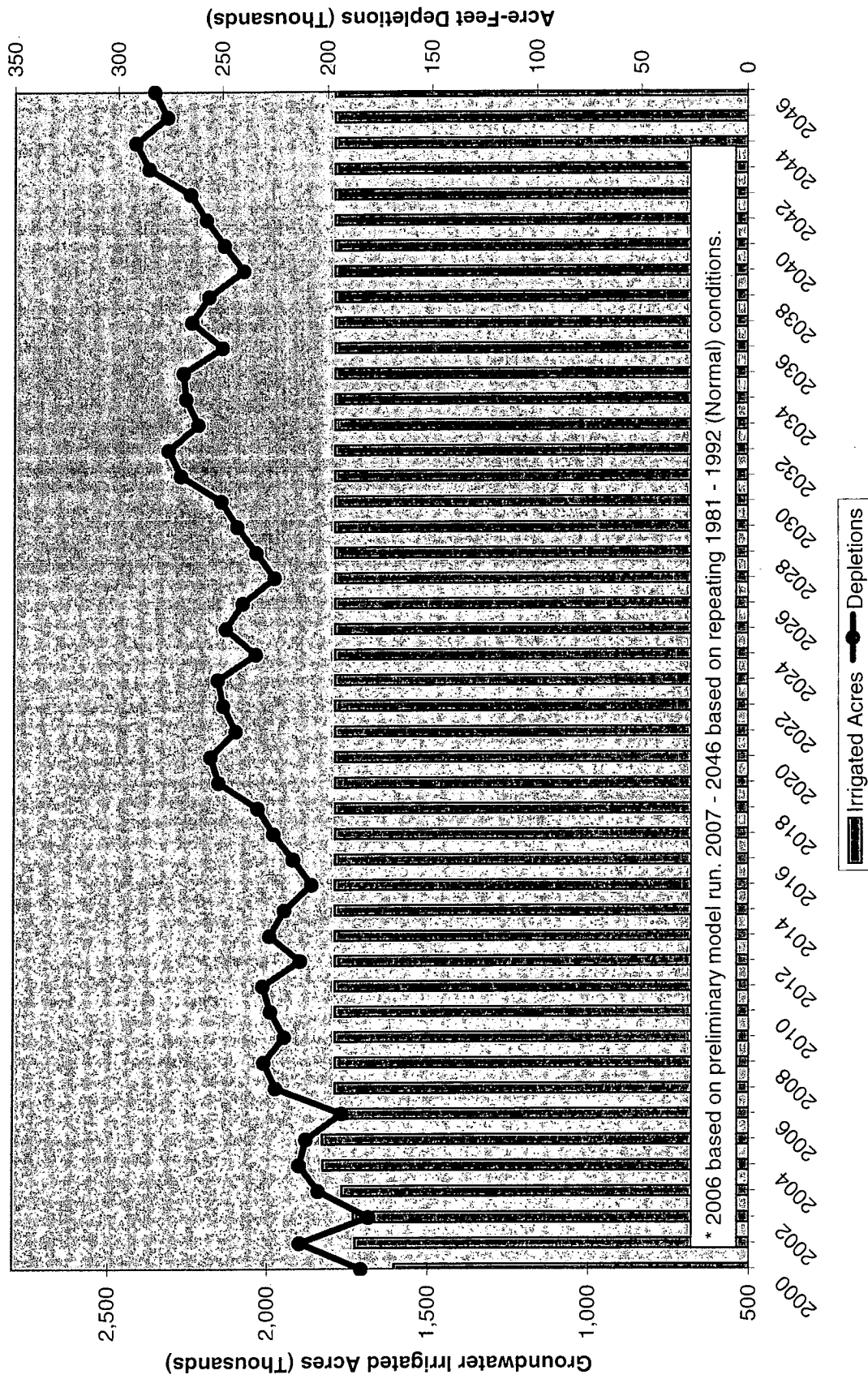


These were all
considered for
presentation to governor
Only a ~~few~~ few were
used & are in
packet.

