

First Regular Session  
Sixty-seventh General Assembly  
STATE OF COLORADO

UNREVISED  
REDRAFT  
9.17.08  
Double underlining  
denotes changes from  
prior draft

DRAFT

LLS NO. 09-0068.01 Thomas Morris

HOUSE BILL

HOUSE SPONSORSHIP

Looper,

SENATE SPONSORSHIP

(None),

SHORT TITLE: "Precipitation Harvesting Pilot Projects"

DEADLINES: Finalize by: 01/06/2009 File by: 01/12/2009

A BILL FOR AN ACT

101 CONCERNING AN AUTHORIZATION OF PILOT PROJECTS FOR THE  
102 BENEFICIAL USE OF CAPTURED PRECIPITATION.

Bill Summary

*(Note: This summary applies to this bill as introduced and does not necessarily reflect any amendments that may be subsequently adopted.)*

Directs the Colorado water conservation board (board) to select the sponsors of up to 10 new residential or mixed-use developments that will conduct individual pilot projects to collect precipitation from rooftops and impermeable surfaces for fire protection and outdoor irrigation uses. Specifies that the purpose of the pilot projects is to:

- Evaluate the technical ability to reasonably quantify the site-specific amount of precipitation that, under native

*Capital letters indicate new material to be added to existing statute.  
Dashes through the words indicate deletions from existing statute.*

conditions, accrues to the natural stream system via surface and ground water returns;

- Create a baseline set of data for quantifying native plant consumption and measuring return flow patterns;
- Evaluate a variety of precipitation harvesting system designs;
- Measure precipitation capture efficiencies;
- Quantify the amount of precipitation that must be augmented to prevent injury to senior water rights;
- Compile and analyze the data collected; and
- Allow sponsors to adjudicate permanent augmentation plans.

Directs the board to establish criteria and guidelines for applications and the selection of pilot projects, including selection of pilot projects to represent different geographic and hydrologic areas in the state and giving priority to pilot projects that are located in areas that face renewable water supply challenges and that promote water conservation.

Requires pilot project sponsors to:

- During the term of the pilot project, operate according to a substitute water supply plan approved annually by the state engineer in which the net depletion is calculated as a minimum of 30% of total precipitation;
- Upon completion of the pilot project, apply for a permanent augmentation plan if necessary;
- Submit an annual preliminary report to the board and the state engineer summarizing the data collected; and
- Submit a final report to the board and the state engineer by January 15, 2019.

Requires the board and the state engineer to brief the water resources review committee on the pilot projects by July 1, 2014, and to provide a final briefing to the water resources review committee by July 1, 2019. Repeals the act, effective July 1, 2020.

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1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1.** 37-60-115, Colorado Revised Statutes, is amended

3 BY THE ADDITION OF A NEW SUBSECTION to read:

4 **37-60-115. Water studies - rules - repeal. (6) Precipitation**

5 **harvesting pilot projects.** (a) THE BOARD SHALL, IN CONSULTATION

6 WITH THE STATE ENGINEER, SELECT THE SPONSORS OF UP TO TEN NEW

7 RESIDENTIAL OR MIXED-USE DEVELOPMENTS THAT WILL CONDUCT

1 INDIVIDUAL PILOT PROJECTS TO COLLECT PRECIPITATION FROM ROOFTOPS  
2 AND IMPERMEABLE SURFACES FOR FIRE PROTECTION AND OUTDOOR  
3 IRRIGATION USES. THE PURPOSE OF THE PILOT PROJECTS SHALL BE TO:

4 (I) EVALUATE THE TECHNICAL ABILITY TO REASONABLY QUANTIFY  
5 THE SITE-SPECIFIC AMOUNT OF PRECIPITATION THAT, UNDER NATIVE  
6 CONDITIONS, ACCRUES TO THE NATURAL STREAM SYSTEM VIA SURFACE  
7 AND GROUND WATER RETURNS;

8 (II) CREATE A BASELINE SET OF DATA FOR MEASURING LOCAL  
9 WEATHER AND PRECIPITATION PATTERNS, QUANTIFYING NATIVE PLANT  
10 CONSUMPTION, MEASURING RETURN FLOW PATTERNS, IDENTIFYING  
11 SURFACE VERSUS GROUND WATER RETURN FLOW SPLITS, IDENTIFYING  
12 GROUND WATER RETURN FLOW PATTERNS AND TIMING, AND ACCOUNTING  
13 FOR VARIATIONS IN HYDROLOGY AND PRECIPITATION EVENT INTENSITY;

14 (III) EVALUATE A VARIETY OF PRECIPITATION HARVESTING  
15 SYSTEM DESIGNS;

16 (IV) MEASURE PRECIPITATION CAPTURE EFFICIENCIES;

17 (V) QUANTIFY THE AMOUNT OF PRECIPITATION THAT MUST BE  
18 AUGMENTED TO PREVENT INJURY TO SENIOR WATER RIGHTS;

19 (VI) COMPILE AND ANALYZE THE DATA COLLECTED; AND

20 (VII) ALLOW SPONSORS TO ADJUDICATE PERMANENT  
21 AUGMENTATION PLANS AS SPECIFIED IN PARAGRAPH (c) OF THIS  
22 SUBSECTION (6) IF AUGMENTATION IS NECESSARY TO PROTECT EXISTING  
23 WATER RIGHTS.

