Appendix B

Assessment Results by State

Appendix B

Assessment Results by State

This appendix contains the results of water energy resource assessments of the 50 states of the United States. The state results are presented in the two part table, Table B-0, to facilitate lookup of power potential values and comparison of these values amongst the states. This summary information is followed by 50 sections, each developed to a particular state. Each section has the same format, which includes the following tables and figures:

- Table of total, developed, excluded, and available power potential by power class
- Pie chart showing the developed, excluded, and available fractions of the total power potential
- Pie chart showing the high power, high head/ low power, and low head/low power fractions of the total available power potential
- Pie chart showing the fractions of the low head/low power power potential corresponding to the operating envelopes of conventional turbines, unconventional systems, and microhydro technology classes
- Two panel power potential distribution map with the upper panel showing the locations of low head/low power power potential sites differentiated by the corresponding low head/low power hydropower technology class and the lower panel showing the locations of existing hydroelectric power plants and sites of high head/low power potential.

Negative available power potential values in the high head/high power class occurred for six states: Florida, Iowa, Nebraska, Nevada, North Dakota, and South Dakota. In addition, negative excluded power potential values in the high head/high power class occurred for two of these states: Nevada and South Dakota. These anomalies are thought to have occurred because the developed power is actually generated using resources that are in other power classes, e.g., where a reservoir overlays resources other than those in the high head/high power class.

In order to address these anomalies, we reasoned that in the cases where negative excluded potentials occurred in the high head/high power power class, all the power potential in exclusion zones for this power class has been developed. Thus the excluded power potential for high head/high power class in these cases was set equal to zero. The amount of developed power in the high head/high power class exceeding the difference between the total high head/high power power potential and the sum of the developed and excluded power potentials in this power class was "rolled down" into lower power classes. In the cases of Florida, Iowa, and Nebraska, the "excess" developed power was simply moved to the low head/high power class. If the excess developed power could not all be moved into the low head/high power class without creating a negative available power potential value, the developed power in this class was raised to the maximum value, resulting in a zero available power for this class. The balance of the excess developed power was moved to the low power classes. In the case of Nevada, which had developed power in the low power power classes, the balance of the excess developed power was apportioned to the low power classes by the amount of developed power that was originally assigned to them. In the cases of North and South Dakota where there was no developed power in the low power class, the excess developed power was rolled down into the low power classes by the maximum amount they could absorb without creating a negative value for available power potential in the power class. Data values affected by assuming that all excluded potential has been developed and by developed power redistribution are shown in yellow font on a green background in the data tables in this appendix.

The results presented in this appendix do not include any assessment of the feasibility of developing or the actual availability for development of any power resources. The term "available" used in the tables and figures in this appendix only denotes the net amount of power potential after subtracting the amounts of developed and excluded power potential from the gross amount of power potential.

Table B-0A. Summary of state water energy resources power potentials (annual mean power) by category and power class.

	Total Potential				Available Potential			Available Low Head/Low Power Potential			
Name	Total (MW)	Developed (MW)	Excluded (MW)	Available (MW)	High Power (MW)	High Head/ Low Power (MW)	Low Head/ Low Power (MW)	Conventional Turbines (MW)	Unconventional Systems (MW)	Microhydro (MW)	Name
Alabama	**3,165**	1,113	44	2,008	1,168	240	600	240	91	269	Alabama
Alaska	**87,028**	171	42,429	44,428	36,240	5,572	2,616	897	409	1,310	Alaska
Arizona	**3,587**	928	1,244	1,415	483	465	467	154	38	275	Arizona
Arkansas	**4,904**	405	407	4,092	3,281	323	488	155	110	223	Arkansas
California	**26,638**	4,699	11,628	10,311	7,770	1,919	622	194	76	352	California
Colorado	**7,413**	246	2,275	4,892	2,978	1,329	585	239	59	287	Colorado
Connecticut	**432**	55	18	359	210	101	48	12	11	25	Connecticut
Delaware	**24**	0	0	24	15	2	7	1	2	4	Delaware
Florida	**446**	32	14	400	176	13	211	41	70	100	Florida
Georgia	**2,249**	429	208	1,612	831	229	552	186	123	243	Georgia
Hawaii	**2,304**	20	459	1825	1,682	134	9	1	0	8	Hawaii
Idaho	**18,794**	1,288	5,545	11,961	9,386	2,036	539	178	71	290	Idaho
Illinois	**1,902**	27	297	1,578	1,146	39	393	103	100	190	Illinois
Indiana	**1,587**	67	4	1,516	1,124	82	310	116	61	133	Indiana
Iowa	**1,124**	95	127	902	361	49	492	183	108	201	Iowa
Kansas	**989**	1	3	985	418	38	529	190	80	259	Kansas
Kentucky	**4,116**	383	46	3,687	3,112	197	378	134	49	195	Kentucky
Louisiana	**2,236**	89	129	2,018	1,764	11	243	68	72	103	Louisiana
Maine	**2,766**	432	71	2,263	1,511	467	285	104	39	142	Maine
Maryland	**845**	203	298	344	211	74	59	21	3	35	Maryland
Massachussetts	**675**	126	29	520	358	102	60	20	6	34	Massachussetts
Michigan	**1,220**	209	224	787	194	180	413	152	51	210	Michigan
Minnesota	**1,410**	128	249	1,033	445	166	422	139	72	211	Minnesota
Mississippi	**4,496**	0	450	4,046	3,477	61	508	172	127	209	Mississippi
Missouri	**4,549**	129	117	4,303	3,395	185	723	277	98	348	Missouri
Montana	**6,379**	1,192	2,179	3,008	1,515	897	596	208	91	297	Montana
Nebraska	**1,222**	152	103	967	348	69	550	280	71	199	Nebraska
Nevada	**1,137**	263	147	727	0	343	385	41	8	336	Nevada
New Hampshire	**1,181**	187	89	905	578	239	88	34	16	38	New Hampshire
New Jersey	**300**	6	38	256	168	37	51	19	5	27	New Jersey
New Mexico	**1,729**	30	368	1,331	383	490	458	110	36	312	New Mexico
New York	**4,902**	2,861	110	1,931	429	1,036	466	170	69	227	New York
North Carolina	**2,750**	610	491	1,649	911	378	360	117	71	172	North Carolina
North Dakota	**289**	270	8	11	0	0	11	0	0	11	North Dakota
Ohio	**1,280**	63	81	1,136	604	144	388	152	54	182	Ohio
Oklahoma	**1,511**	239	23	1,249	481	114	654	282	152	220	Oklahoma
Oregon	**18,397**	3,271	5,835	9,291	6,691	1,931	669	229	89	351	Oregon
Pennsylvania	**4,754**	284	488	3,982	2,535	949	498	185	56	257	Pennsylvania
Rhode Island	**37**	4	0	33	15	9	9	2	1	6	Rhode Island
South Carolina	**1,325**	428	49	848	509	78	261	69	79	113	South Carolina
South Dakota	**858**	622	67	169	0	0	169	0	0	169	South Dakota
Tennessee	**5,284**	1,082	472	3,730	2,900	397	433	145	78	210	Tennessee
Texas	**2,336**	189	119	2,028	361	242	1,425	438	242	745	Texas
Utah	**3,924**	135	933	2,856	1,513	970	373	87	32	254	Utah
Vermont	**1,144**	128	49	967	538	345	84	36	15	33	Vermont
Virginia	**2,220**	147	194	1,879	1,120	410	349	127	49	173	Virginia
Washington	**30,803**	11,470	6,893	12,440	10,645	1,385	410	138	74	198	Washington
West Virginia	**3,427**	140	753	2,534	1,848	452	234	82	33	119	West Virginia
Wisconsin	**1,595**	264	189	1,142	602	138	402	131	68	203	Wisconsin
Wyoming	**6,058**	117	2,768	3,173	1,904	801	468	194	47	227	Wyoming
U.S. Total	**289,741**	**35,429**	**88,761**	**165,551**	**118,334**	**25,868**	**21,350**	**7,253**	**3,362**	**10,735**	

