensuing rental paying date; or, provided lessee begins or resumes the payment of rentals in the manner and amount above herein provided.

22. The lessee further agrees to release this lease from the Larimer County Records at the expiration or termination of the lease.

Attest:
Secretary

President
ACKNOWLEDGMENT

STATE OF
County of

On this day of , 19 , before me personally appeared , to me known to be the person described in and who executed the foregoing instrument and acknowledged that executed the same as free act and deed.

Given under my hand and seal this day of , 19 .

My Commission Expires

ACKNOWLEDGMENT—MAN AND WIFE

STATE OF
County of

On this day of , 19 , before me personally appeared , to me known to be the person described in and who executed the foregoing instrument and acknowledged that executed the same as free act and deed, including the release and waiver of the right of homestead; the said wife having been by me fully apprised of her right and the effect of signing and acknowledging the said instrument.

Given under my hand and seal this day of , 19 .

My Commission Expires

MONTANA ACKNOWLEDGMENT

STATE OF
County of

On this day of , 19 , before me, a notary public, personally appeared , known to me to be the person whose name subscribed to the within instrument, and acknowledged to me that executed the same.

Witness my hand and official seal.

My Commission Expires

ACKNOWLEDGMENT

STATE OF
County of

The foregoing instrument was acknowledged before me this day of , 19 , by .

Witness my hand and official seal.

My Commission Expires

OIL AND GAS LEASE

No. TO

STATE OF
County of

This instrument was filed for record on the day of , 19 , and duly recorded in Book , Page , of the records of this office.

By

COLORADO ACKNOWLEDGMENT

STATE OF
County of

The foregoing instrument was acknowledged before me this day of , 19 , by .

Witness my hand and official seal.

My Commission Expires
Mr. R. W. Keirnes
Consolidated Home Supply Ditch and Reservoir Company
Estes Park Route
Loveland, Colorado

Benefit to cost ratios of various Colo. Watershed Projects

1963
Mr. R. W. Keirnes
Secretary-Manager
Consolidated Home Supply Ditch
and Reservoir Company
Loveland, Colorado

Subject: WATERSHED PLANNING — P. L. 566 Status
Colorado Watershed Applications

Dear Reggie:

There have been a total of 52 watershed applications received by the Colorado State Soil Conservation Board.

The present status of these are as follows:

<table>
<thead>
<tr>
<th>Status</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tabled by State Board for various reasons</td>
<td>11</td>
</tr>
<tr>
<td>Duplicate applications</td>
<td>2</td>
</tr>
<tr>
<td>Ineligible applications</td>
<td>2</td>
</tr>
<tr>
<td>Planning authority</td>
<td>19</td>
</tr>
<tr>
<td>Construction completed</td>
<td>-3</td>
</tr>
<tr>
<td>Under construction</td>
<td>-3</td>
</tr>
<tr>
<td>Approved for construction</td>
<td>-3</td>
</tr>
<tr>
<td>Project Pending — Congressional Approval</td>
<td>-1</td>
</tr>
<tr>
<td>Awaiting Sponsor Decisions</td>
<td>-4</td>
</tr>
<tr>
<td>Suspended due to sponsor inactivity</td>
<td>-5</td>
</tr>
<tr>
<td>Under preliminary investigation by Work Plan Staff</td>
<td>12</td>
</tr>
<tr>
<td>To be considered by State Soil Conservation Board</td>
<td>-6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
</tr>
</tbody>
</table>

The benefit-cost ratio of those projects that have reached the work plan stage are as follows:
<table>
<thead>
<tr>
<th>Project</th>
<th>Ratio</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wray Project</td>
<td>1.67 to 1.00</td>
<td>Completed</td>
</tr>
<tr>
<td>West Cherry Creek</td>
<td>1.49 to 1.00</td>
<td>Completed</td>
</tr>
<tr>
<td>Coalbank Creek</td>
<td>1.30 to 1.00</td>
<td>Completed</td>
</tr>
<tr>
<td>Big Sandy Creek</td>
<td>1.49 to 1.00*</td>
<td>Under Construction</td>
</tr>
<tr>
<td>Franktown-Parker Tributaries</td>
<td>1.44 to 1.00</td>
<td>Under Construction</td>
</tr>
<tr>
<td>Fishers Peak - Carbon Arroyos</td>
<td>1.80 to 1.00</td>
<td>Under Construction</td>
</tr>
<tr>
<td>Vineland Project</td>
<td>1.52 to 1.00</td>
<td>No Construction</td>
</tr>
<tr>
<td>Indian Wash Project</td>
<td>1.38 to 1.00</td>
<td>In Congress</td>
</tr>
<tr>
<td>Limon Watershed</td>
<td>2.80 to 1.00</td>
<td>No Construction</td>
</tr>
<tr>
<td>Roatcap Wash Project</td>
<td>1.91 to 1.00</td>
<td>Just Approved</td>
</tr>
<tr>
<td>* Big Sandy Supplement</td>
<td>1.34 to 1.00</td>
<td>Under Construction</td>
</tr>
</tbody>
</table>

Hope that this will give you the needed information. Keep us informed of your progress and whether we can be of further service.