24 (b) AN APPLICANT FOR A DEVELOPMENT PERMIT, AS THAT TERM IS  
25 DEFINED IN SECTION 29-20-103, C.R.S., FOR A NEW PLANNED UNIT  
26 DEVELOPMENT OR NEW SUBDIVISION OF RESIDENTIAL HOUSING OR MIXED  
27 USES MAY SUBMIT AN APPLICATION TO THE BOARD TO BECOME A SPONSOR

1 OF ONE OR MORE OF THE TEN PILOT PROJECTS AUTHORIZED BY THIS  
2 SECTION. THE BOARD SHALL ESTABLISH CRITERIA AND GUIDELINES FOR  
3 APPLICATIONS AND THE SELECTION OF PILOT PROJECTS, INCLUDING THE  
4 FOLLOWING:

5 (I) AN APPLICATION FEE AND, FOR PILOT PROJECTS THAT ARE  
6 SELECTED, AN ANNUAL REVIEW FEE;

7 (II) THE INFORMATION TO BE INCLUDED IN THE APPLICATION,  
8 INCLUDING A DESCRIPTION OF THE PROPOSED DEVELOPMENT AND THE  
9 PROPOSED PRECIPITATION HARVESTING SYSTEM;

10 (III) SELECTION OF PILOT PROJECTS TO REPRESENT DIFFERENT  
11 GEOGRAPHIC AND HYDROLOGIC AREAS IN THE STATE, WITH NO MORE THAN  
12 THREE PILOT PROJECTS BEING LOCATED WITHIN ANY SINGLE WATER  
13 DIVISION ESTABLISHED IN SECTION 37-92-201 \_\_\_\_\_;

14 (IV) GIVING PRIORITY TO PILOT PROJECTS THAT:

15 (A) ARE LOCATED IN AREAS THAT FACE RENEWABLE WATER  
16 SUPPLY CHALLENGES; AND

17 (B) PROMOTE WATER CONSERVATION.

18 (c) IN RECOGNITION OF A PRECIPITATION HARVESTING PILOT  
19 PROJECT SPONSOR'S INCREASED COSTS OF UNDERTAKING A PILOT PROJECT,  
20 INCLUDING COSTS OF INFRASTRUCTURE NECESSARY TO IMPLEMENT A  
21 PRECIPITATION HARVESTING SYSTEM, AND NOTWITHSTANDING ANY  
22 LIMITATIONS REGARDING PHREATOPHYTES OR IMPERMEABLE SURFACES  
23 THAT WOULD OTHERWISE APPLY PURSUANT TO SECTION 37-92-103 (9) OR  
24 37-92-501 (4) (b) (III), EACH OF THE TEN PILOT PROJECT SPONSORS SHALL:

25 (I) DURING THE TERM OF THE PILOT PROJECT, OPERATE ACCORDING  
26 TO A SUBSTITUTE WATER SUPPLY PLAN APPROVED ANNUALLY BY THE  
27 STATE ENGINEER PURSUANT TO SECTION 37-92-308 (5). THE PILOT

1 PROJECT SPONSOR SHALL BE REQUIRED TO REPLACE THE NET DEPLETION  
2 CAUSED BY THE CAPTURE OF PRECIPITATION FROM ROOFTOPS AND  
3 IMPERMEABLE SURFACES FOR FIRE PROTECTION AND OUTDOOR  
4 IRRIGATION. FOR PURPOSES OF THE PILOT PROJECT PERIOD, THE NET  
5 DEPLETION SHALL BE CALCULATED AS THE GREATER OF:

6 (A) THIRTY PERCENT OF TOTAL PRECIPITATION REPLACED  
7 PURSUANT TO THE "GENERAL GUIDELINES FOR SUBSTITUTE WATER  
8 SUPPLY PLANS FOR SAND AND GRAVEL PITS SUBMITTED TO THE STATE  
9 ENGINEER PURSUANT TO SB 89-120 & SB 93-260" ISSUED BY THE STATE  
10 ENGINEER AND AVAILABLE FROM THE DIVISION OF WATER RESOURCES; OR

11 (B) THE ACTUAL NET DEPLETION CALCULATED AS THE AMOUNT OF  
12 PRECIPITATION CAPTURE MINUS THE HISTORICAL CONSUMPTIVE USE FROM  
13 PREEXISTING NATURAL VEGETATION COVER ON THE IMPERMEABLE AREA  
14 AS DEMONSTRATED BY THE DATA COLLECTED BY THE PROJECT SPONSOR.