These were all prepared
as *pdf's

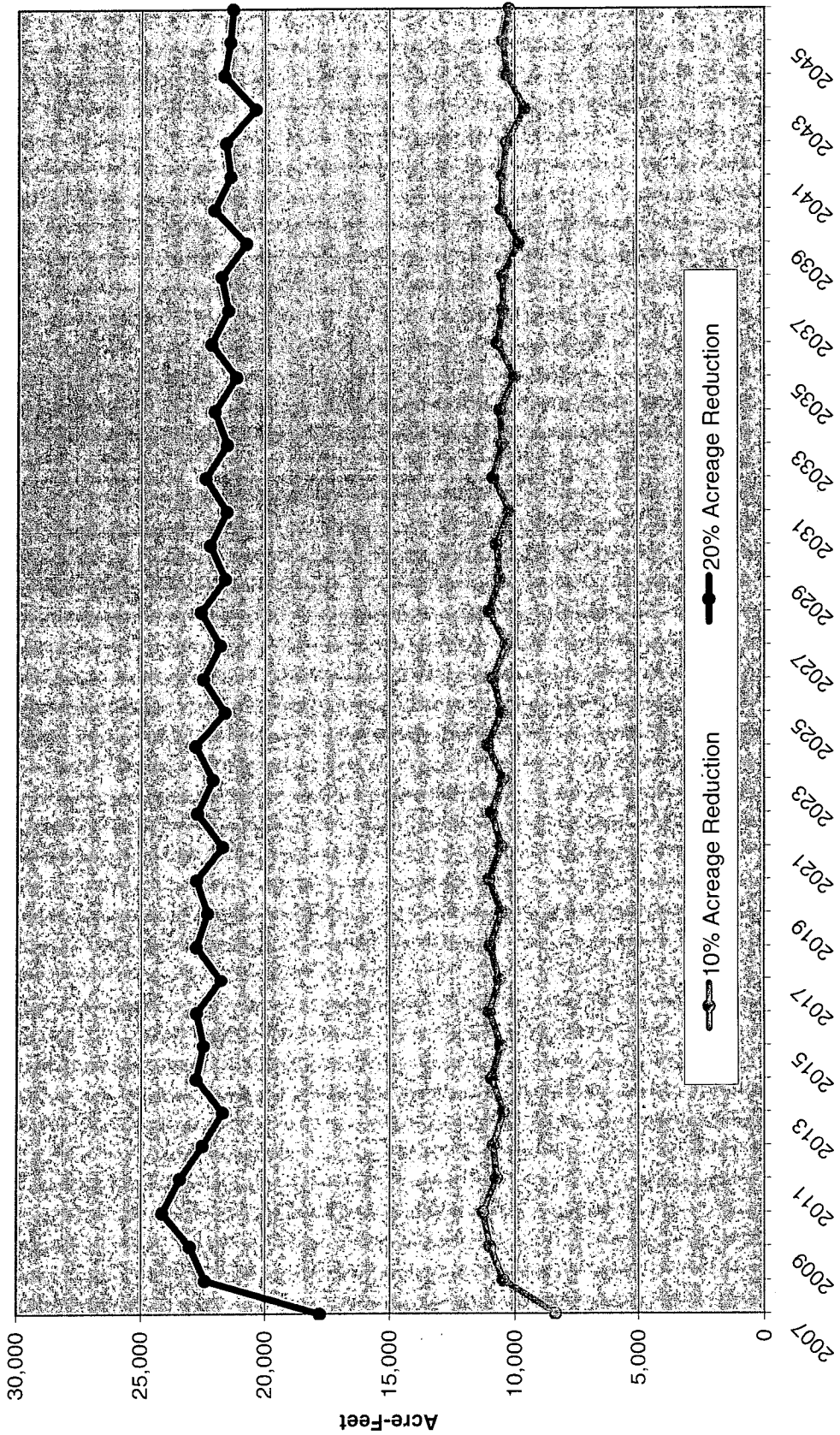
Lagged Depletions to Stream Flow



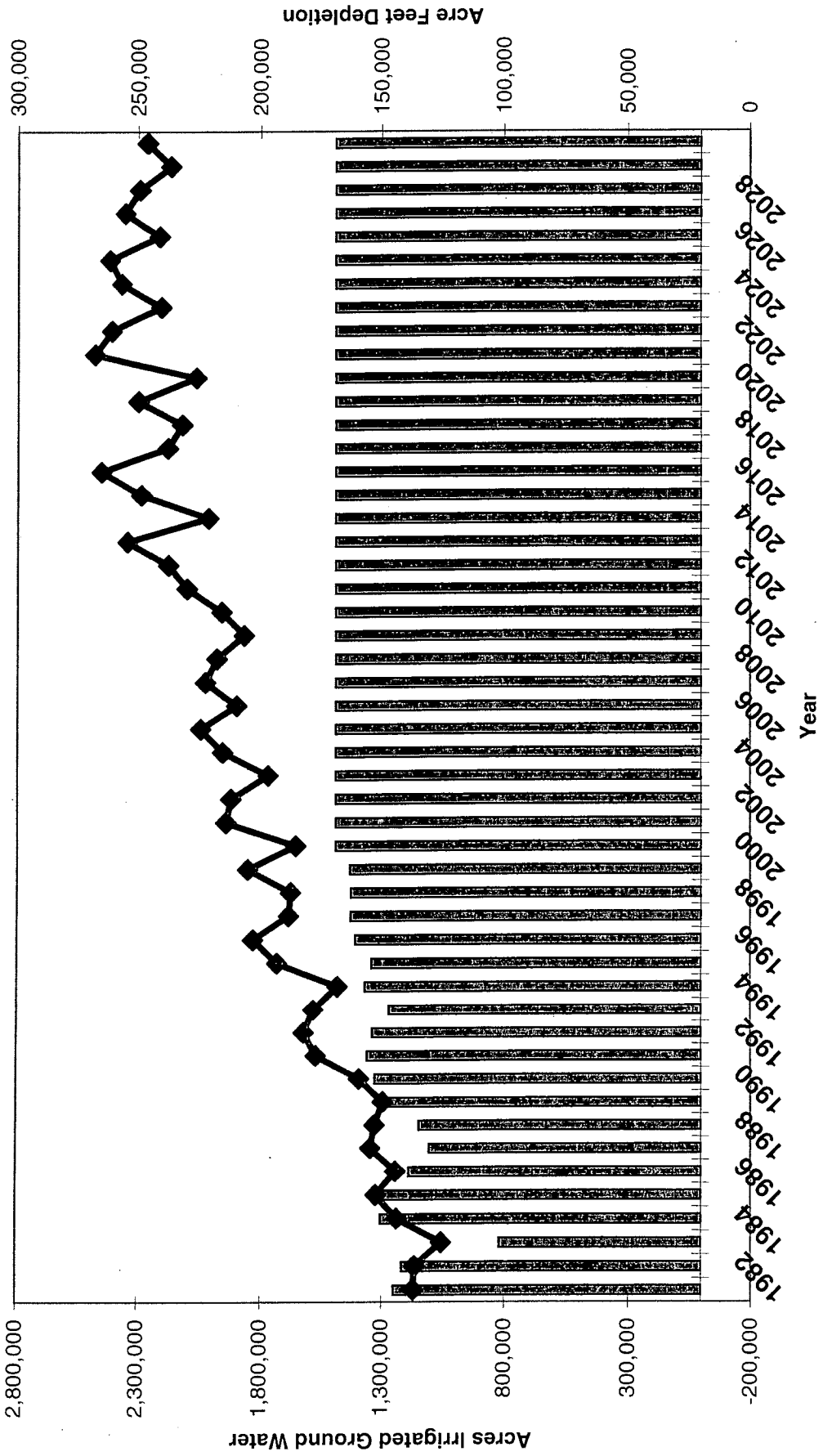
0746MdDrtnorm_LAG.xls

Fixed

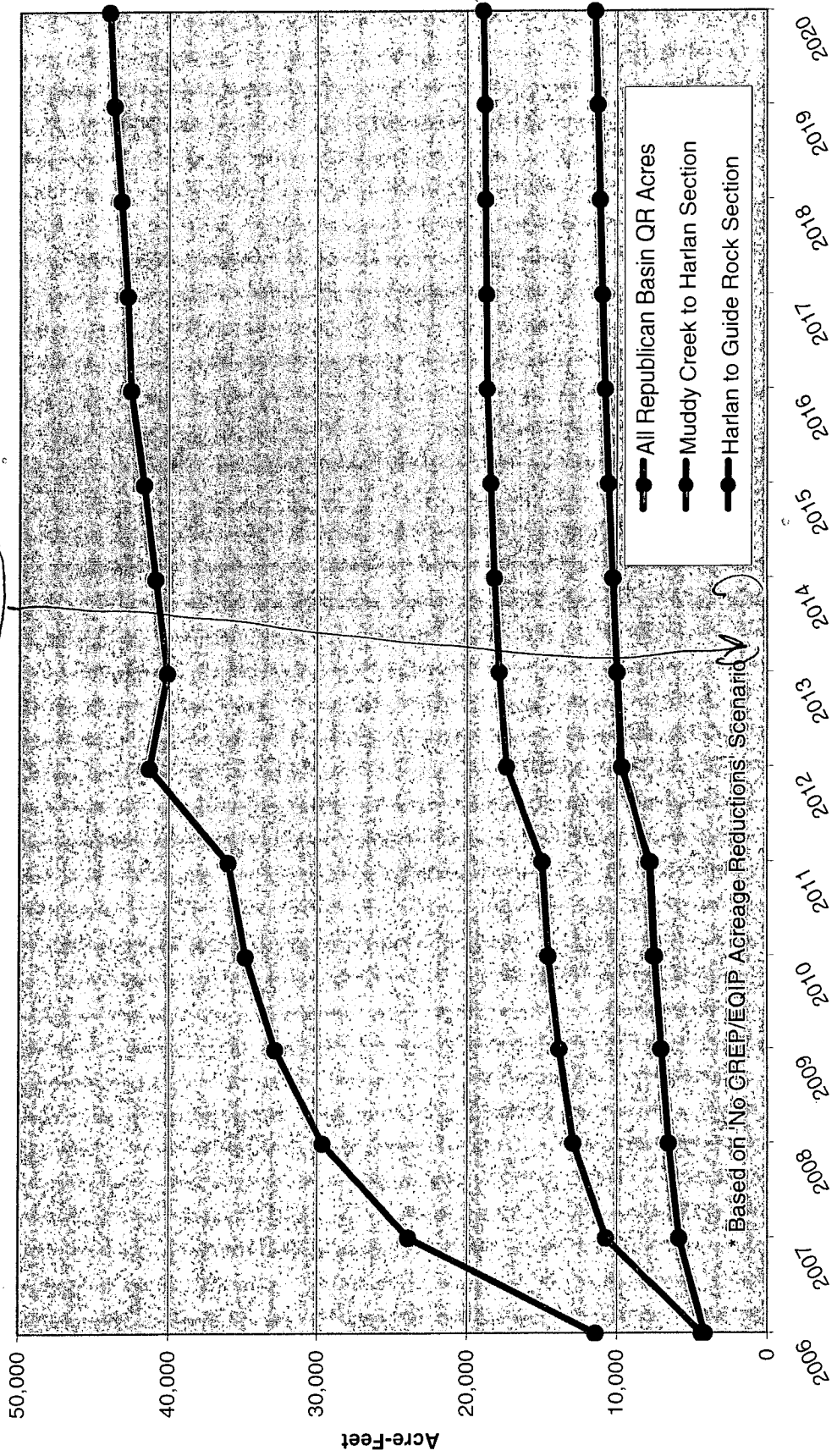
Republican Basin Sum Baseflow Impact Reductions due to Phreatophyte Acreage Reduction in the NE Quick-Response Area, Moderate Drought Scenario 2007-2046



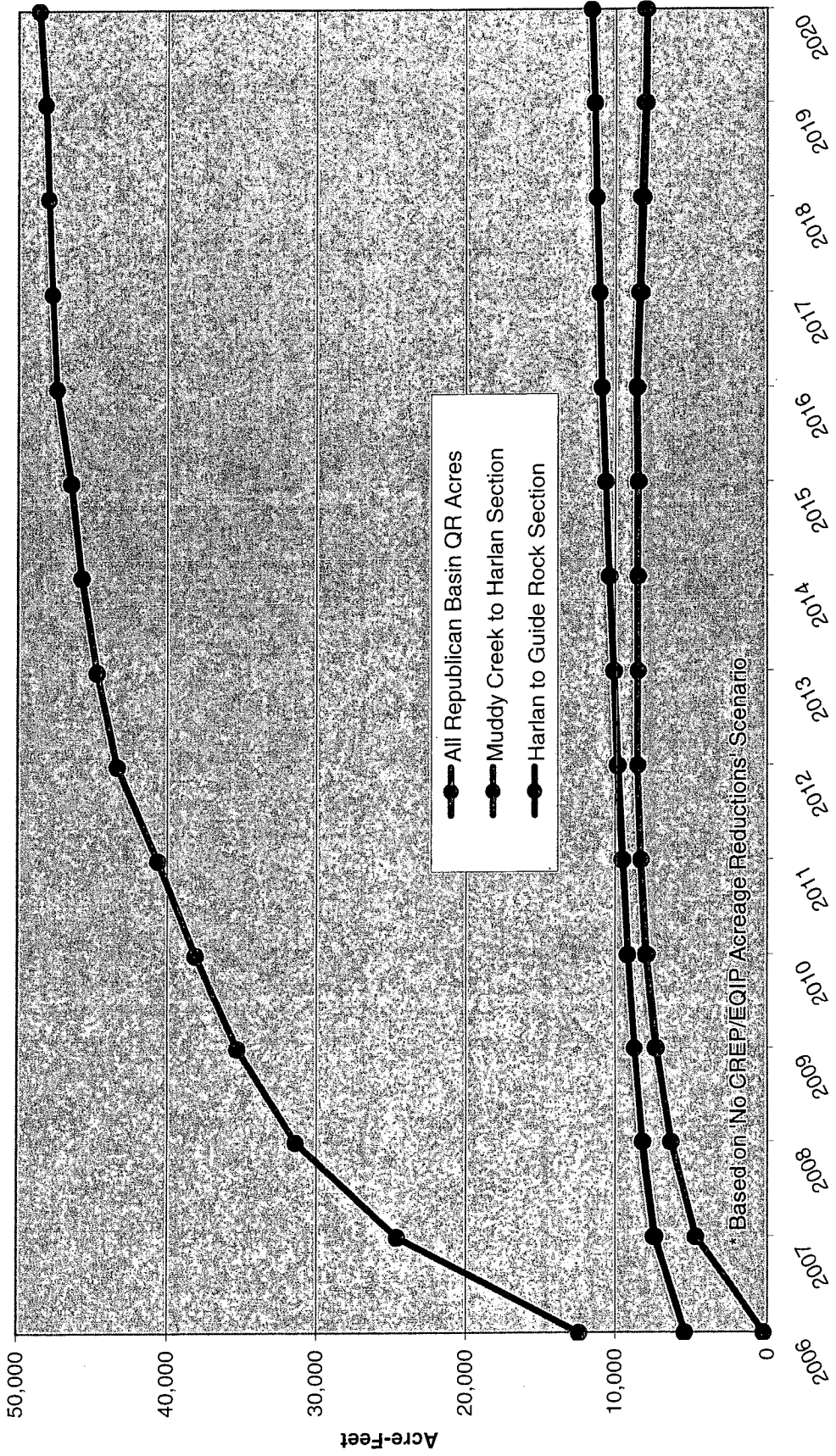
Lagged Depletions to Stream Flow



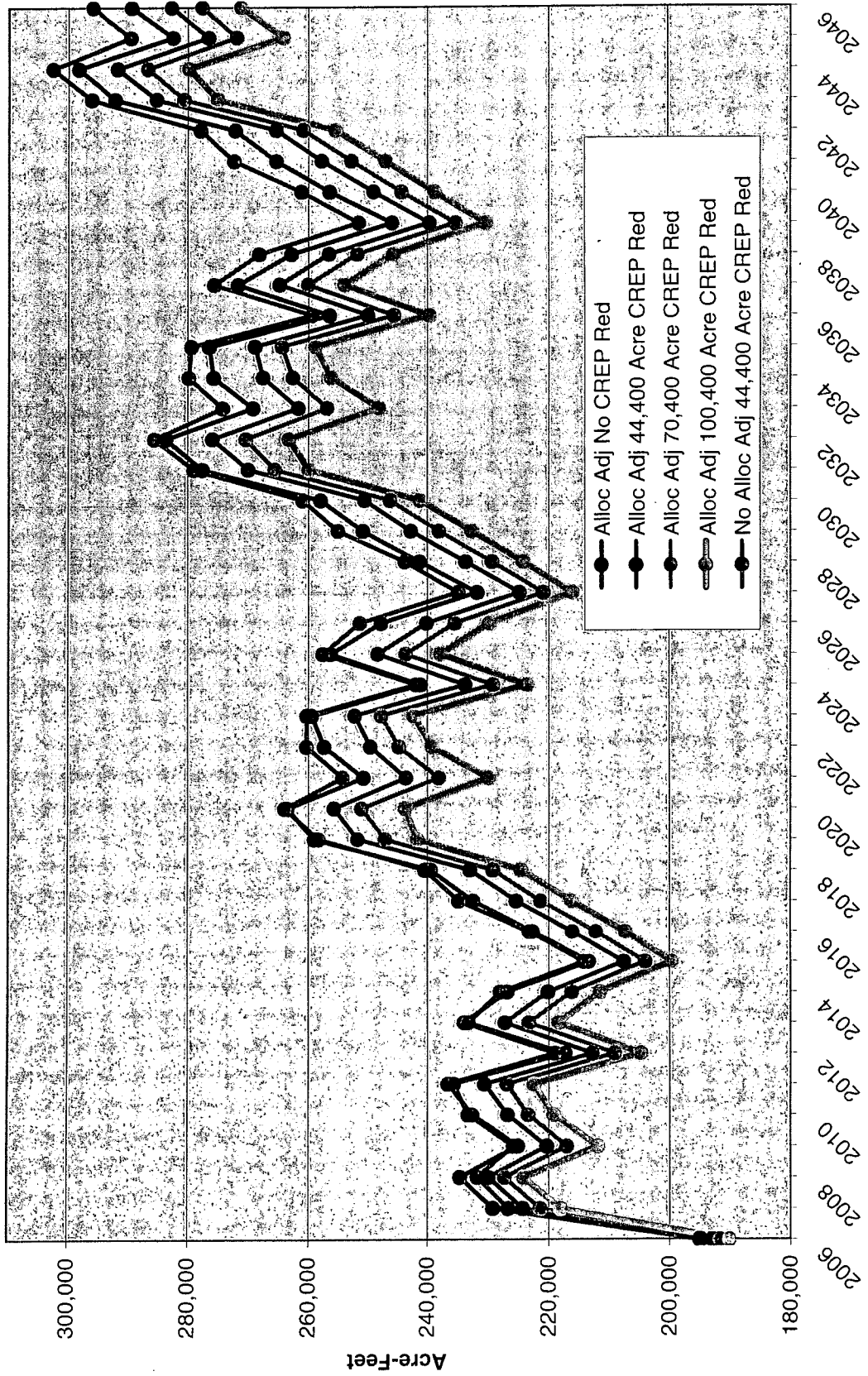
Streamflow Depletion Reductions due to Turning off Pumping in Different Sections of Republican Basin Quick Response Area, 2006 - 2020 'Dry Years' Scenario



Streamflow Depletion Reductions due to Turning off Pumping in Different Sections of Republican Basin Quick Response Area, 2006 - 2020 'Average Conditions' Scenario