Kit Carson
Mr. W. R. Keirnes, Secretary-Manager
Consolidated Home Supply Ditch and Reservoir Co.
EstesPark Route
Loveland, Colorado
Mr. W. R. Keirnes, Secretary-Manager  
Consolidated Home Supply Ditch & Reservoir Co.  
Estes Park Route  
Loveland, Colorado  

Dear Mr. Keirnes:

Subject: Watershed Planning (PL 566) - Home Supply Watershed

The certified Articles of Incorporation, the Articles of Amendment to the Articles of Incorporation and By Laws of the Consolidated Home Supply Ditch and Reservoir Company have been reviewed by the Office of the General Counsel with respect to your qualification as a sponsoring agency of the Home Supply Watershed Protection and Flood Prevention Project.

The General Counsel has given me an opinion dated March 26, 1963 that you are qualified to act as a sponsoring agency for the Home Supply Watershed project under the requirements of the law and the applicable regulations.

As State Conservationist, I hereby approve the Consolidated Home Supply Ditch and Reservoir Company as a qualified sponsor.

Very truly yours,

[Signature]
F. A. Mark  
State Conservationist
At noon on October 31st, Northern Colorado Water Conservancy District completed the delivery of water for the irrigation season of 1963. In spite of the above normal rainfall of late August and early September, water users of the District area ordered and received deliveries which totalled 298,300 acre-feet for a season in which initial delivery commenced on April 15th and closed with the shut-down at noon Thursday.

The water released from the Colorado-Big Thompson system this year constituted the second highest delivered quantity in the history of District operation. The extreme drouth of 1954, with a water use of 301,486 acre-feet, retains its place as the year of record high delivery.

As the District Board had released a full quota of 310,000 acre-feet for delivery if demanded, actual usage amounted to 96.2% of the water quantity available on call. The 1963 net deliveries of 298,300 acre-feet plus system operational losses estimated at about 16,000, has meant the withdrawal of nearly 315,000 acre-feet from the project system this year.

With a 1963 subnormal snow pack and rainfall on the Upper Colorado River, the net conservation of water by the project's Western Slope storage system of Granby and Willow Creek Reservoirs amounted to only 168,000 acre-feet. In effect, then, District water usage depleted the system "savings account" storage by 147,000 acre-feet. Obviously, it was fortunate that Granby Reservoir remained nearly full at the close of the 1962 season so that the carry-over storage was sufficient to provide the needs which could not have been supplied by the inflows of the current year.

Actually, the value of sizeable carry-over capacity in Granby Reservoir is even better understood by noting the comparison between the net inflows, or conserved storage, of the past 10 years and the District's water uses of the same period. From 1954 through 1963, the average annual net inflow to Granby Reservoir has amounted to 231,900 acre-feet. Over the same 10 year period, water delivered by the District, including system transportation and evaporation losses, has averaged 244,100 acre-feet annually or 12,200 acre-feet per year more than the net production of the Western Slope system. This has been possible, of course, only because Granby contained a sizeable carry-over at the commencement of the 1954 season and because the District Board and the water users of the area have cooperated carefully in the annual usage of both local and project water supplies.

Naturally, it is hoped that the snow pack of the coming winter will be better than normal in order to offset the depletion of supply during 1963.