Note 1: No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.
Note 2: The U.S. total, excluded, and available potentials listed in Table A-0 are 1–4% higher than the values in this table, which contains more accurate U.S. values.
Note 3: Numbers in yellow font indicate values that have been adjusted. See power table in individual state section of this appendix for explanation.

Table B-0B. Summary of state water energy resources power potential percentages of totals by category and power class.

	Total Potential				Available Potential			Available Low Head/Low Power Potential			
Name	Total[a]	Developed[b]	Excluded[b]	Available[b]	High Power[c]	High Head/ Low Power[c]	Low Head/ Low Power[c]	Conventional Turbines[d]	Unconventional Systems[d]	Microhydro[d]	Name
Alabama	**1%**	**35%**	1%	**63%**	58%	12%	**30%**	**40%**	15%	45%	Alabama
Alaska	**31%**	0%	**45%**	**55%**	**83%**	11%	5%	**34%**	15%	**51%**	Alaska
Arizona	**1%**	**26%**	**35%**	39%	34%	**33%**	**33%**	33%	8%	**59%**	Arizona
Arkansas	**2%**	8%	8%	**83%**	**80%**	8%	12%	32%	**23%**	46%	Arkansas
California	**9%**	**18%**	**44%**	39%	**75%**	**19%**	6%	31%	12%	**57%**	California
Colorado	**3%**	3%	**31%**	**66%**	61%	**27%**	12%	**41%**	10%	49%	Colorado
Connecticut	**0%**	**13%**	4%	**83%**	58%	**28%**	**13%**	25%	**23%**	**52%**	Connecticut
Delaware	**0%**	0%	0%	**100%**	63%	8%	**29%**	14%	**29%**	**57%**	Delaware
Florida	**0%**	7%	3%	**90%**	44%	3%	**53%**	19%	**33%**	47%	Florida
Georgia	**1%**	**19%**	9%	**72%**	52%	14%	**34%**	**34%**	**22%**	44%	Georgia
Hawaii	**1%**	1%	20%	**79%**	**92%**	7%	0%	11%	0%	**89%**	Hawaii
Idaho	**6%**	7%	**30%**	**64%**	**78%**	**17%**	5%	33%	13%	**54%**	Idaho
Illinois	**1%**	1%	16%	**83%**	**73%**	2%	**25%**	26%	**25%**	48%	Illinois
Indiana	**1%**	4%	0%	**96%**	**74%**	5%	**20%**	**37%**	**20%**	43%	Indiana
Iowa	**0%**	8%	11%	**80%**	40%	5%	**55%**	**37%**	**22%**	41%	Iowa
Kansas	**0%**	0%	0%	**100%**	42%	4%	**54%**	**36%**	15%	49%	Kansas
Kentucky	**1%**	9%	1%	**90%**	**84%**	5%	10%	**35%**	13%	**52%**	Kentucky
Louisiana	**1%**	4%	6%	**90%**	**87%**	1%	12%	28%	**30%**	42%	Louisiana
Maine	**1%**	**16%**	3%	**82%**	67%	**21%**	**13%**	**36%**	14%	**50%**	Maine
Maryland	**0%**	**24%**	**35%**	41%	61%	**22%**	**17%**	**36%**	5%	**59%**	Maryland
Massachussetts	**0%**	**19%**	4%	**77%**	69%	**20%**	12%	33%	10%	**57%**	Massachussetts
Michigan	**0%**	**17%**	18%	**65%**	25%	**23%**	**52%**	**37%**	12%	**51%**	Michigan
Minnesota	**0%**	9%	18%	**73%**	43%	**16%**	**41%**	33%	**17%**	**50%**	Minnesota
Mississippi	**2%**	0%	10%	**90%**	**86%**	2%	**13%**	**34%**	**25%**	41%	Mississippi
Missouri	**2%**	3%	3%	**95%**	**79%**	4%	**17%**	**38%**	14%	48%	Missouri
Montana	**2%**	**19%**	**34%**	47%	50%	**30%**	**20%**	**35%**	15%	**50%**	Montana
Nebraska	**0%**	**12%**	8%	**79%**	36%	7%	**57%**	**51%**	13%	36%	Nebraska
Nevada	**0%**	**23%**	13%	**64%**	0%	**47%**	**53%**	11%	2%	**87%**	Nevada
New Hampshire	**0%**	**16%**	8%	**77%**	64%	**26%**	10%	**39%**	**18%**	43%	New Hampshire
New Jersey	**0%**	2%	13%	**85%**	66%	14%	**20%**	**37%**	10%	**53%**	New Jersey
New Mexico	**1%**	2%	21%	**77%**	29%	**37%**	**34%**	24%	8%	**68%**	New Mexico
New York	**2%**	**58%**	2%	39%	22%	**54%**	**24%**	**36%**	15%	49%	New York
North Carolina	**1%**	**22%**	18%	**60%**	55%	**23%**	**22%**	33%	**20%**	48%	North Carolina
North Dakota	**0%**	**93%**	3%	4%	0%	0%	**100%**	0%	0%	**100%**	North Dakota
Ohio	**0%**	5%	6%	**89%**	53%	13%	**34%**	**39%**	14%	47%	Ohio
Oklahoma	**1%**	**16%**	2%	**83%**	39%	9%	**52%**	**43%**	**23%**	34%	Oklahoma
Oregon	**6%**	**18%**	**32%**	51%	**72%**	**21%**	7%	**34%**	13%	**52%**	Oregon
Pennsylvania	**2%**	6%	10%	**84%**	64%	**24%**	**13%**	**37%**	11%	**52%**	Pennsylvania
Rhode Island	**0%**	11%	0%	**89%**	45%	**27%**	**27%**	22%	11%	**67%**	Rhode Island
South Carolina	**0%**	**32%**	4%	**64%**	60%	9%	**31%**	26%	**30%**	43%	South Carolina
South Dakota	**0%**	**72%**	8%	20%	0%	0%	**100%**	0%	0%	**100%**	South Dakota
Tennessee	**2%**	**20%**	9%	**71%**	**78%**	11%	12%	33%	**18%**	48%	Tennessee
Texas	**1%**	8%	5%	**87%**	18%	12%	**70%**	31%	**17%**	**52%**	Texas
Utah	**1%**	3%	24%	**73%**	53%	**34%**	**13%**	23%	9%	**68%**	Utah
Vermont	**0%**	11%	4%	**85%**	56%	**36%**	9%	**43%**	**18%**	39%	Vermont
Virginia	**1%**	7%	9%	**85%**	60%	**22%**	**19%**	**36%**	14%	**50%**	Virginia
Washington	**10%**	**37%**	22%	40%	**86%**	11%	3%	**34%**	**18%**	48%	Washington
West Virginia	**1%**	4%	22%	**74%**	**73%**	**18%**	9%	**35%**	14%	**51%**	West Virginia
Wisconsin	**1%**	**17%**	12%	**72%**	53%	12%	**35%**	33%	**17%**	**50%**	Wisconsin
Wyoming	**2%**	2%	**46%**	52%	60%	**25%**	**15%**	**41%**	10%	49%	Wyoming
U.S. Average		**12%**	**30%**	**58%**	**72%**	**15%**	**12%**	**34%**	**16%**	**50%**	

a. Regional percentage of total U.S. hydropower potential
b. Percentage of regional total hydropower potential
c. Percentage of regional total available hydropower potential
d. Percentage of regional total low head/low power hydropower potential

Note 1: No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.
Note 2: Bolded figures indicate values greater than or equal to the U.S. average.
Note 3: Blue background indicates constituent with the largest percentage.
Note 4: Numbers in yellow font indicate values that have been adjusted. See power table in individual state sections of this appendix for explanation.