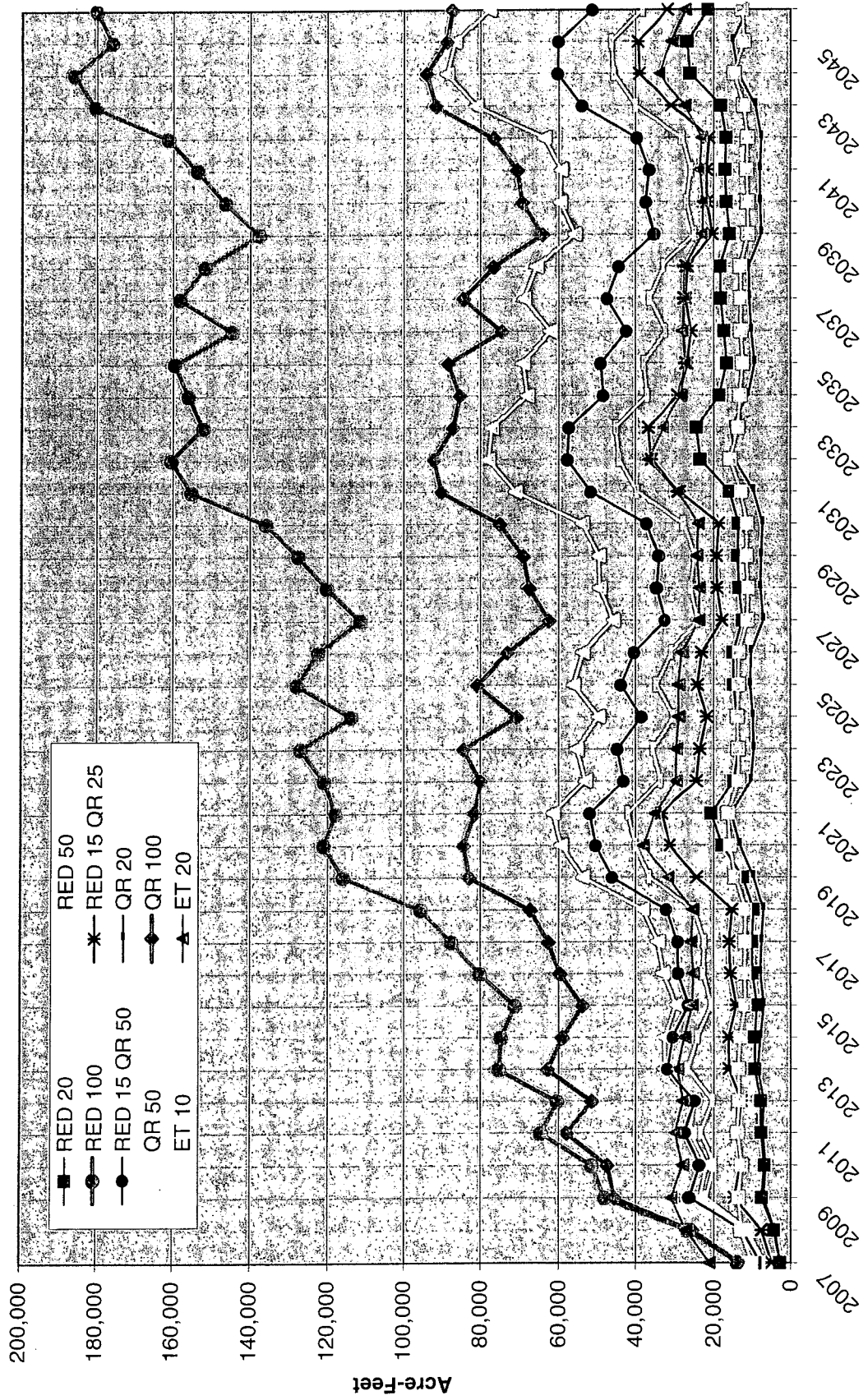


2006 - 2047 Normal-Conditions Baseflow Impact Comparison

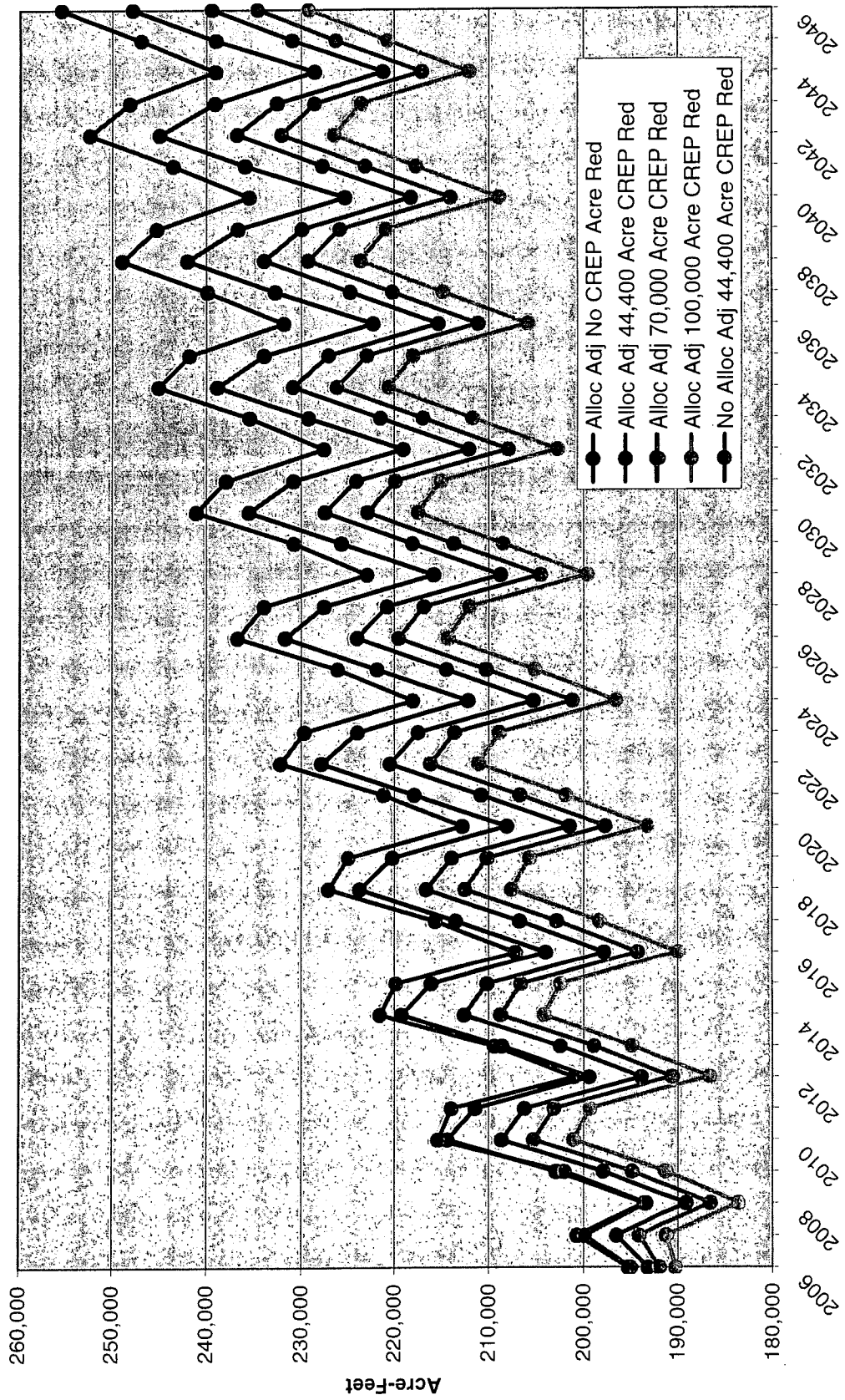


Republican Basin Sum Baseflow Impact Reductions, 2007 - 2046

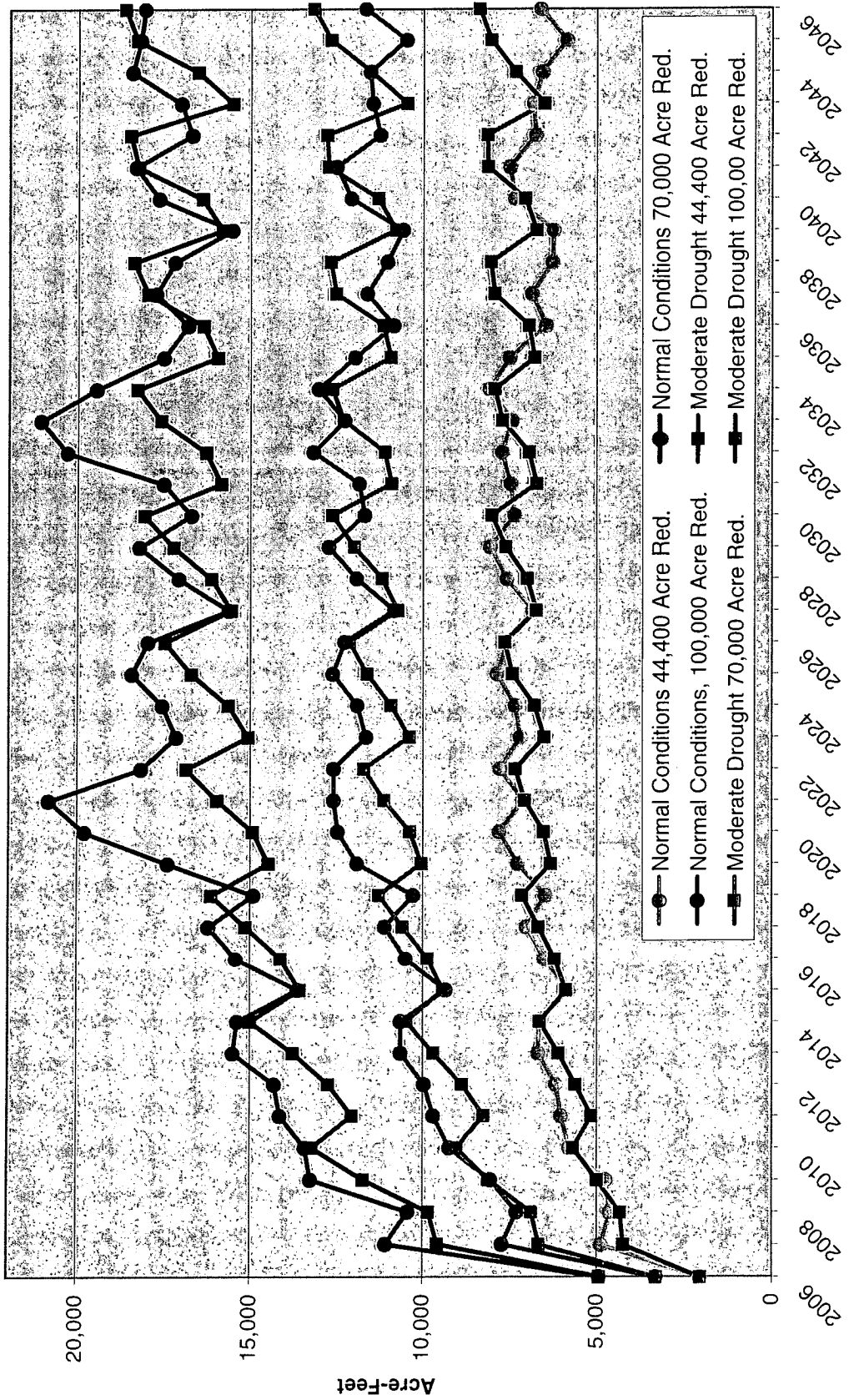
Normal Conditions 3-NRD Reduction Scenarios



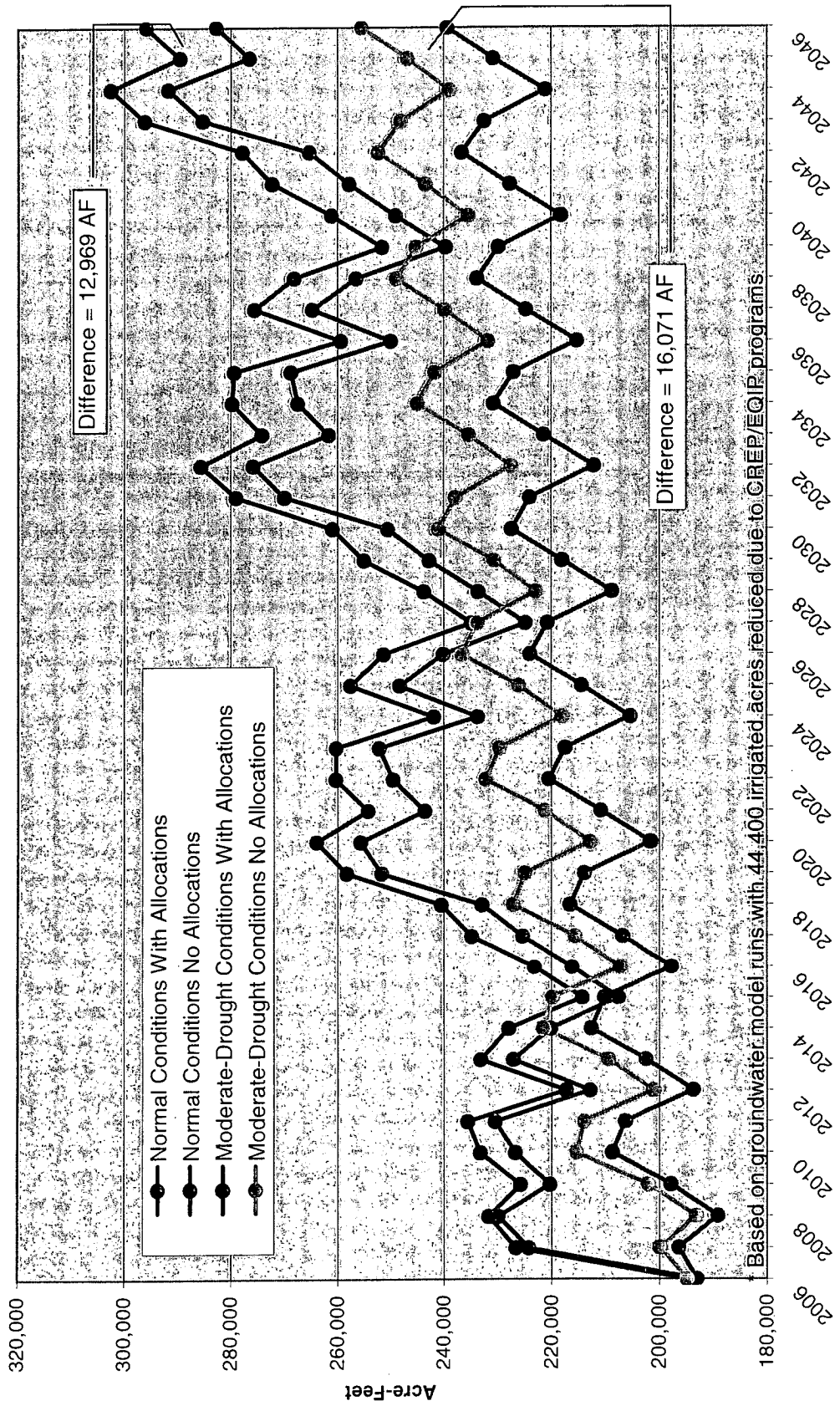
2006 - 2047 Moderate-Drought Conditions Baseflow Impact Comparison