J. R. Barkley
Secretary-Manager
## Conservation and Use of Project Water Supplies

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Inflow to Granby</th>
<th>Spills</th>
<th>Total Water Supply</th>
<th>Water Delivered</th>
<th>System Losses</th>
<th>Total Water Accounted For</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>123,269</td>
<td>0</td>
<td>123,269</td>
<td>301,486</td>
<td>32,545</td>
<td>334,031</td>
</tr>
<tr>
<td>1955</td>
<td>175,142</td>
<td>0</td>
<td>175,142</td>
<td>238,062</td>
<td>18,646</td>
<td>256,708</td>
</tr>
<tr>
<td>1956</td>
<td>245,253</td>
<td>0</td>
<td>245,253</td>
<td>177,228</td>
<td>15,896</td>
<td>193,124</td>
</tr>
<tr>
<td>1957</td>
<td>417,512</td>
<td>17,813</td>
<td>435,325</td>
<td>122,872</td>
<td>9,798</td>
<td>132,670</td>
</tr>
<tr>
<td>1958</td>
<td>217,421</td>
<td>30,286</td>
<td>247,707</td>
<td>288,064</td>
<td>13,543</td>
<td>301,607</td>
</tr>
<tr>
<td>1959</td>
<td>221,133</td>
<td>0</td>
<td>221,133</td>
<td>232,993</td>
<td>12,002</td>
<td>244,995</td>
</tr>
<tr>
<td>1960</td>
<td>264,552</td>
<td>0</td>
<td>264,552</td>
<td>212,611</td>
<td>13,287</td>
<td>225,898</td>
</tr>
<tr>
<td>1961</td>
<td>258,911</td>
<td>0</td>
<td>258,911</td>
<td>132,394</td>
<td>4,289</td>
<td>136,683</td>
</tr>
<tr>
<td>1962</td>
<td>227,831</td>
<td>133,940</td>
<td>361,771</td>
<td>282,901</td>
<td>18,151</td>
<td>301,052</td>
</tr>
<tr>
<td>1963</td>
<td>167,978</td>
<td>0</td>
<td>168,000</td>
<td>298,285</td>
<td>16,000</td>
<td>314,285</td>
</tr>
<tr>
<td>10 Yr.</td>
<td>231,900</td>
<td>18,204</td>
<td>250,104</td>
<td>228,690</td>
<td>15,416</td>
<td>244,105</td>
</tr>
</tbody>
</table>

### Including Spills

- Avg. net inflow to Granby Reservoir: 250,104 A.F.
- Avg. water delivered plus system losses: 244,105 A.F.
- Avg. West Slope water supply in excess of use: 5,999 A.F.

### Exclusive of Spills

- Avg. water delivered plus system losses: 244,105 A.F.
- Avg. net inflow stored at Granby Res.: 231,900 A.F.
- Avg. deliveries in excess of conserved supply: 12,205 A.F.
Cons. Home Supply Ditch Company
% W. R. Keirnes
Estes Park Route
Loveland, Colorado
Gentlemen:

The recent years of rapid growth in the Western States have been accompanied by a corresponding increase in the installation of Federal Government facilities or facilities installed with Federal assistance. Inter-State highways, airports, defense installation, A.E.C. facilities are the more common ones.

Federal acquisition of lands has created problems for irrigation districts, irrigation companies or other water supplying agencies. Present federal law governing land acquisition imposes two distinct problems on such agencies:

(1) A water supplying agency is not reimbursed for any loss of revenue resulting from the transfer of land from private to public ownership, nor is compensation made for reduction in assessed value of land which often serves as security for outstanding indebtedness. (This primarily affects irrigation districts in Colorado.)

(2) Any water supplying organization may suffer a burden of increased operation and maintenance costs due to the federal installations. For example, a Federal or Federal-Aid Highway with limited access points can greatly increase the time and expense of ditch riding. Relocation of canals and structures sometimes effect major points of water delivery and changed patterns of land ownership may also cause a jump in the overall cost of water delivery.

These general problems have been discussed for the past several years by the Water Users Committee of the National Reclamation Association. The Committee, composed of one representative from each of the 17 Western States, recommended that appropriate corrective legislation be drafted and supported by the Association. A proposed bill, now apparently acceptable to the Departments of Interior, Agriculture and Defense, has been introduced in the House, H. R. 5565, by Congresswoman May of the State of Washington.
While the organizations which operate Federal Reclamation projects were the ones primarily affected in the Pacific Northwest, several of us insisted that the corrective legislation should equally protect the hundreds of private or mutual ditch companies throughout the West.

Section 5 of H. R. 5565, enclosed herewith, provides the protection which your ditch company should have.

If we are to succeed in getting enactment of this legislation, we must have the support of the officers or directors of ditch companies which may be affected by future federal right-of-way acquisitions. Hearings on H. R. 5565 will probably be held sometime in August.

I sincerely believe it will be most worthwhile if your company will immediately voice its support by communications to our Congressional delegates in the Congress. Without a good showing of support, this proposed legislation could die for lack of interest.