Intentionally left blank

B.1 Alabama

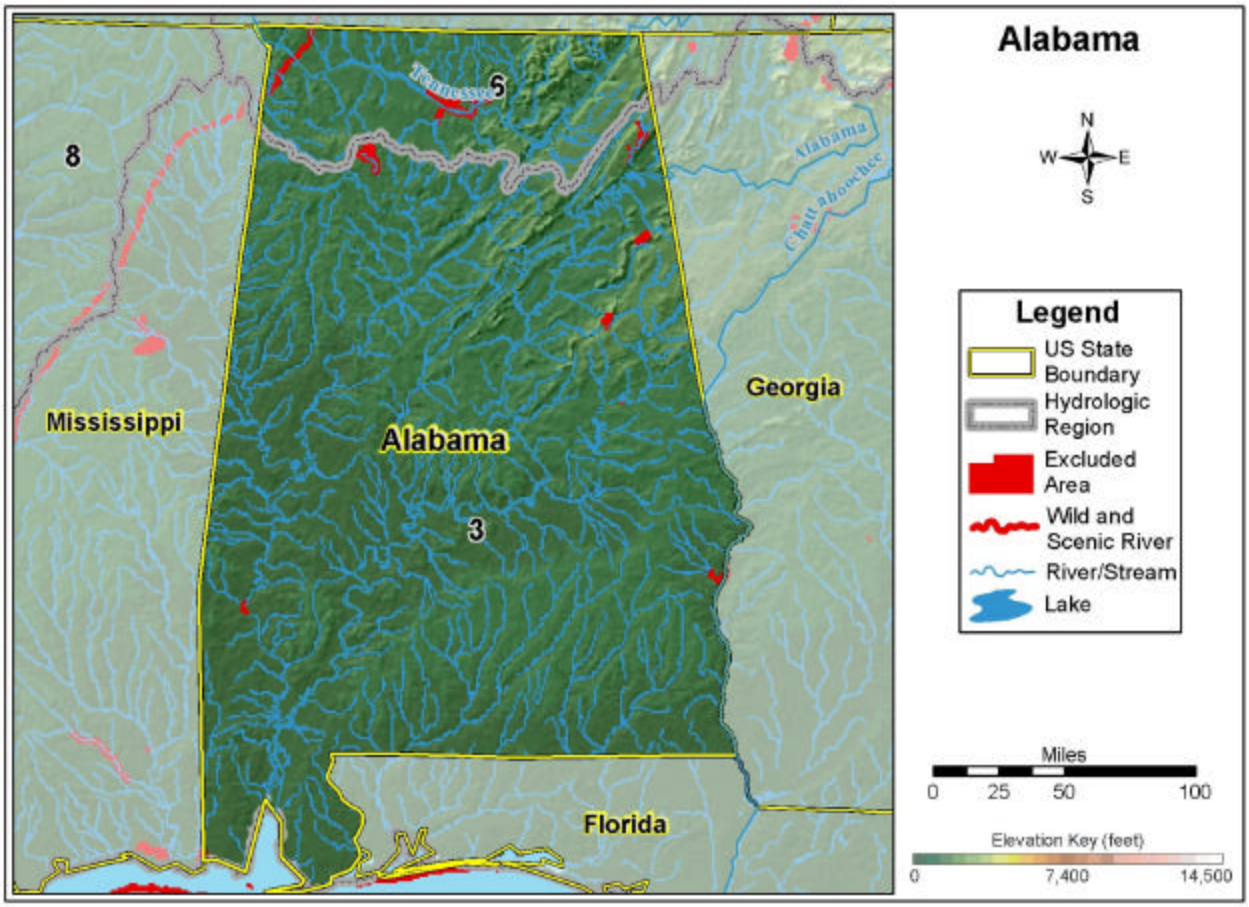


Figure B-1. Alabama.

Table B-1. Summary of results of water energy resource assessment of Alabama.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**3,165**	**1,113**	**44**	**2,008**
TOTAL HIGH POWER	**2,312**	**1,113**	**31**	**1,168**
High Head/High Power	**1,491**	**1,113**	**22**	**356**
Low Head/High Power	**821**	**0**	**9**	**812**
TOTAL LOW POWER	**853**	**0**	**13**	**840**
High Head/Low Power	**246**	**0**	**6**	**240**