Sum Baseflow Impact Reductions due to CREP/EQIP Program Irrigated Acreage Reductions



Republican Basin Sum Baseflow Impacts for Normal and Moderate-Drought Conditions, with and without NRD Pumping Allocations



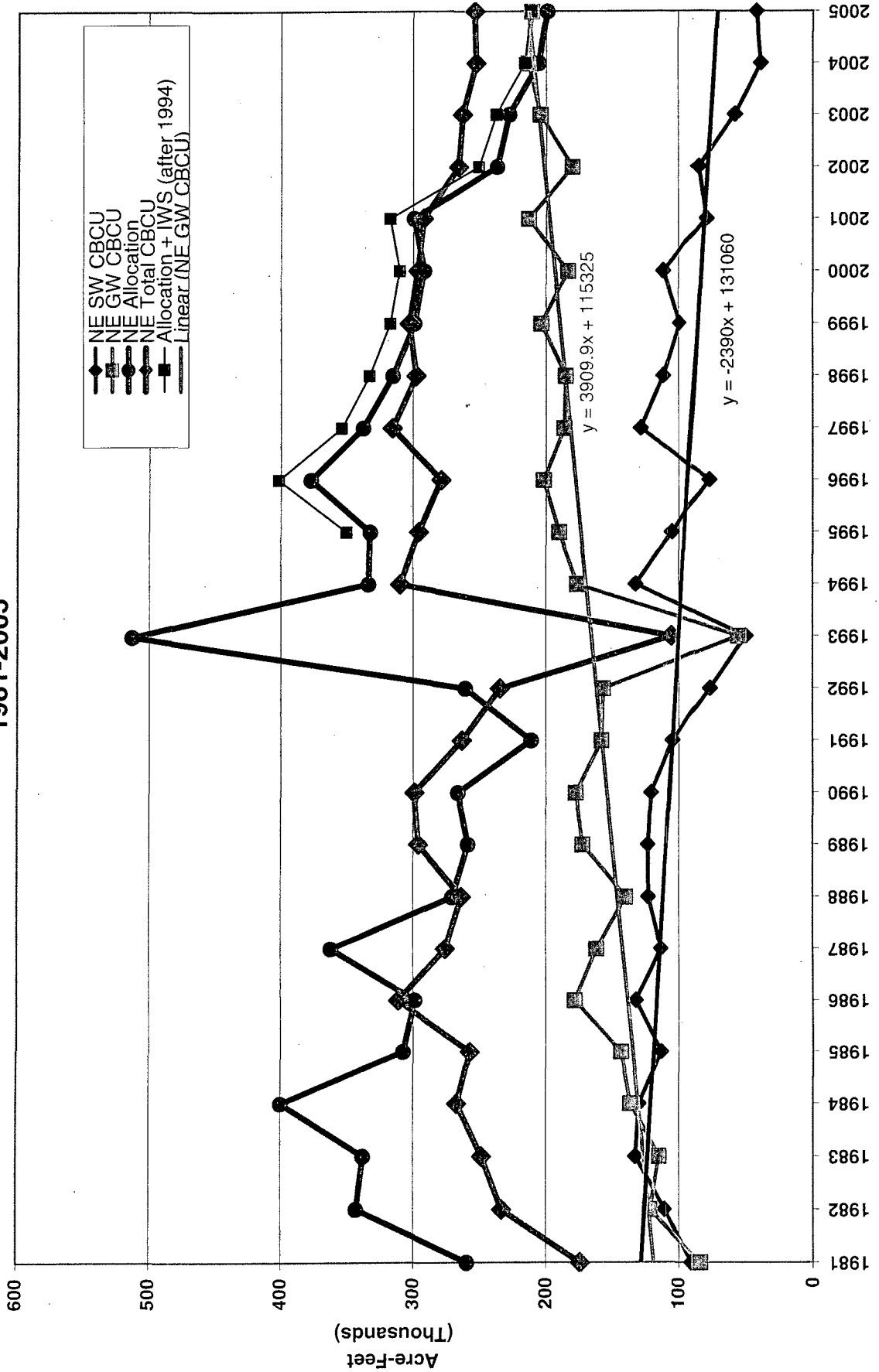
DRAFT OUTLINE

- Where we've been
 - Background discussion of drought, declining streamflows
 - Show slide of historical Allocation/CBCU/IWS info
 - consider referring to CBCU as streamflow impact
- Where we are at
 - Discuss size and scope of CREP/EQIP programs
 - Discuss NRD allocation programs
 - Basically highlight the positive steps taken thus far
- Discuss status quo
 - Consider slides of baseline conditions with various climate assumptions
- Where do we want to be
 - State that we don't know what the allocation will be year to year
 - Something that needs to be jointly decided is a target water supply to manage towards
 - Show at a couple of different allocation levels what we could support
 - Goal is to answer the question: If our water supply (allocation) is "x", we can have stream impacts (CBCU) of "y" which translates to pumpage/sw delivery conditions of "z." State the climate condition assumptions, etc made.
- Discuss ways to increase water supply (allocation) or decrease stream impacts (CBCU)
 - Additional Water Importation (may mention that current IWS already is importation)
 - Phreatophyte control
 - Climate modification (cloud seeding, etc)
 - NRD allocation adjustments
 - Additional irrigated acreage retirement
 - Surface water buyouts

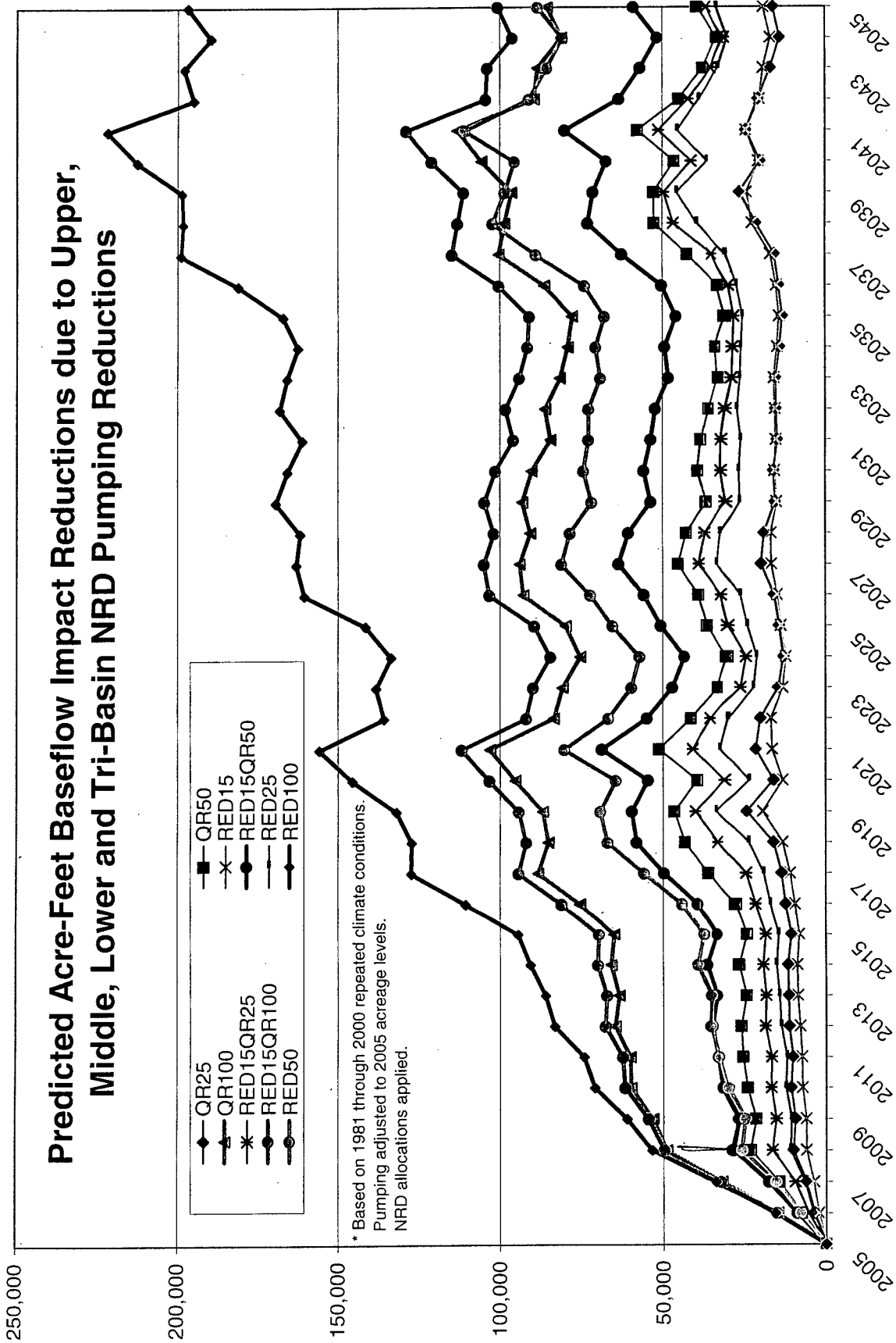
Consider a set of slides which shows estimates of how much impact these various programs may have (e.g. how much did 2006 surface water buyouts reduce SW CBCU, how many AF can we expect QR management to provide, estimate of ET control)

- Other options which may be beneficial
 - Re-timing projects that provide water to downstream states when they need it
 - off stream/off season storage projects
 - importation
 - surface water system operation modifications
 - use canals to keep alluvial system charged
- Close with statement(s) to the effect that one of today's purposes is to discuss these and other options to achieve the goals we set together.

Republican River Compact Data 1981-2005

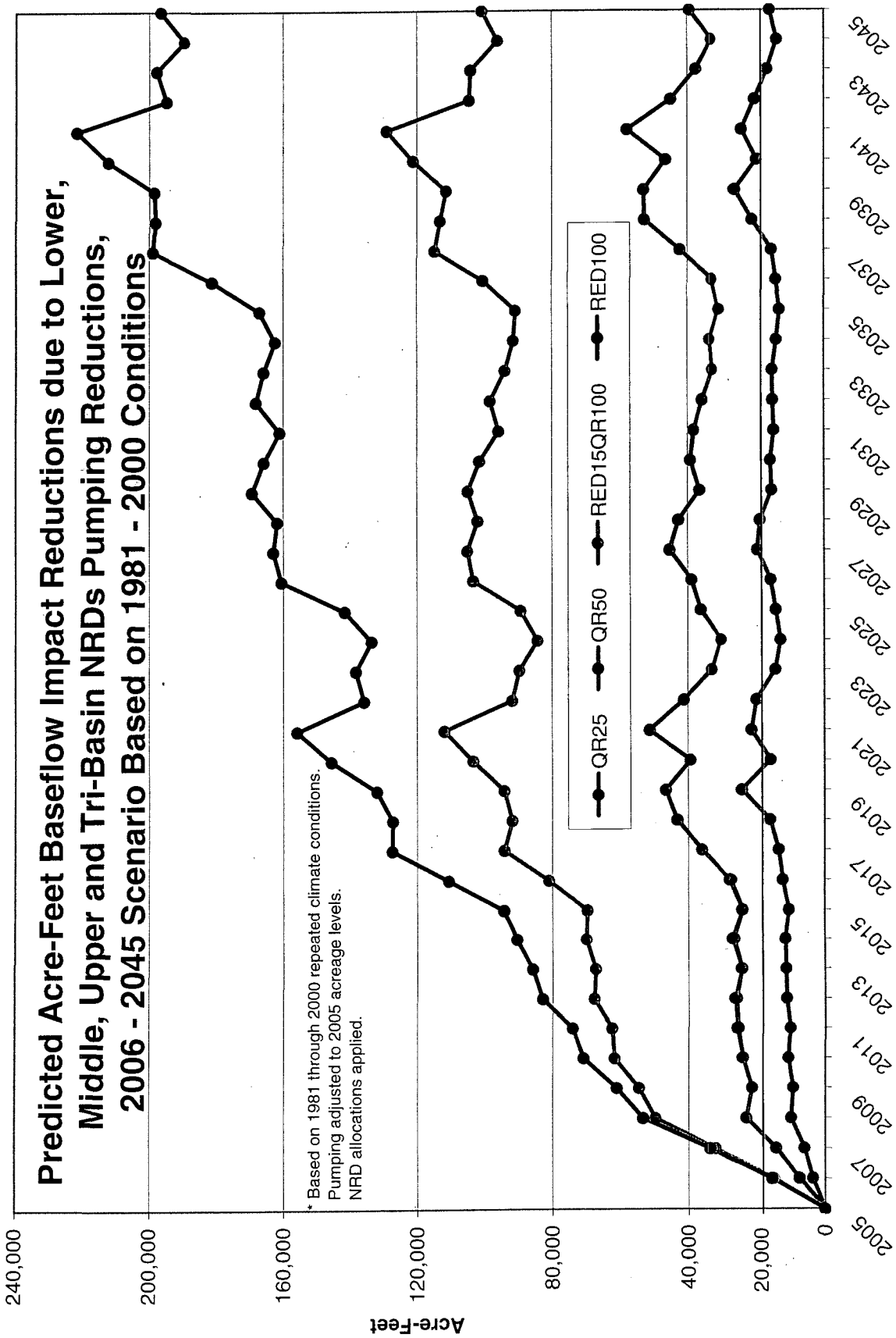


Predicted Acre-Feet Baseflow Impact Reductions due to Upper, Middle, Lower and Tri-Basin NRD Pumping Reductions