Sincerely yours

J. R. Barkley
Chairman
Water Users Committee

JRB:ls
IN THE HOUSE OF REPRESENTATIVES

APRIL 9, 1963

Mrs. May introduced the following bill; which was referred to the Committee on Interior and Insular Affairs

A BILL

To provide for the payment of debt service construction charges, and increased operation and maintenance charges when irrigable lands are taken for nonagricultural uses under Federal programs.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That whenever any lands on account of which construction charges or other charges would be payable to the United States under the Federal reclamation laws, the Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto, are included within any project, undertaking, or activity of any Federal agency and are acquired, withdrawn or reserved by said agency, including any lands
acquired by States or other public bodies under any authorized Federal assistance program, the Secretary shall dispose of water formerly made available to such lands and shall negotiate corresponding adjustments in the construction charges attributable to respective landowners and water agencies. Wherever such dispositions shall be made within the affected water agency's original or amended boundaries, to the extent that construction charges determined by the Secretary to be attributable to such lands cannot be transferred in connection with disposal of water, the charges shall be non-reimbursable and nonreturnable.

SEC. 2. Whenever any project or division of a project, as defined in section 2 of the Reclamation Project Act of 1939 (53 Stat. 1187) is subject to the provisions of section 1 of this Act, the Secretary will consult with the local district to determine the effect of the proposed program of the Federal agency on any additional operation costs and advise the head of the Federal agency concerned of his findings. The Federal agency shall, to the extent determined reasonable and just by the Secretary and the Federal agency involved, transfer sufficient funds from any moneys available to the Federal agency for the program activity involved, including moneys available to other public bodies as Federal assistance, to the credit of the project under the jurisdiction of the Secretary, and which shall be utilized to reimburse the
water agency and the water users for such additional operation costs either annually or on a lump-sum basis.

SEC. 3. Whenever lands within a water agency are acquired by a Federal agency, or are acquired by a public body under any authorized Federal assistance program, the Federal agency or public body that acquires such land shall be liable to compensate the water agency for the loss of revenues to make payments on outstanding bonds or other obligations secured by the land taken and for additional operation costs attributable to the acquisition of the land:

Provided, That such compensation need not be made if the water agency is fully compensated under section 1 or 2 of this Act: And provided further, That any reasonable adjustment that the water agency can make in its service area and operations shall be taken into account in determining such compensation. Payments are authorized to be made for such compensation either annually or on a lump-sum basis, from any moneys available for the program activity involved, including moneys available to public bodies as Federal assistance. The amount of compensation shall be determined in the same manner and in the same proceedings as for other compensation for the acquisition of land by purchase or eminent domain.

SEC. 4. As used in this chapter, the following terms are hereby defined:
(a) "Lands" shall mean lands used for agricultural purposes and interests in lands used for agricultural purposes.

(b) "Secretary" shall mean the Secretary of the Interior or his agent.

(c) "Federal assistance" shall mean Federal grants-in-aid or Federal loans or any combination thereof.

(d) "Additional operation costs" shall mean the increment in costs to the water agency or to the landowners which results directly from the change in land ownership or use within the water agency, including but not limited to, administrative, maintenance, water master and relocation costs.

(e) "Water agency" shall mean any water conservation district, irrigation district, water company, municipality, State or political subdivision thereof, or any other water distribution entity serving water for irrigation purposes.
A BILL

To provide for the payment of debt service construction charges, and increased operation and maintenance charges when irrigable lands are taken for nonagricultural uses under Federal programs.

By Mrs. May

APRIL 9, 1963
Referred to the Committee on Interior and Insular Affairs
FINANCING INFORMATION

Amortized annual payments per $1,000.00 loaned @ 2 3/4% interest

<table>
<thead>
<tr>
<th>Period of Loan</th>
<th>Annual payment per $1,000.00 @ 2 3/4%</th>
<th>Total repayment per $1,000.00 @ 2 3/4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 years</td>
<td>$35.67173</td>
<td>$1,313.43</td>
</tr>
<tr>
<td>30 years</td>
<td>49.38442</td>
<td>1,481.53</td>
</tr>
<tr>
<td>40 years</td>
<td>42.12556</td>
<td>1,684.90</td>
</tr>
<tr>
<td>50 years</td>
<td>37.04032</td>
<td>1,852.05</td>
</tr>
</tbody>
</table>

For each $100,000.00 borrowed @ 2 3/4% the repayment breakdown would be as follows:

<table>
<thead>
<tr>
<th>Period of Loan</th>
<th>Total Amount to be repaid</th>
<th>Total Cost Per share</th>
<th>Annual cost per share</th>
<th>Average Total Cost per share</th>
<th>Average Annual Cost per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>$131,343.00</td>
<td>$65,672</td>
<td>$3.284</td>
<td>$656.72</td>
<td>$.328</td>
</tr>
<tr>
<td>30</td>
<td>148,153.00</td>
<td>74,076</td>
<td>2.459</td>
<td>7,403</td>
<td>.247</td>
</tr>
<tr>
<td>40</td>
<td>168,490.00</td>
<td>84,245</td>
<td>2.106</td>
<td>8,425</td>
<td>.211</td>
</tr>
<tr>
<td>50</td>
<td>185,205.00</td>
<td>92,602</td>
<td>1.852</td>
<td>9,260</td>
<td>.185</td>
</tr>
</tbody>
</table>

December 12, 1960
Mr. Keirnes:

New front sheet for application and two maps.

[Signature]
APPLICATION FOR ASSISTANCE IN PLANNING AND CARRYING OUT WORKS OF IMPROVEMENT
UNDER THE WATERSHED PROTECTION AND FLOOD PREVENTION ACT

To: The Honorable Secretary of Agriculture
United States Department of Agriculture

The undersigned local Organizations make application for Federal assistance under the Watershed Protection and Flood Prevention Act in preparing and carrying out plans for works of improvement for the Home Supply Watershed tributary to the Big Thompson River, State of Colorado.

The following information is submitted in support of the application:

I. Size of watershed (maps to be made on county roads) = 64,09 square miles
   Private Land (See USGS for most of boundary) = 40,738 acres
   State Land = 2,80 acres
   Total = 41,018 acres

II. Location:

   The watershed is located in Larimer (approximately 45.09 square miles) and Weld Counties (approximately 19.20 square miles), Colorado, and includes lands served by the Consolidated Home Supply Ditch and Reservoir Company. These lands comprise part of the irrigated area south of the Big Thompson River in the vicinity of Campion and Johnstown, Colorado. All of the watershed lands are within the boundaries of the Big Thompson Soil Conservation District. Most of these lands are tributary to the Big Thompson River but a small portion of the southeast end of the system is tributary to the Little Thompson River.

   The present ditch and reservoir system comprises one reservoir for direct use of the system and one reservoir for exchange of stored water for direct diversion.

   Distribution of Land Use:

   1. Irrigated land 29,021 acres
   2. Dry Cropland 3,527 acres
   3. Rangeland 4,156 acres
       Subtotal 37,004
   4. Acreage in ditches, highways, farm buildings, towns, etc. 4,014 acres
       Total 41,018
APPLICATION FOR ASSISTANCE IN PLANNING AND CARRYING OUT WORKS OF IMPROVEMENT UNDER THE WATERSHED PROTECTION AND FLOOD PREVENTION ACT

To: The Honorable Secretary of Agriculture
United States Department of Agriculture

The undersigned local Organizations make application for Federal assistance under the Watershed Protection and Flood Prevention Act in preparing and carrying out plans for works of improvement for the Home Supply Watershed tributary to the Big Thompson River, State of Colorado.

The following information is submitted in support of the application:

I. Size of watershed (maps to be made on county roads) = 64,02 square miles
   Private Land (See USGS for most of boundary) = 40,738 acres
   State Land = 280 acres
   Total = 41,018 acres

II. Location:

The watershed is located in Larimer (approximately 45.09 square miles) and Weld Counties (approximately 19.0 square miles), Colorado, and includes lands served by the Consolidated Home Supply Ditch and Reservoir Company. These lands comprise part of the irrigated area south of the Big Thompson River in the vicinity of Campion and Johnstown, Colorado. All of the watershed lands are within the boundaries of the Big Thompson Soil Conservation District. Most of these lands are tributary to the Big Thompson River but a small portion of the southeast end of the system is tributary to the Little Thompson River.

The present ditch and reservoir system comprises one reservoir for direct use of the system and one reservoir for exchange of stored water for direct diversion.