Low Head/Low Power	**607**	**0**	**7**	**600**
Conventional Turbine	242	0	2	240
Unconventional Systems	93	0	2	91
Microhydro	272	0	3	269

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

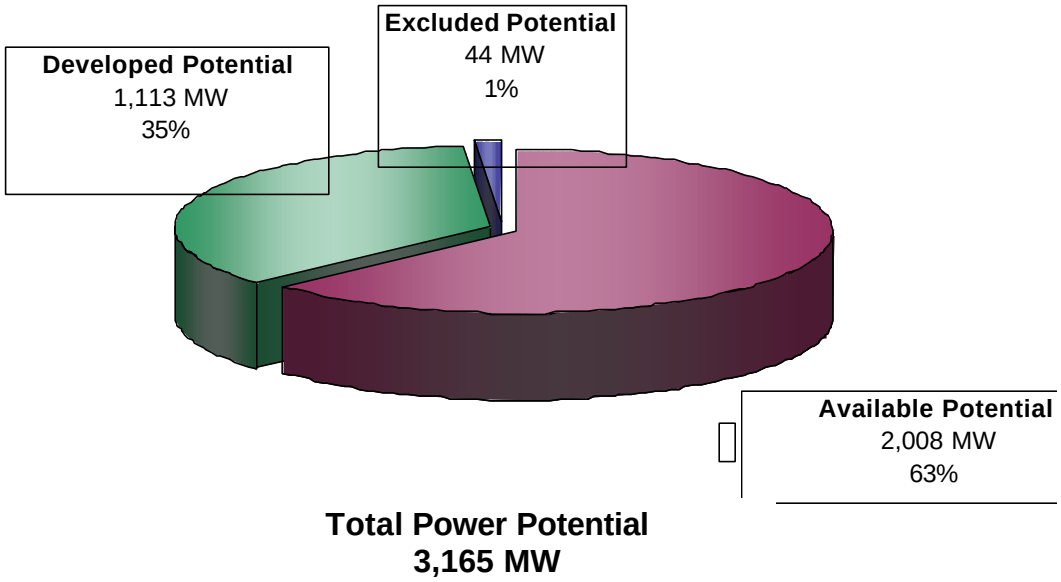


Figure B-2. Power category distribution of the total power potential (annual mean power) of water energy resources in Alabama.

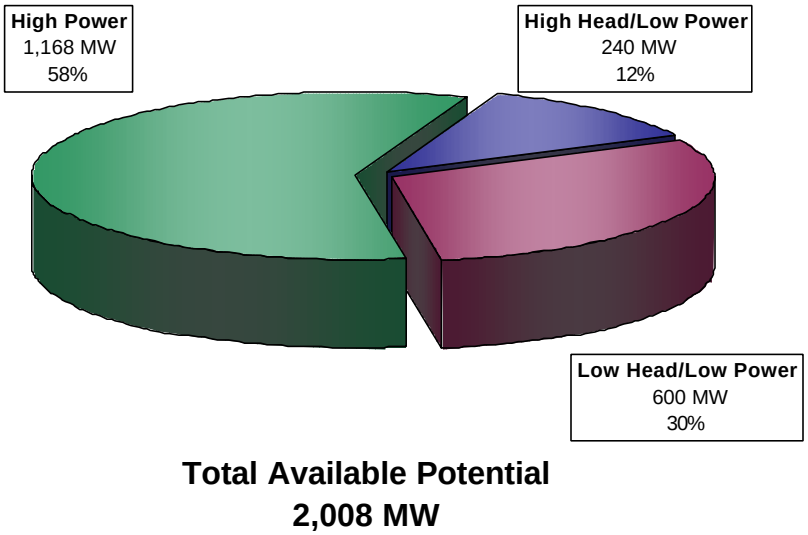


Figure B-3. Power class distribution of the available power potential (annual mean power) of water energy resources in Alabama.