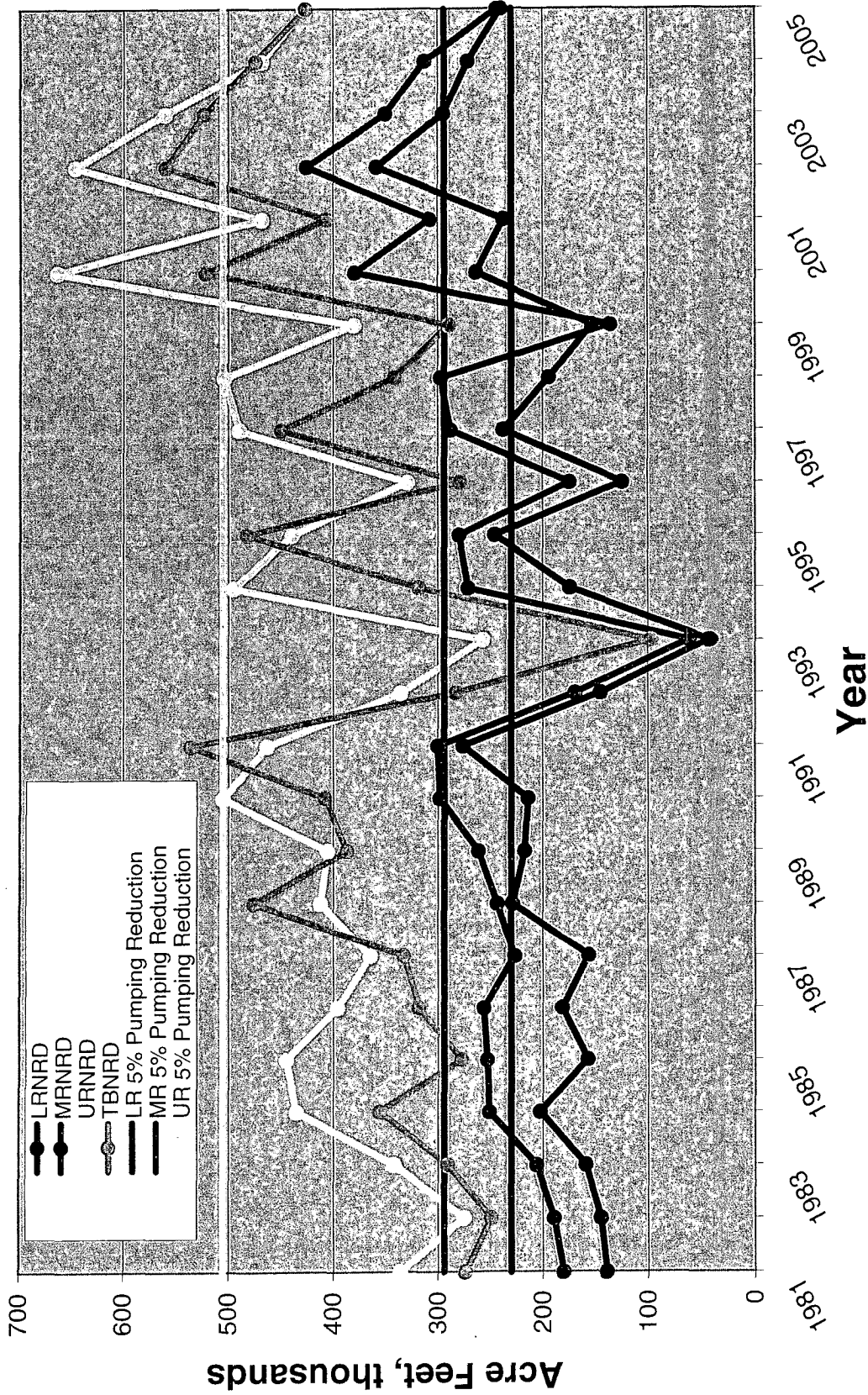
* Based on 1981 through 2000 repeated climate conditions. Pumping adjusted to 2005 acreage levels. NRD allocations applied.

Predicted Acre-Foot Baseflow Impact Reductions due to Lower, Middle, Upper and Tri-Basin NRDs Pumping Reductions, 2006 - 2045 Scenario Based on 1981 - 2000 Conditions



* Based on 1981 through 2000 repeated climate conditions. Pumping adjusted to 2005 acreage levels. NRD allocations applied.

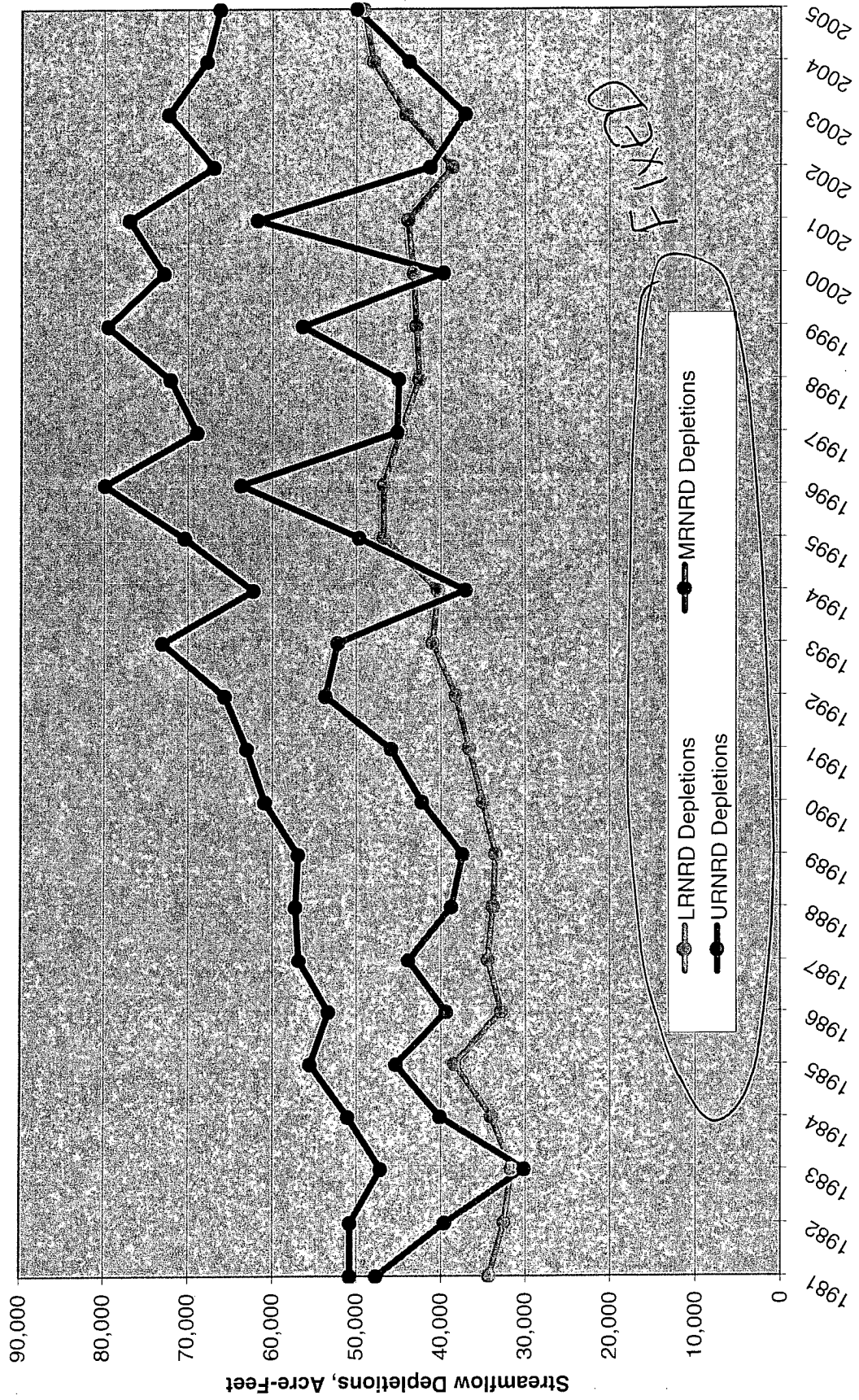
Republican Model Region Groundwater Pumping by NRD