Distribution of Land Use:

1. Irrigated land = 29,021 acres
2. Dry Cropland = 3,827 acres
3. Rangeland = 4,156 acres
   Subtotal = 37,004
4. Acreage in ditches, highways, farm buildings, towns, etc. = 4,014 acres
   Total = 41,018
To:          Roland G. Wilson, Area Conservationist  
            SCS, Littleton, Colorado  
From:        Alex D. Elkin, Geologist, Watershed Planning Party  
            SCS, Denver, Colorado  
Subject:     Geologic Reconnaissance, Proposed Dam Site, 
            Consolidated Home Supply Ditch and Reservoir Company, 
            Big Thompson Soil Conservation District  

Introduction:  

Inspection of the proposed irrigation reservoir site was made by 
A. D. Elkin on March 30, 1959, accompanied by A. J. Sprecher and 
F. C. Pinch of the Soil Conservation Service. The site is located 
on a small unnamed east-flowing tributary to the Big Thompson River 
and is in Secs. 29 and 32, T. 5 N., R. 69 W., Larimer County, Colorado. 
The site lies at an elevation of about 5,100 feet. The drainage area 
above the reservoir is less than two square miles. Most of the water 
used to fill the reservoir will be obtained from the Home Supply Ditch 
which diverts water from the Big Thompson River. 

As presently proposed, the dam at this site will have a maximum 
height of from 60 to 70 feet and a length of about 2,500 feet. The 
dam axis will be oriented approximately in a north-south direction 
with wing dikes extending back to the west at both ends of the main 
structure. The storage capacity of the reservoir will be about 
3,000 acre-feet, all of which will be used to store water for irrigation 
use. The surface area of the reservoir at high water elevation will 
be from 150 to 160 acres. No field surveys of the site have been 
made to date and no definite location has been made for the emergency 
spillway. The site is located about five miles southwest of Loveland, 
Colorado, and can be reached by graveled road.
To: Roland G. Wilson, Area Conservationist        April 2, 1959

Dam Site Geology:

The geology of this site is relatively simple. Bedrock underlying the dam site and reservoir area consists of silty clay-shale of the Pierre formation of Upper Cretaceous geologic age. The shale layers dip towards the east (downstream) at an angle of about 25 degrees. Shale lies at or near the surface throughout most of both abutments of the proposed dam. The upper several feet of shale in the abutments is generally weathered to varying degrees.

At the tops of both abutments the shale is overlain by pediment gravels of Pleistocene age. These pediment deposits consist mainly of gravel-sized fragments of limestone from the Niobrara formation (which crops out a short distance to the west). The average thickness of the gravel deposits on both abutments is about ten feet. A thin mantle of eolian-deposited fine sand, silt, and clay overlies the gravels.

The valley floor at the proposed dam site contains alluvial deposits, mainly silty clay, overlying the shale bedrock. The maximum thickness of the alluvium is not known, but is estimated to be from 15 to 20 feet.

Borrow Materials:

It appears likely that an adequate amount of suitable impervious borrow material will be found within the reservoir area. Most of this material will be located on the side slopes of the valley and can be classified as CL (gravelly, sandy, or silty clay of low plasticity) and CH (clay of high plasticity) according to the Unified Soil Classification System. Material for riprap is available from quarries in the foothills area several miles west of the site.

Conclusions:

1. This site appears to be generally suitable for the size and type of dam proposed.
To: Roland G. Wilson, Area Conservationist

April 2, 1959

Conclusions -- Continued

2. Because of the presence of shale and shale derived soils in the foundation, the most important consideration in further investigation of this site will be the determination of the stability of the foundation materials.

3. Pending further investigations it is recommended that a cutoff trench be excavated throughout the length of the dam. This cutoff trench should be excavated into firm, relatively unweathered shale.

4. Additional investigations at this site should include core sampling or auger sampling of the materials along the dam centerline, the centerline of the primary spillway, and the centerline of the emergency spillway. All holes should be drilled into firm, unweathered shale. Undisturbed samples may be necessary if any significant thickness of materials of questionable stability are encountered in the dam foundation.

5. Auger holes should be drilled in potential borrow areas so that the types and quantities of borrow material can be determined. Representative samples of borrow materials should be collected for laboratory analysis.

Copies: K. W. Chalmers, State Conservationist
SCS, Denver, Colorado
C. H. Mitchell, State Conservation Engineer
SCS, Denver, Colorado
A. J. Sprecher, Engineering Specialist
SCS, Littleton, Colorado
F. C. Pinch, Area Engineer
SCS, Littleton, Colorado
O. J. Scherer, Geologist, E and WP Unit
SCS, Lincoln, Nebraska
R. S. Decker, Head, Soil Mechanics Laboratory
SCS, Lincoln, Nebraska
J. R. Monaghan, Geologist
SCS, Colorado Springs, Colorado
G. A. Weber, Soil Conservationist
SCS, Loveland, Colorado