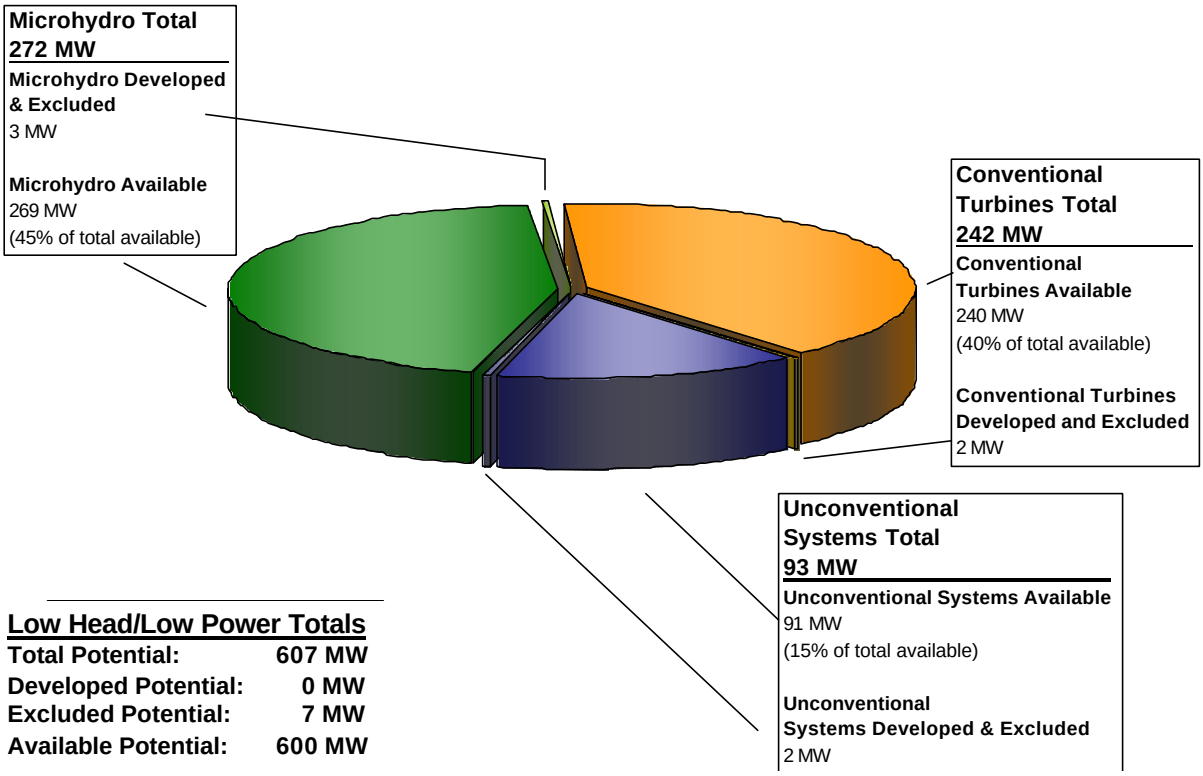


Figure B-4. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Alabama among three low head/low power hydropower technology classes.