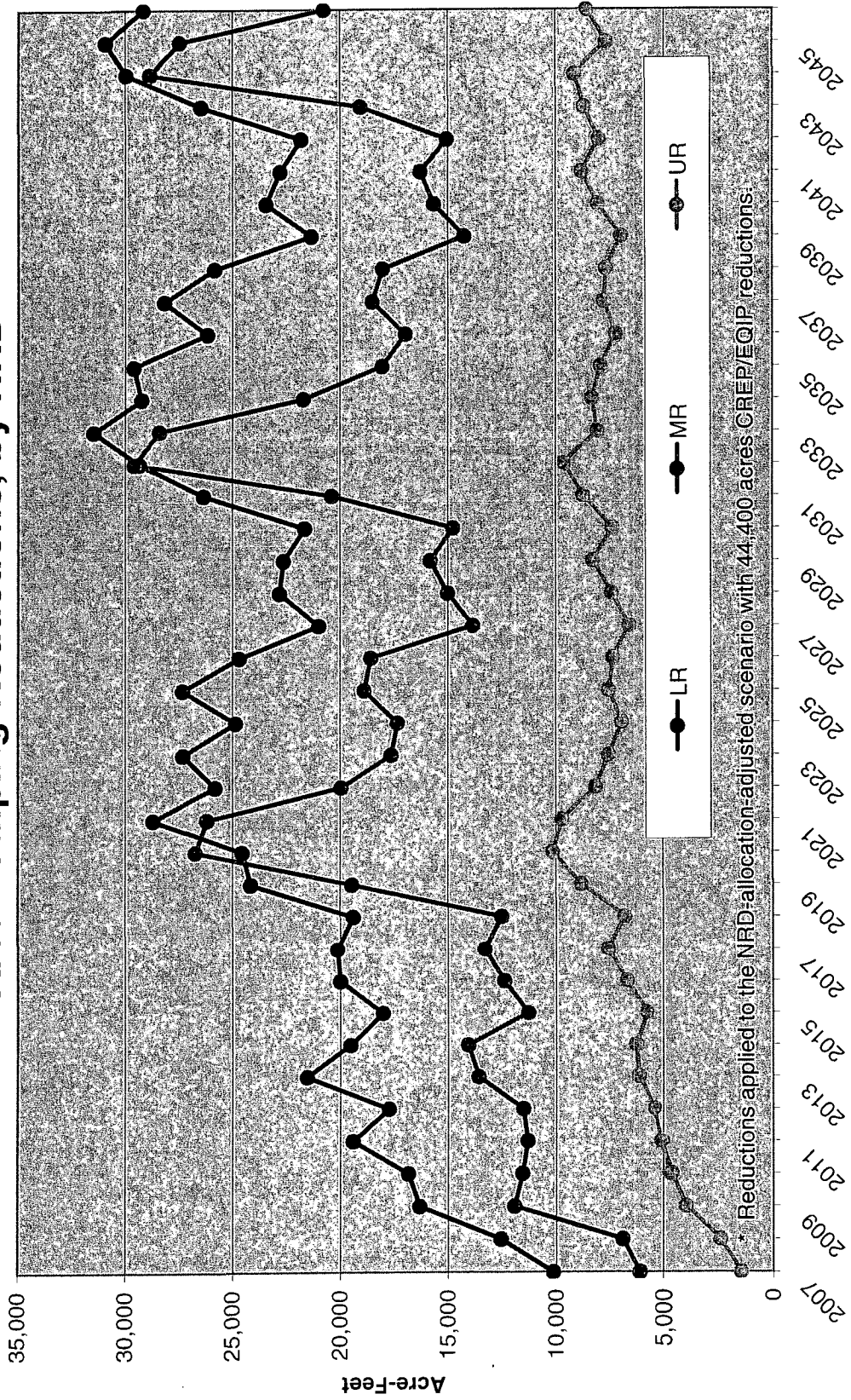
based on '03-'05 using Red15QR100

Year	Historical Allocation Repeated	Lag CU	IWS	CBCU GW	CBCU SW	Total CBCU	Alloc - (CBCU-IWS)	15% Overall + 100% Quick Response Reduction	Riparian ET Reduction or Stream Aug.	Stream Aug-mentation	Bottom Line with additional savings
2002	236,550		14,000	180,440	85,470	265,910	(15,360)				(15,360)
2003	227,580		9,780	204,170	58,610	262,780	(25,420)				(25,420)
2004	205,630		10,380	213,120	39,530	252,650	(36,640)				(36,640)
2005	199,450		11,960	210,880	42,860	253,740	(42,330)				(42,330)
2006	227,580	0	10,000	204,170	58,610	262,780	(25,200)	0			(25,200)
2007	227,580	1,200	10,000	204,170	58,610	263,980	(26,400)	15,035			(11,365)
2008	205,630	2,350	10,000	213,120	39,530	255,000	(39,370)	31,935			(7,435)
2009	199,450	3,450	10,000	210,880	42,860	257,190	(47,740)	49,693			1,953
2010	227,580	4,500	10,000	204,170	58,610	267,280	(29,700)	54,529			24,829
2011	205,630	5,500	10,000	213,120	39,530	258,150	(42,520)	61,690			19,170
2012	199,450	6,450	10,000	210,880	42,860	260,190	(50,740)	62,356			11,616
2013	227,580	7,350	10,000	204,170	58,610	270,130	(32,550)	67,647			35,097
2014	205,630	8,200	10,000	213,120	39,530	260,850	(45,220)	67,157			21,937
2015	199,450	9,000	10,000	210,880	42,860	262,740	(53,290)	69,934			16,644
2016	227,580	9,750	10,000	204,170	58,610	272,530	(34,950)	69,657			34,707
2017	205,630	10,450	10,000	213,120	39,530	263,100	(47,470)	81,023			33,553
2018	199,450	11,100	10,000	210,880	42,860	264,840	(55,390)	94,253			38,863
2019	227,580	11,700	10,000	204,170	58,610	274,480	(36,900)	91,881			54,981
2020	205,630	12,250	10,000	213,120	39,530	264,900	(49,270)	94,247			44,977
2021	199,450	12,750	10,000	210,880	42,860	266,490	(57,040)	103,347			46,307
2022	227,580	13,200	10,000	204,170	58,610	275,980	(38,400)	111,870			73,470
2023	205,630	13,600	10,000	213,120	39,530	266,250	(50,620)	91,891			41,271
2024	199,450	13,950	10,000	210,880	42,860	267,690	(58,240)	89,751			31,511
2025	227,580	14,250	10,000	204,170	58,610	277,030	(39,450)	84,410			44,960
2026	205,630	14,500	10,000	213,120	39,530	267,150	(51,520)	89,375			37,855

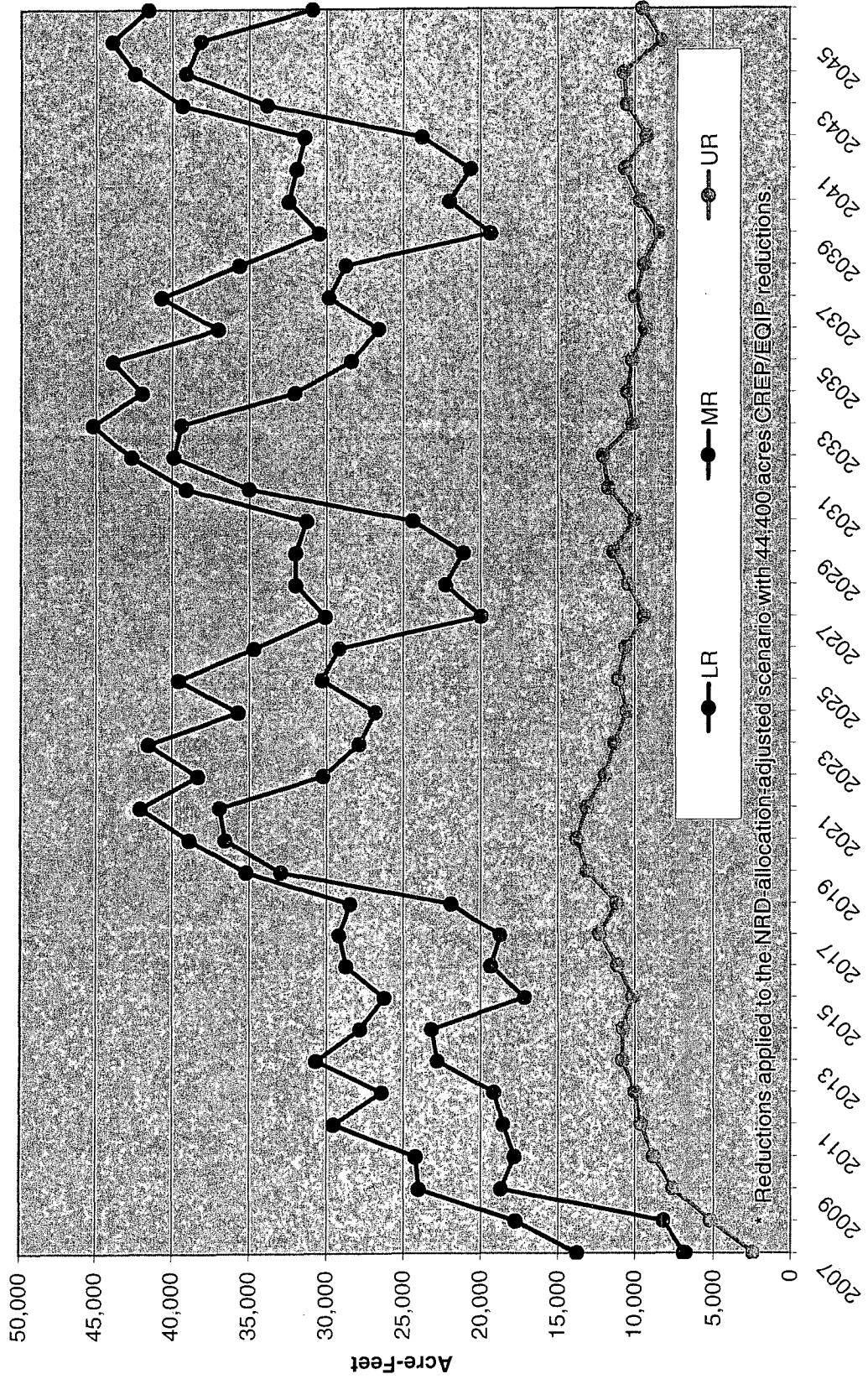
Republican Basin NRDs Streamflow Depletions, 1981 - 2005



Normal Conditions Scenario Baseflow Impact Reductions due to 15% Overall, plus 50% Quick-Response Area Pumping Reductions, by NRD

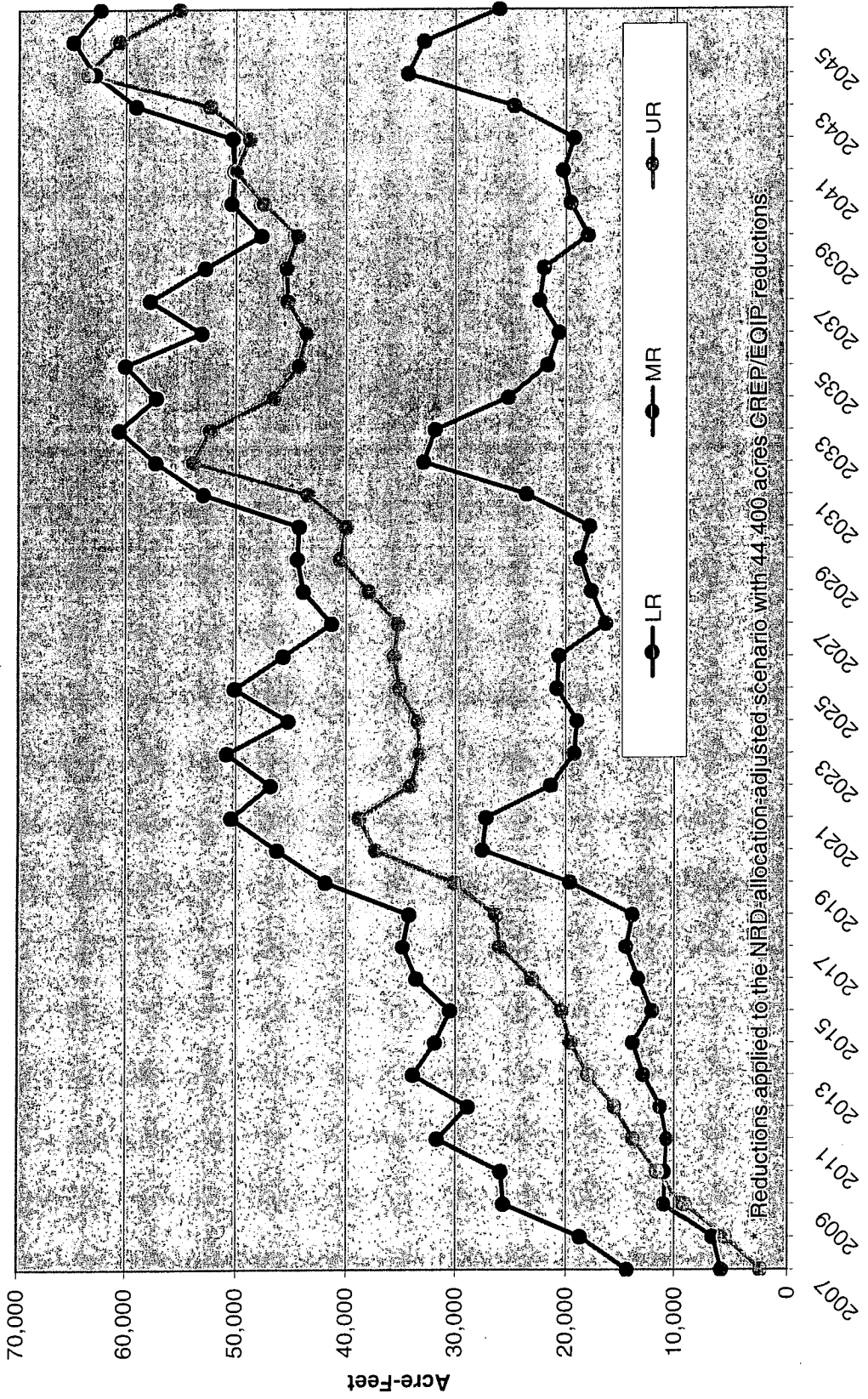


Normal Conditions Scenario Baseflow Impact Reductions due to 100% Pumping Reductions in the Quick-Response Area, by NRD

