

BEFORE THE BOARD OF  
NATURAL RESOURCES AND CONSERVATION  
OF THE STATE OF MONTANA

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IN THE MATTER OF APPLICATION FOR )  
RESERVATION OF WATER NO. 9946-r42M )  
BY THE PRAIRIE CONSERVATION DISTRICT )

) FINDINGS OF FACT AND CON-  
) CLUSIONS OF LAW OF APPLI-  
) CATION NO. 9946-r42M  
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The above-entitled matter came on regularly for hearing starting on or about September 8, 1977, in Billings, Montana, before the Montana Board of Natural Resources and Conservation and its duly appointed Hearing Examiner, James Driscoll. The Applicant appeared by and through its counsel of record, Gary Spaeth. The Montana Department of Natural Resources and Conservation appeared by and through its counsel of record, Richard Gordon. The Montana Department of Fish and Game appeared by and through its counsel of record, F. Woodside Wright and Clayton Herron. The Montana Department of Health and Environmental Sciences appeared by and through its counsel of record, Mona Jamison. Witnesses were duly sworn, and oral and documentary evidence was introduced.

The Board, having read and fully considered the complete record, makes the following Findings of Fact and Conclusions of Law relating to the Prairie Conservation District, Application No. 9946-r42M:

## FINDINGS OF FACT

1. The Prairie Conservation District has applied for a reservation of 68,467 acre-feet of water per year (af/y) with a maximum diversionary flow rate of 567.5 cubic feet per second (Cfs). Of this amount, 68,024 acre-feet and a peak diversionary flow of 552.7 cfs are requested for full-service irrigation of 22,241 acres; 443 acre-feet and a peak flow of 14.8 cfs are requested for 295 acres of waterspreading. All full-service irrigation would use water from the Yellowstone River. All waterspreading would use water from the Powder River. On the average, this request is for a diversion of 3.04 acre-feet per acre and a maximum diversionary flow rate of 1 cfs per 39.71 acres for the year 2000. ( Application No. 9946-r42M, Table 1 as amended.).

### Findings Related to the Purpose of this Reservation (89-890(3)(a)).

2. The purpose of the reservation is to insure water availability and adequate streamflow for the future agricultural needs of the Prairie Conservation District. (The Prairie Conservation District Application at page 4).

3. It is established to the satisfaction of the Board that a purpose of the reservation has been shown (Finding 2).

4. A reservation of water is needed because it will secure a priority date for future developments that is earlier than the priority dates such developments would have if permits were obtained immediately before construction or use began (Prairie Conservation District, Application No. 9946-r42M, p. 6).

5. The reservation is needed because there is a proliferating world-wide demand for food, which is dependent on sufficient water availability. (The Prairie Conservation District Application at page 4).

6. A reservation is needed because there is competition for water in the Yellowstone River Basin which may affect the availability of the Applicant to obtain a water right by permit in the future. This, in turn, will also help promote the necessary planning. (The Prairie Conservation District Application at page 5).

7. It is established to the satisfaction of the Board that the need for a reservation of water has been shown (Findings 4 and 5).

Findings Related to the Amount of Water Necessary for the Purpose of the Reservation (89-890(3)(c)).

8. The amount of water necessary for this reservation is the amount required to irrigate the number of acres described in this application that can reasonably be expected to be completed by the Prairie Conservation District by the year 2000 (EIS).

9. The payment capacity consists of total farm revenue minus all costs except irrigation water costs and is the maximum amount a water user could pay for water while maintaining a profitable operation (Prairie Conservation District, Application No. 9946-r42M, p. 24).

10. The cropping pattern by percent is 29% for grain and 38% for hay, 10% for silage and 23% for cash crops with a maximum payment capacity of \$240.00 per acre. (The Prairie Conservation District Application at page 25).

11. A 75% on-farm irrigation efficiency was assumed for sprinkler irrigation and 55% for flood irrigation. (The Prairie Conservation District Application at page 12).

12. Conveyance losses were estimated by formula and included in the diversionary requirement needs. (The Prairie Conservation District Application at page 14).

13. Peak diversion requirements were calculated using recommended peak consumption use rates for alfalfa divided by the on-farm efficiency. (The Prairie Conservation District Application at page 14).

14. The calculated values for alfalfa equals 11 gpm per acre-foot for flood irrigation and 8 gpm for side-roll sprinklers. In the case of center pivots, the peak rate was reduced to 6.5 gpm per acre to more closely match the

infiltration rate of heavy soils to the application rate of system. (Application 9946-r42M, at page 14).

15. The system will not meet peak plan consumptive uses, but using the soil profile as a moisture reservoir, the system is sized somewhat below that required to meet peak consumptive uses. (Application 9946-r42M, at page 14).

16. The diversion requirement ranges from .58 cfs per 40 acres to 1.00 cfs per 40 acres with an annual requirement ranging from 2.25 acre-feet per acre to 3.07 acre-feet per acre for an average of 3.04 acre-feet per acre with a maximum flow rate of 39.71 acres per 1 cfs. (Application 9946-r42M, at page 1).