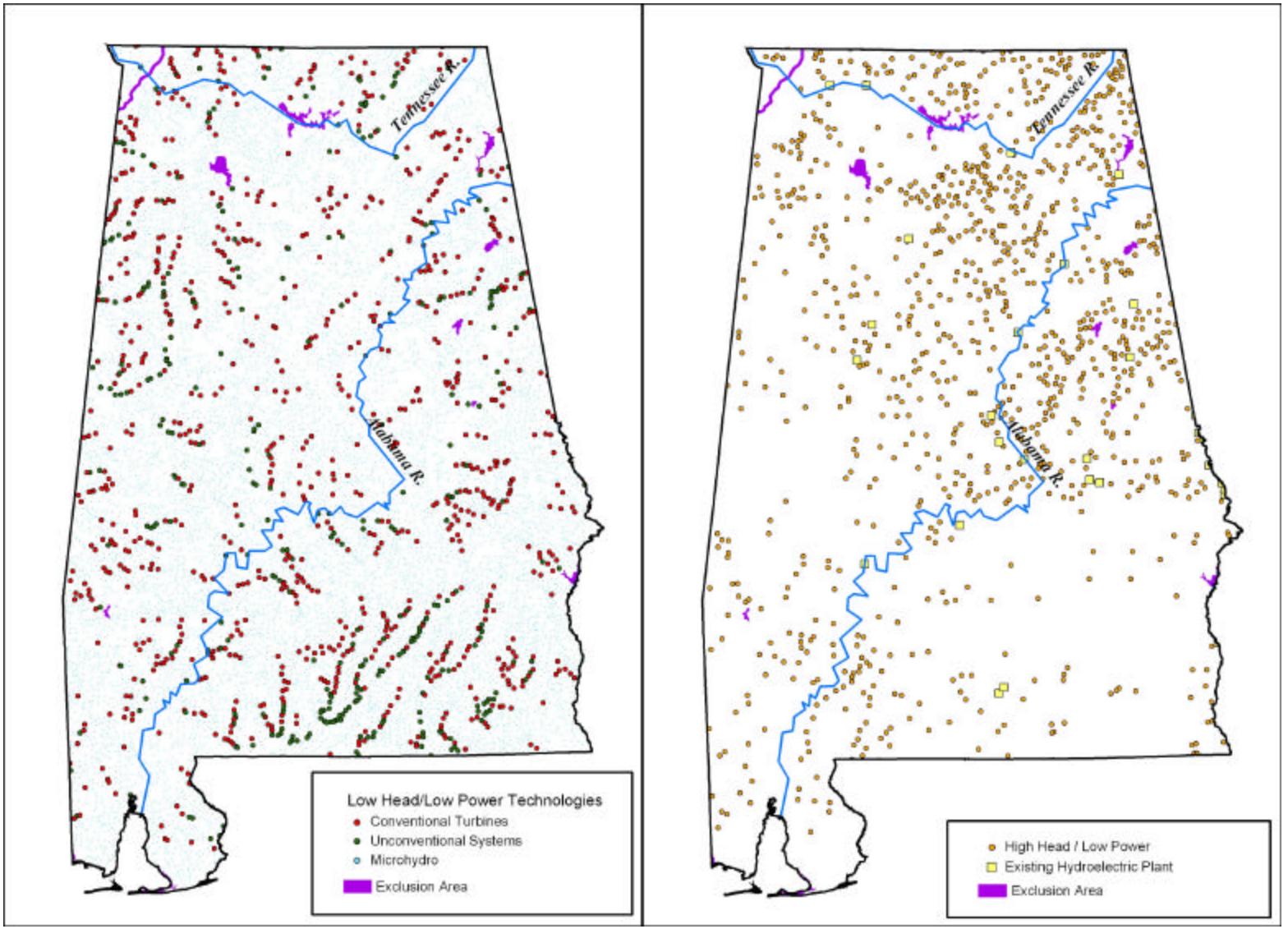


Figure B-5. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Alabama.

B.2 Alaska

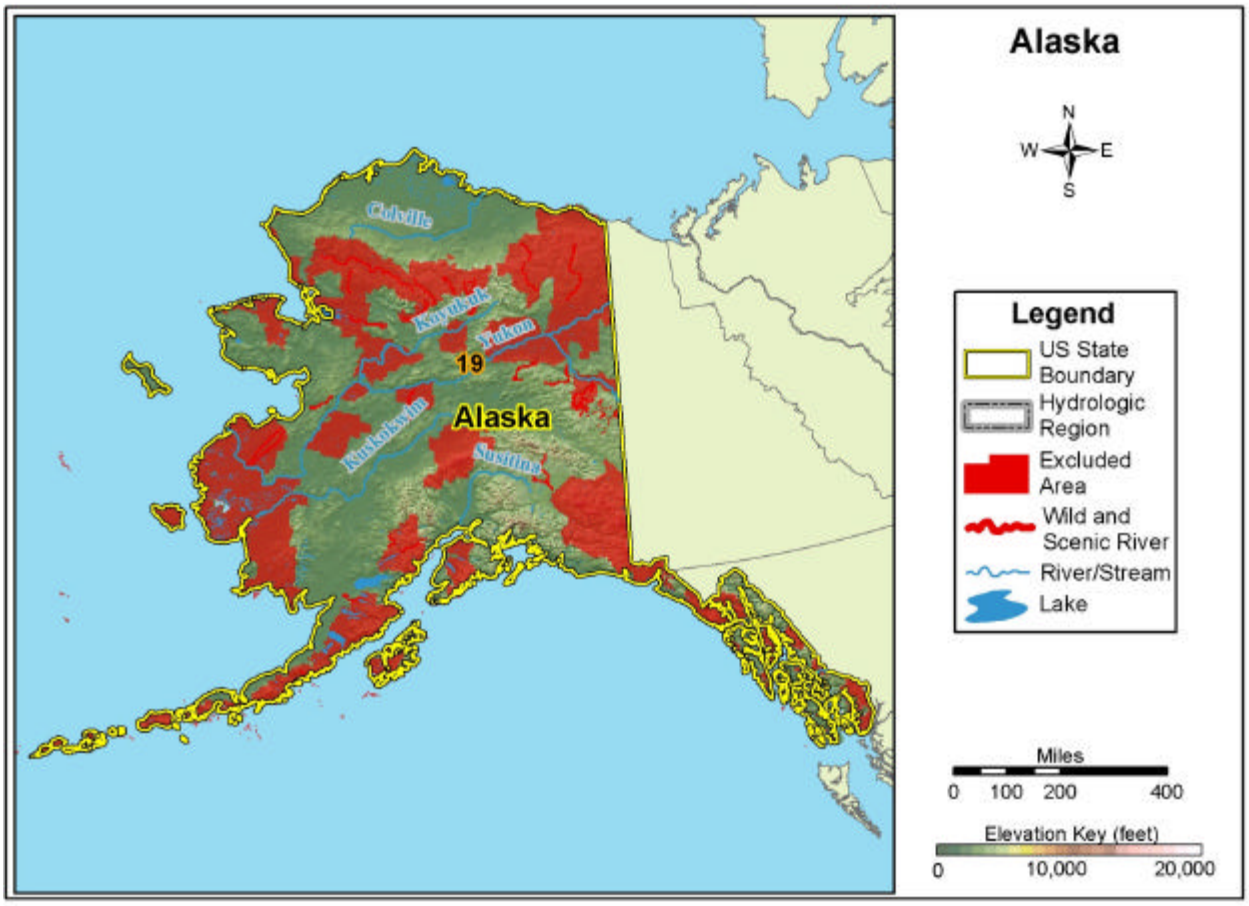


Figure B-6. Alaska.