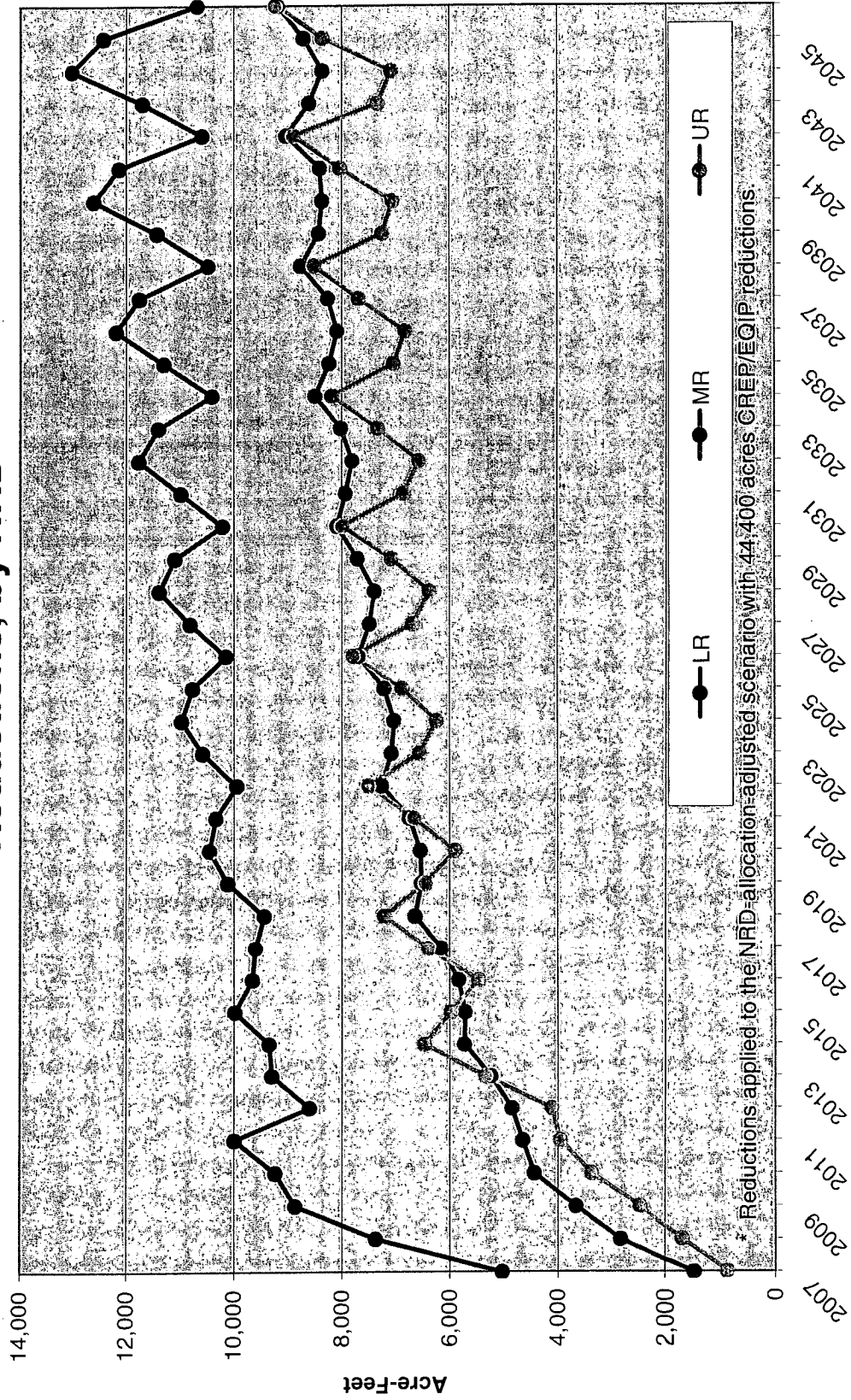


Normal Conditions Scenario Baseflow Reductions, by NRD

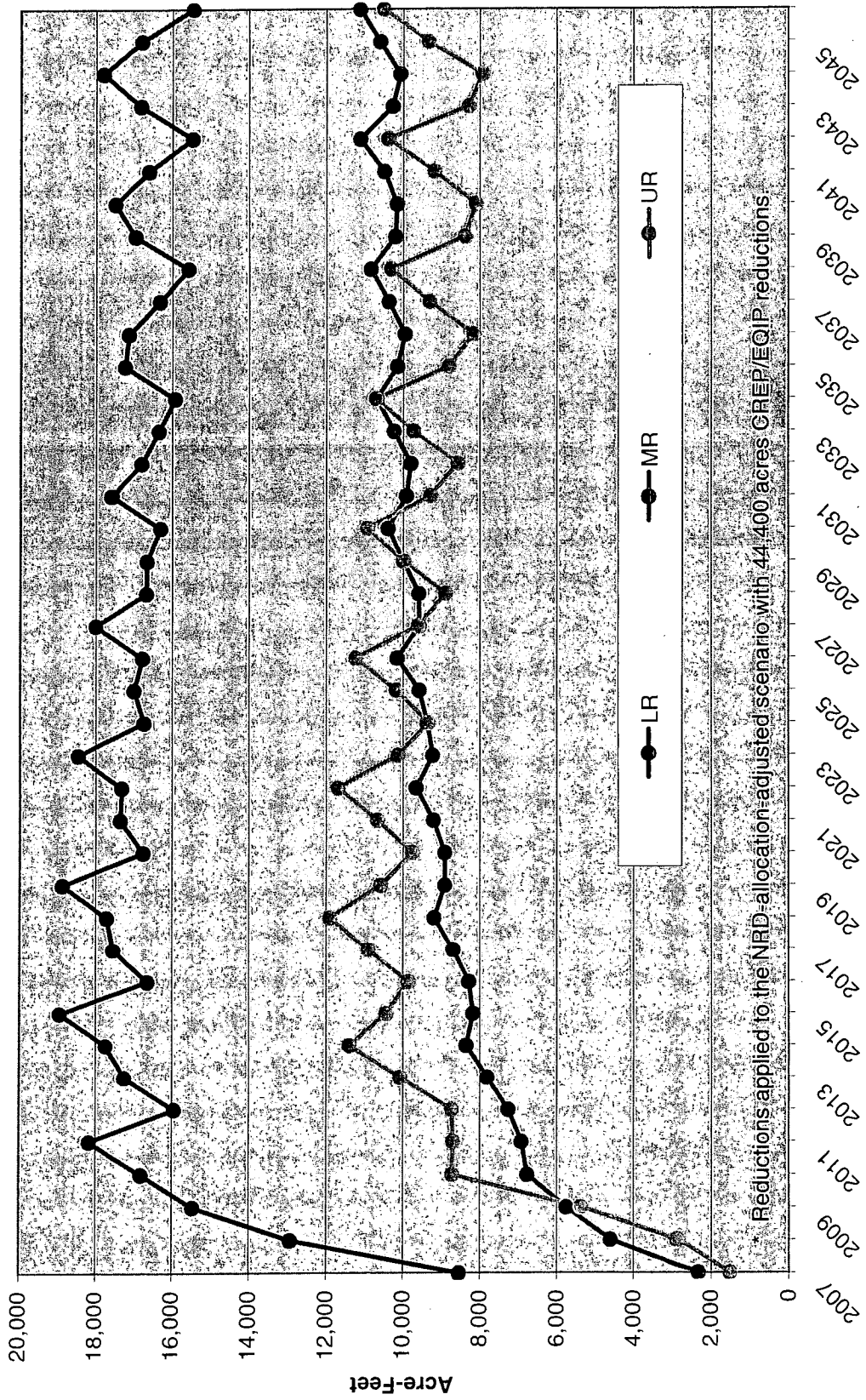
Reductions due to 100% Pumping Reductions, by NRD



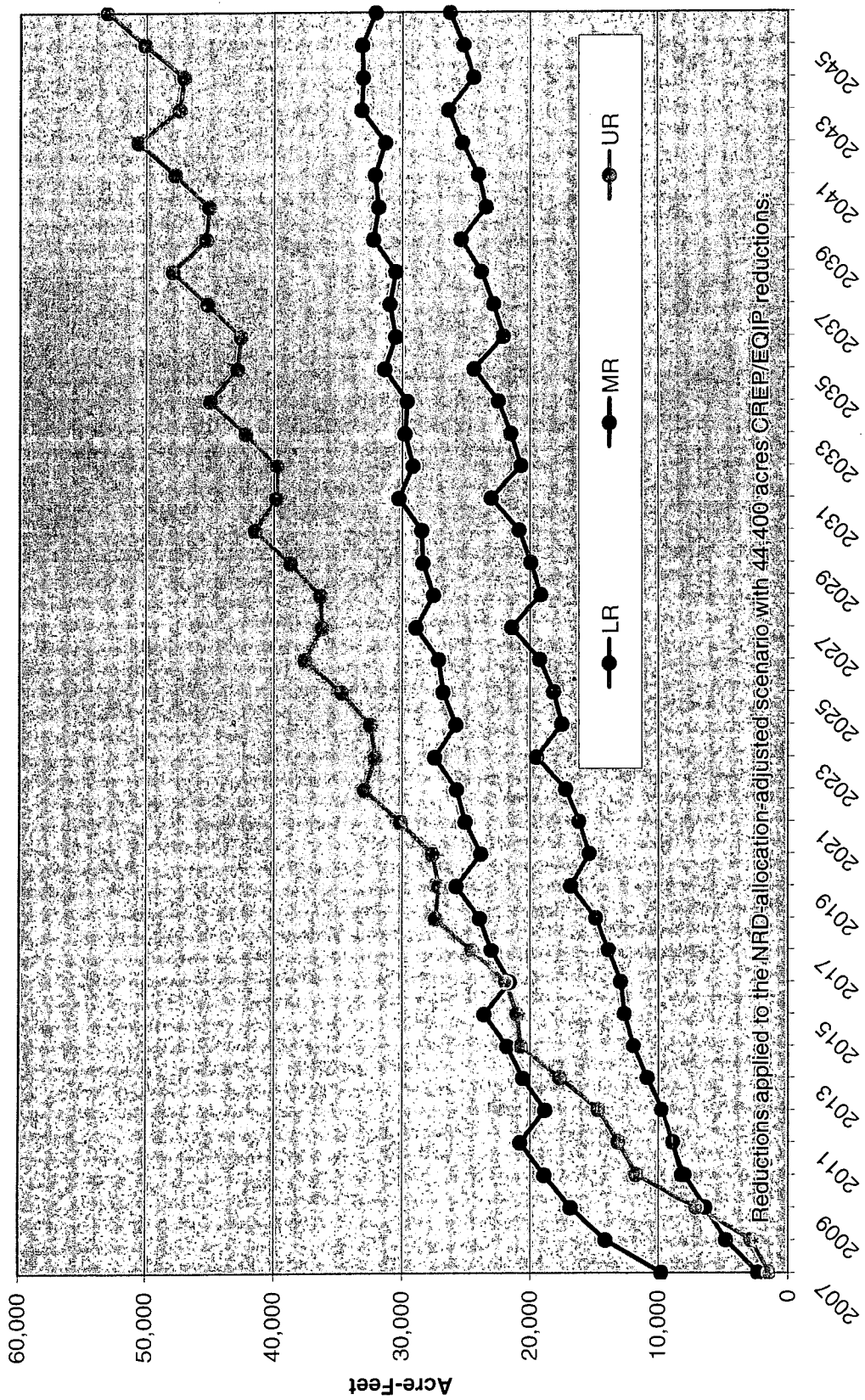
Moderate Drought Scenario Baseflow Impact Reductions due to 15% Overall, plus 50% Quick-Response Area Pumping Reductions, by NRD



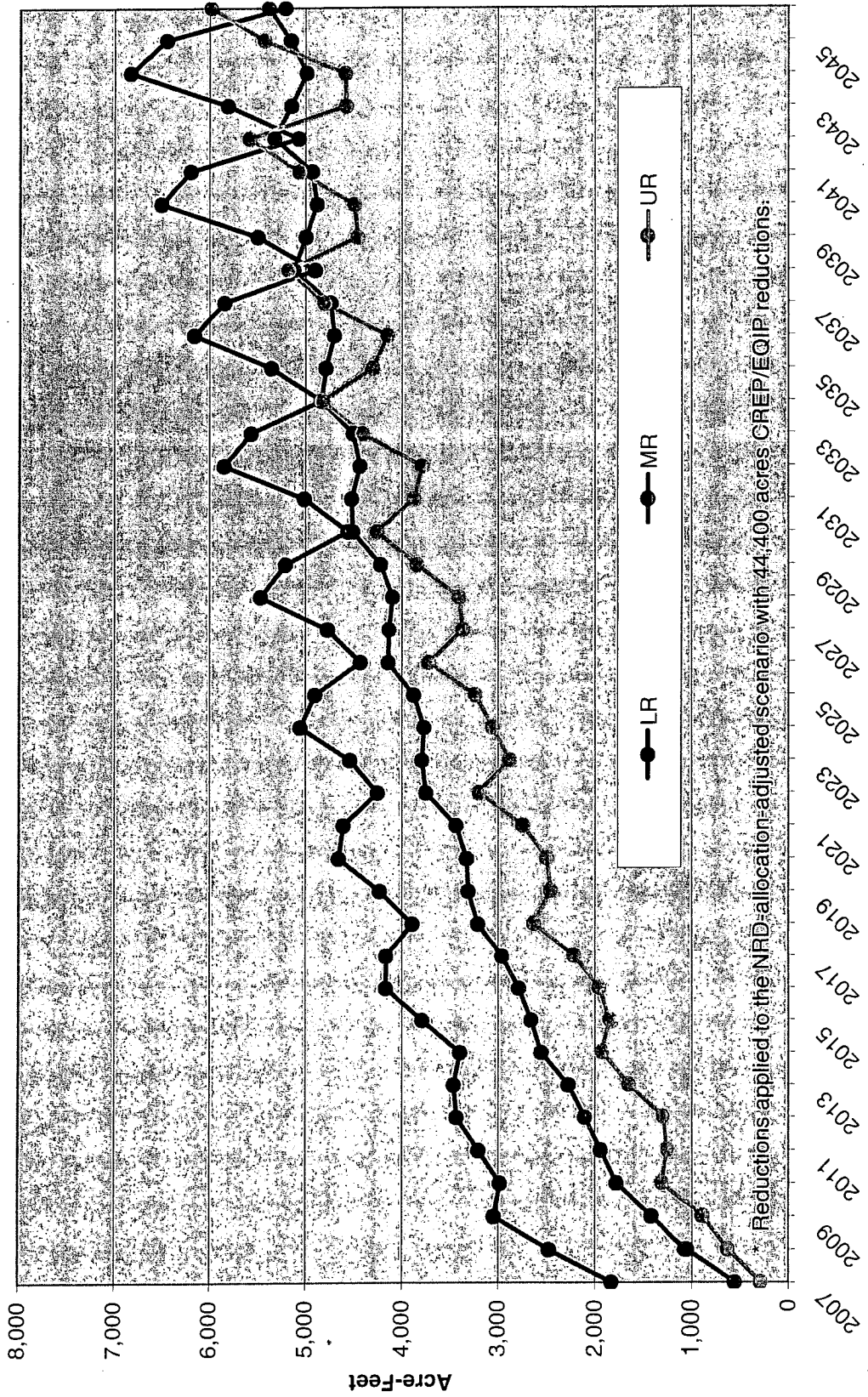
Moderate Drought Scenario Baseflow Impact Reductions due to 100% Pumping Reductions in the Quick-Response Area, by NRD