15 (II) IF NECESSARY, APPLY TO THE APPROPRIATE WATER COURT FOR  
16 A PERMANENT AUGMENTATION PLAN UPON COMPLETION OF THE PILOT  
17 PROJECT. ANY SUCH PERMANENT AUGMENTATION PLAN SHALL ENTITLE  
18 THE SPONSOR TO FULLY CONSUME ONLY THAT PORTION OF THE  
19 PRECIPITATION THAT THE SPONSOR PROVES BY A PREPONDERANCE OF THE  
20 EVIDENCE WOULD NOT HAVE ACCRUED TO A NATURAL STREAM UNDER  
21 NATIVE CONDITIONS. THE PILOT PROJECT SPONSOR SHALL BE REQUIRED TO  
22 FULLY AUGMENT ANY PRECIPITATION CAPTURED OUT OF PRIORITY THAT  
23 WOULD OTHERWISE HAVE ACCRUED TO A NATURAL STREAM. IF THE PILOT  
24 PROJECT SPONSOR CAN DEMONSTRATE THAT THERE IS A NET GAIN TO THE  
25 STREAM FROM THE PILOT PROJECT, NO AUGMENTATION PLAN SHALL BE  
26 NECESSARY TO CONTINUE OPERATION OF THE PRECIPITATION HARVESTING  
27 SYSTEM. THE AMOUNT OF NET GAIN SHALL NOT BE USED AS A CREDIT TO

1 THE APPLICANT OR OTHERWISE BE USED, LEASED, OR SOLD AS AN  
2 AUGMENTATION SOURCE OR FOR ANY OTHER PURPOSE.

3 (d) EACH PILOT PROJECT SPONSOR SHALL SUBMIT AN ANNUAL  
4 PRELIMINARY REPORT TO THE BOARD AND THE STATE ENGINEER  
5 SUMMARIZING THE INFORMATION SET FORTH IN PARAGRAPH (a) OF THIS  
6 SUBSECTION (6). THE BOARD AND THE STATE ENGINEER SHALL BRIEF THE  
7 WATER RESOURCES REVIEW COMMITTEE CREATED IN SECTION 37-98-102  
8 ON THE REPORTED RESULTS OF THE PILOT PROJECTS BY JULY 1, 2014.  
9 EACH PILOT PROJECT SPONSOR SHALL SUBMIT A FINAL REPORT TO THE  
10 BOARD AND THE STATE ENGINEER BY JANUARY 15, 2019. THE BOARD AND  
11 THE STATE ENGINEER SHALL PROVIDE A FINAL BRIEFING TO THE WATER  
12 RESOURCES REVIEW COMMITTEE BY JULY 1, 2019.

13 (e) THIS PARAGRAPH (e), PARAGRAPHS (a), (b), AND (d), AND  
14 SUBPARAGRAPH (I) OF PARAGRAPH (c) OF THIS SUBSECTION (6) ARE  
15 REPEALED, EFFECTIVE JULY 1, 2020.

16 **SECTION 2.** The introductory portion to 37-92-308 (5) (a) and  
17 37-92-308 (5) (b), Colorado Revised Statutes, are amended to read:

18 **37-92-308. Substitute water supply plans - special procedures**  
19 **for review - water adjudication cash fund - legislative declaration.**

20 (5) (a) Beginning January 1, 2002, for new water use plans involving  
21 out-of-priority diversions or a change of water right, if no application for  
22 approval of a plan for augmentation or a change of water right has been  
23 filed with a water court and the water use plan or change proposed and  
24 the depletions associated with such water use plan or change will be for  
25 a limited duration not to exceed five years, EXCEPT IN THE CASE OF A  
26 WATER USE PLAN FOR A PRECIPITATION HARVESTING PILOT PROJECT  
27 SELECTED PURSUANT TO SECTION 37-60-115 (6), IN WHICH CASE THE

1 WATER USE PLAN PROPOSED AND THE DEPLETIONS ASSOCIATED WITH SUCH  
2 WATER USE PLAN WILL BE FOR A LIMITED DURATION NOT TO EXCEED TEN  
3 YEARS, the state engineer may approve such plan or change as a substitute  
4 water supply plan if the following conditions are met:

5 (b) (I) EXCEPT AS OTHERWISE PROVIDED IN SUBPARAGRAPH (II) OF  
6 THIS PARAGRAPH (b), a substitute water supply plan approved pursuant to  
7 this subsection (5) shall not be approved for a period of more than one  
8 year; except that an applicant may request the renewal of a plan by  
9 repeating the application process described in this subsection (5).  
10 However, in no event shall any plan approved pursuant to this subsection  
11 (5) or any water use included in such plan be approved or renewed for  
12 more than five years.

13 (II) A WATER USE PLAN FOR A PRECIPITATION HARVESTING PILOT  
14 PROJECT SELECTED PURSUANT TO SECTION 37-60-115 (6) MAY BE  
15 APPROVED FOR UP TO TEN YEARS.

16 **SECTION 3. Safety clause.** The general assembly hereby finds,  
17 determines, and declares that this act is necessary for the immediate  
18 preservation of the public peace, health, and safety.