Table B-2. Summary of results of water energy resource assessment of Alaska.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**87,028**	**171**	**42,429**	**44,428**
TOTAL HIGH POWER	**72,632**	**167**	**36,225**	**36,240**
High Head/High Power	**45,782**	**167**	**22,246**	**23,369**
Low Head/High Power	**26,850**	**0**	**13,979**	**12,871**
TOTAL LOW POWER	**14,396**	**4**	**6,204**	**8,188**
High Head/Low Power	**10,243**	**4**	**4,667**	**5,572**
Low Head/Low Power	**4,153**	**0**	**1,537**	**2,616**
Conventional Turbine	1,418	0	521	897
Unconventional Systems	683	0	274	409
Microhydro	2,052	0	742	1,310

a. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

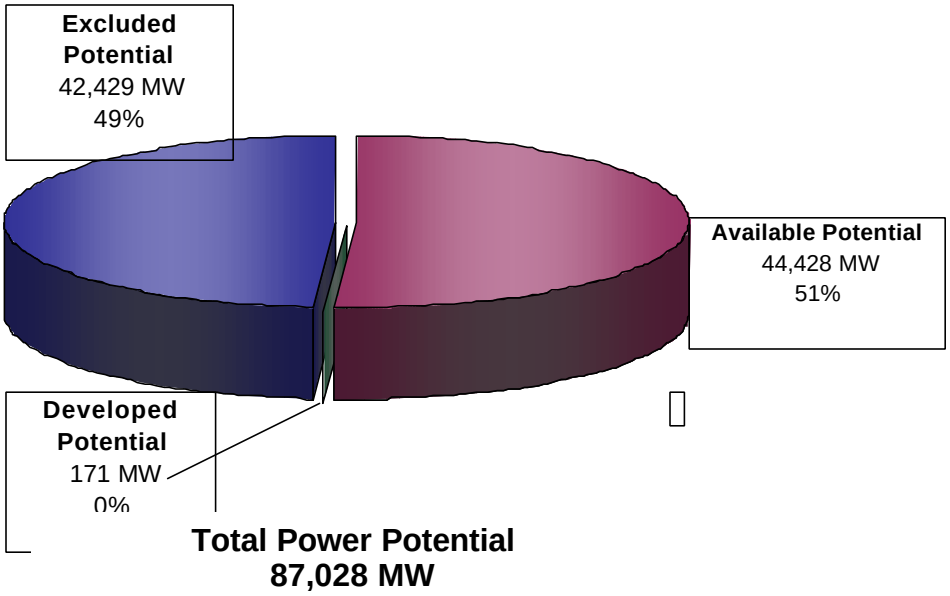


Figure B-7. Power category distribution of the total power potential (annual mean power) of water energy resources in Alaska.

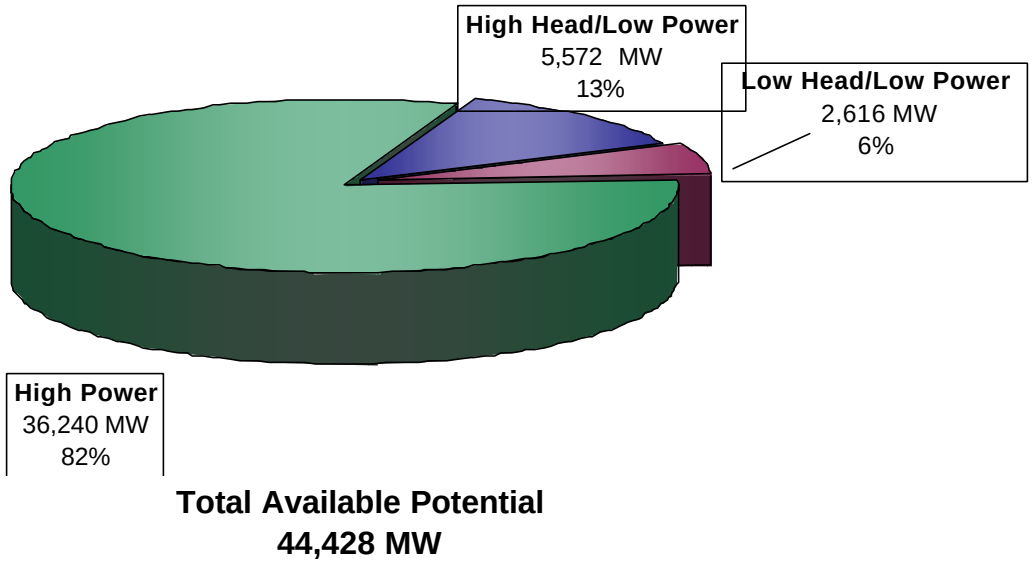


Figure B-8. Power class distribution of the available power potential (annual mean power) of water energy resources in Alaska.