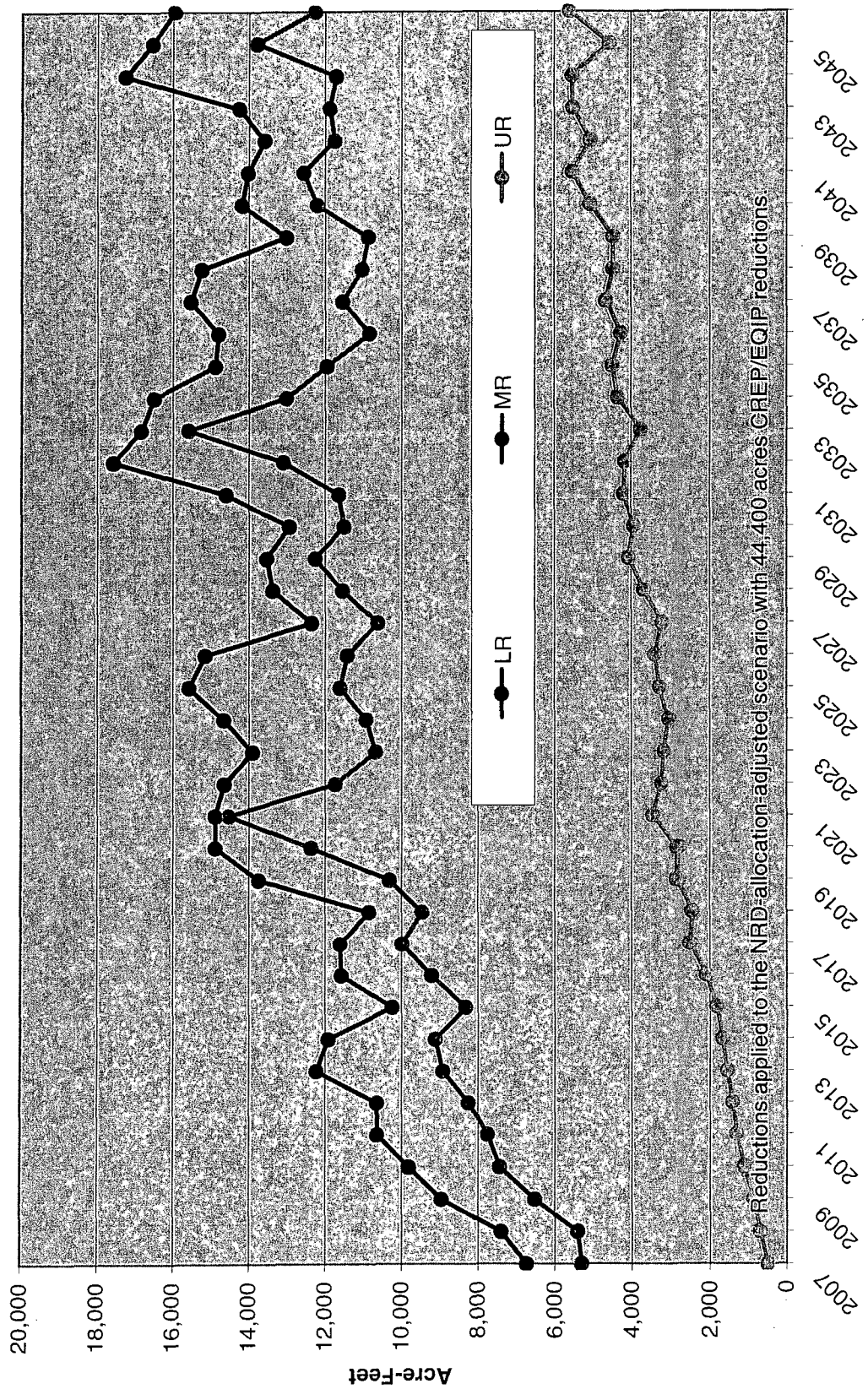
Moderate Drought Scenario Baseflow Impact Reductions due to 100% Pumping Reductions, by NRD



Moderate Drought Scenario Baseflow Impact Reductions due to 20% Pumping Reductions, by NRD



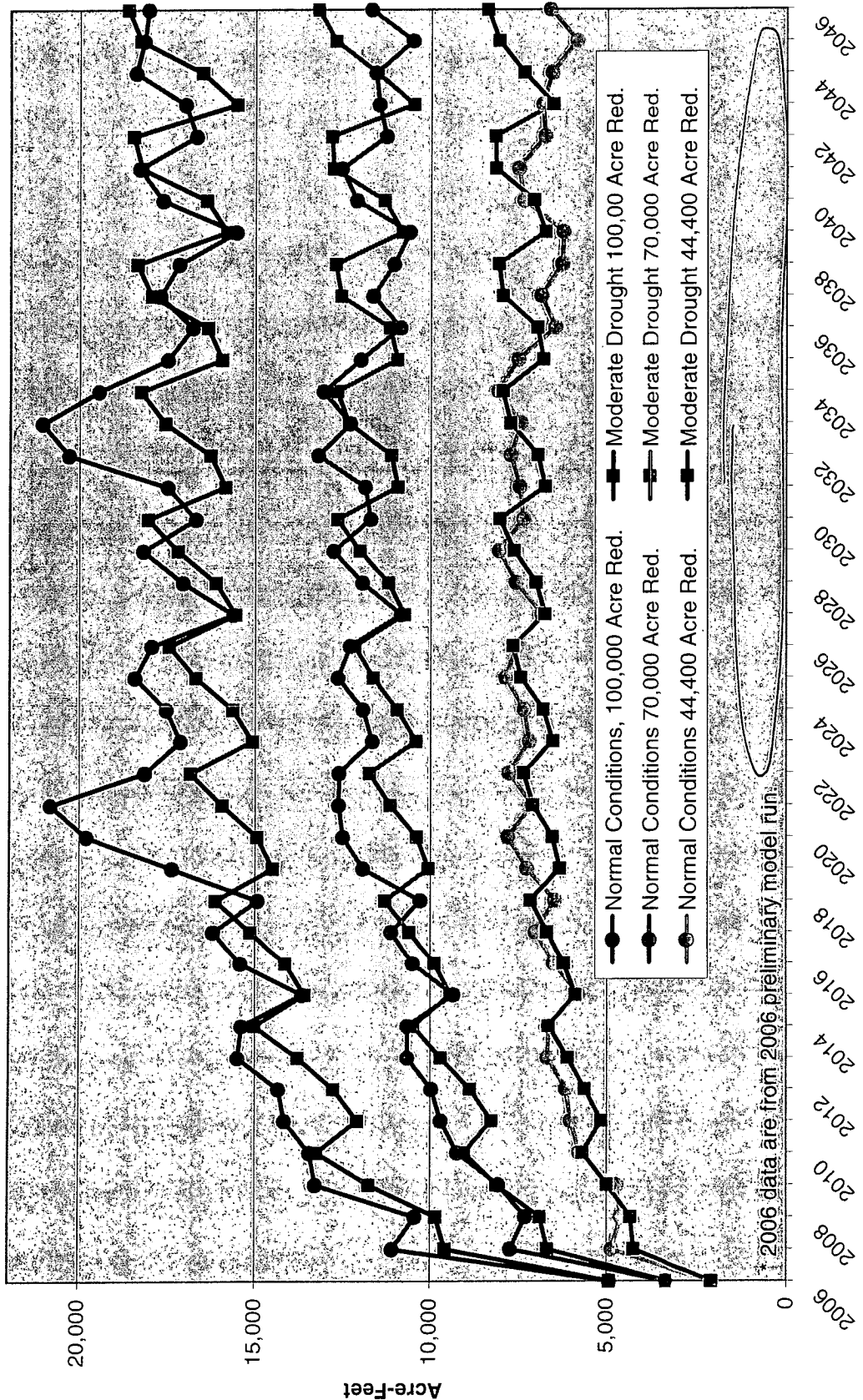
Normal Conditions Scenario Baseflow Impact Reductions due to 20% Pumping Reductions, by NRD



Reductions applied to the NRD-allocation-adjusted scenario with 44,400 acres CREP/EQIP reductions.

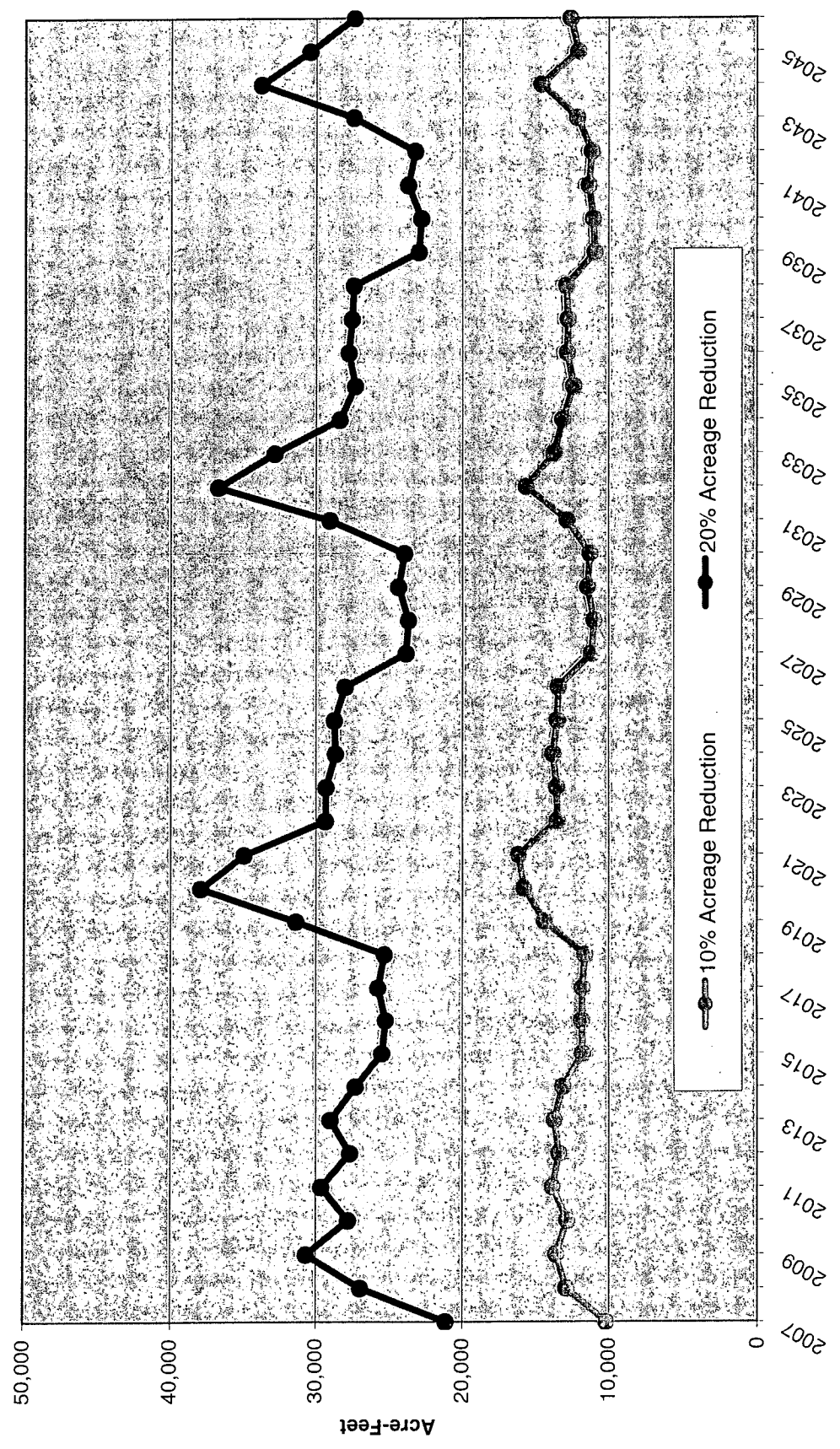
FIXED

Sum Baseflow Impact Reductions due to CREP/EQIP Program Irrigated Acreage Reductions



Fixed

Republican Basin Sum Baseflow Impact Reductions due to Phreatophyte Acreage Reduction in the NE Quick-Response Area, Normal Conditions Scenario 2007-2046



Republican Basin Sum Baseflow Impact Reductions due to NRD Pumping Allocations, 2006 - 2046