17. All systems were designed to operate simultaneously, even on large systems in lieu of a rotation system. (Application 9946-r42M, at page 14).

18(a) Using irrigation factors of 3.04 acre-feet per year of water per acre, and 40.24 acres per cfs, a reservation of water sufficient to irrigate 22,241 acres would be 68,024 acre-feet with a maximum diversionary flow of 552.7 cfs from the Yellowstone River.

(b) Using a waterspreading factor of 1.5 acre-feet per acre, the amount of water needed for a reservation from the Powder River for waterspreading 295 acres is 443 af/y.

19. It is established to the satisfaction of the Board that 68,024 acre-feet per year with a maximum diversionary flow rate of 552.7 cfs is the amount of water necessary for the purpose of the reservation to the year 2000.

Findings Related to the Public Interest (89-890(3)(d)).

20. The reservation will contribute economically to the public interest. (Application 9946-r42M, at page 3).

21. The development of future irrigation projects in Prairie County and beneficial use of water will create jobs and increase the tax revenues. (Application 9946-r42M, at page 3).

22. From 1960 to 1970, the rural population in Prairie County declined 24.4 percent. A major reason was a lack of job opportunities (Draft EIS, Vol. I, p. 101).

23. The development of new pumping facilities, ditches, canals, sprinkler systems, and other diversions will contribute to the economic stability of the County. (The Prairie Conservation District Application at page 8).

24. New irrigation would increase income in Prairie County, both for the farmers who would install the systems and for the local businesses that would enjoy increased sales resulting from the increase in agricultural income. New irrigation would increase the number of both on-farm and off-farm jobs. (Draft EIS, Vol. I, p. 156).

25. The Prairie Conservation District has an established plan for completion of the proposed facilities which will put reserved water to use by the year 2000 (Prairie Conservation District, Application No. 9946-r42M).

26. By reserving water for future beneficial use, individual ranchers and farmers have a more favorable timetable in which to accumulate the capital needed to finance, to take maximum advantage of favorable changes in the agricultural market, or to utilize the most contemporary technology available in water delivery systems. (Prairie Conservation District Application at pages 5 and 6).

27. The plan of the Prairie Conservation District is not speculative and is documented to the highest degree of detail possible. (Prairie Conservation District).

28. The reservation shall be put to use within reasonable diligence and the plan includes a bona fide intent and ability to use the water reserved as projected.

29. Detailed planning of district projects will be accomplished through funds made available by the Montana Legislature or Prairie County mill levy. The Department of Natural Resources and Conservation's Technical Assistance Program will also be used. (The Prairie Conservation District Application at page 3).

30. The Board is satisfied there will be progress toward completion of construction of the facilities with reasonable diligence according to an established plan which includes the economic feasibility of each project, a soils and land classification analysis showing the suitability of lands to sustain irrigation, and possible sources of funding.

31. A reservation sufficient to irrigate 22,536 acres is in the public interest because it is reasonable to expect that the Prairie Conservation District will irrigate an additional 22,536 acres by the year 2000.

32. It is established to the satisfaction of the Board that the reservation of 68,467 af/y with a maximum diversionary flow rate of 552.7 cfs to be used for irrigation is in the public interest and that there will be progress toward completion of the facility and accomplishment of the purpose with reasonable diligence in accordance with an established plan.

33. It is established to the satisfaction of the Board that the reservation of 68,467 acre-feet per year is for 68,024 acre-feet per year for full-service irrigation from the Yellowstone River, and 443 acre-feet per year from the Powder River for waterspreading.

#### CONCLUSIONS OF LAW

1. Chapter 8, Title 89, R.C.M., 1947, and in particular, Section 89-890, R.C.M. 1947, authorize the adoption by the Montana Board of Natural Resources and Conservation of orders reserving water to qualified applicants for reservation of water.

2. If ordered adopted, a reservation must be ordered adopted in accordance with Chapter 8, Title 89, R.C.M. 1947, and any rules adopted thereunder.

3. The Applicant, Prairie Conservation District, is a political subdivision of the State of Montana and as such is entitled to apply to reserve water within the State of Montana in accordance with 89-890, R.C.M. 1947, and any rules adopted thereunder.

4. All pertinent statutes and rules of the State of Montana have been adhered to in review of this reservation application, both by the Montana Department of Natural Resources and Conservation and by the Montana Board of Natural Resources and Conservation.

5. Based upon the above Findings of Fact, and specifically based upon any condition, limitation, or modification of the full application appearing in said Findings, all pertinent criteria delineated in Section 89-890, R.C.M. 1947, and any rules adopted thereunder providing for the adoption of an order reserving water have been met.

6. Nothing found herein has bearing upon the status of water rights claimed by the Applicant other than those herein newly applied for, nor does anything found herein have bearing on the status of claimed water rights of any other party except in relation to those rights herein newly applied for, to the extent necessary to reach a conclusion herein.