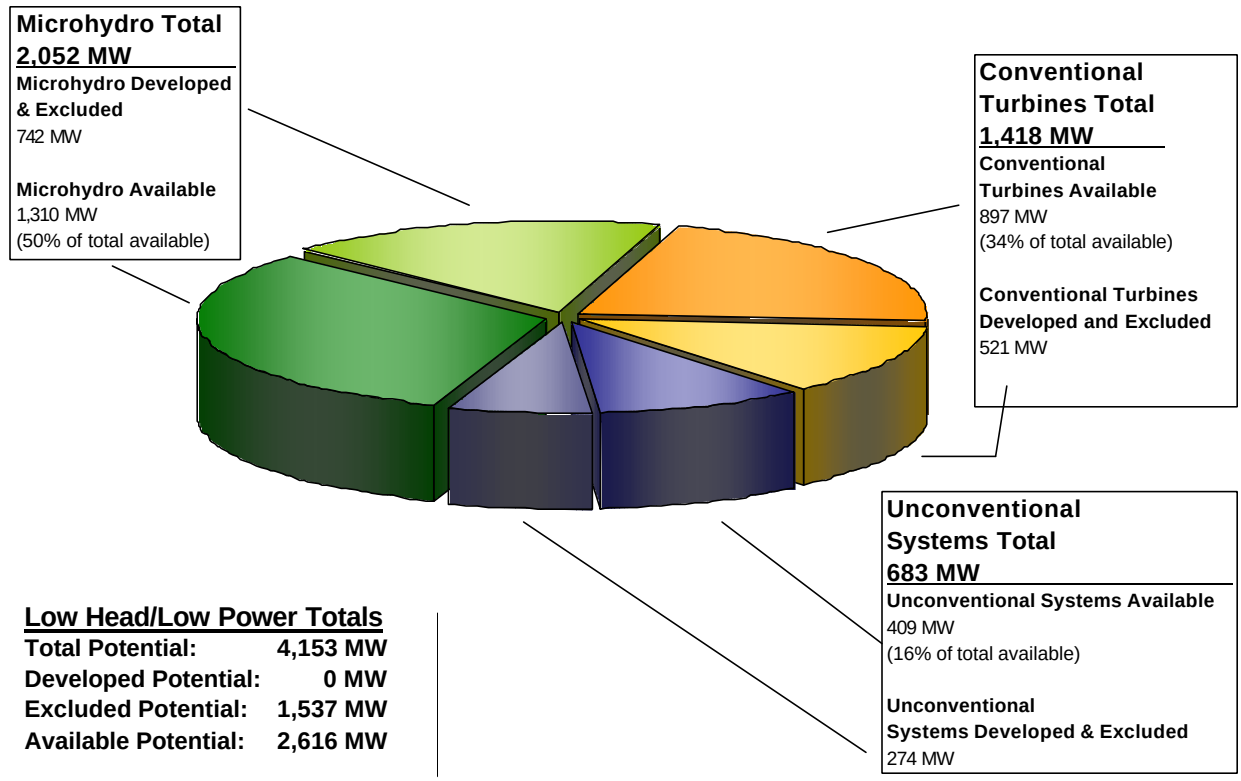


Figure B-9. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Alaska among three low head/low power hydropower technology classes.

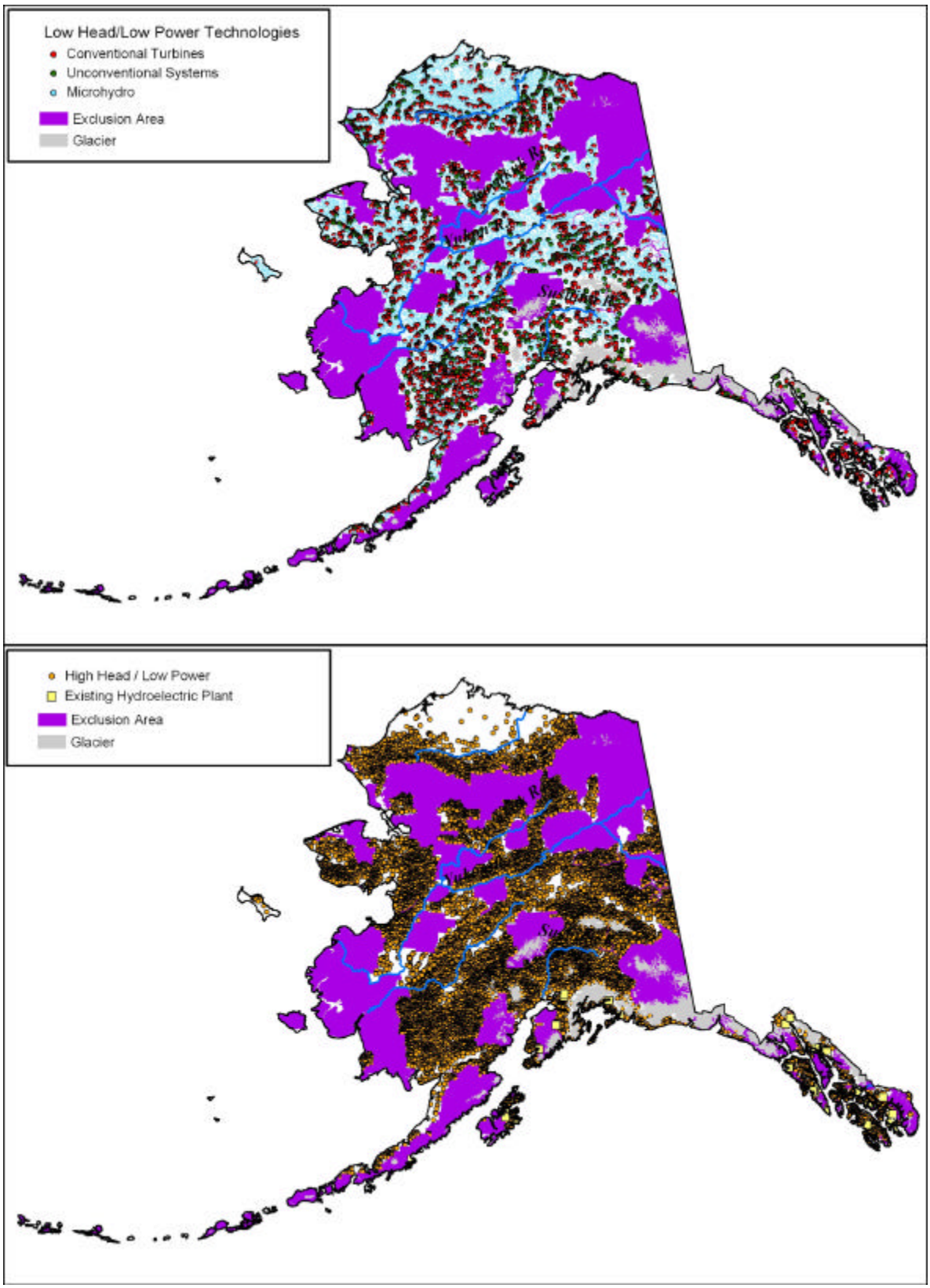


Figure B-10. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Alaska.

B.3 Arizona

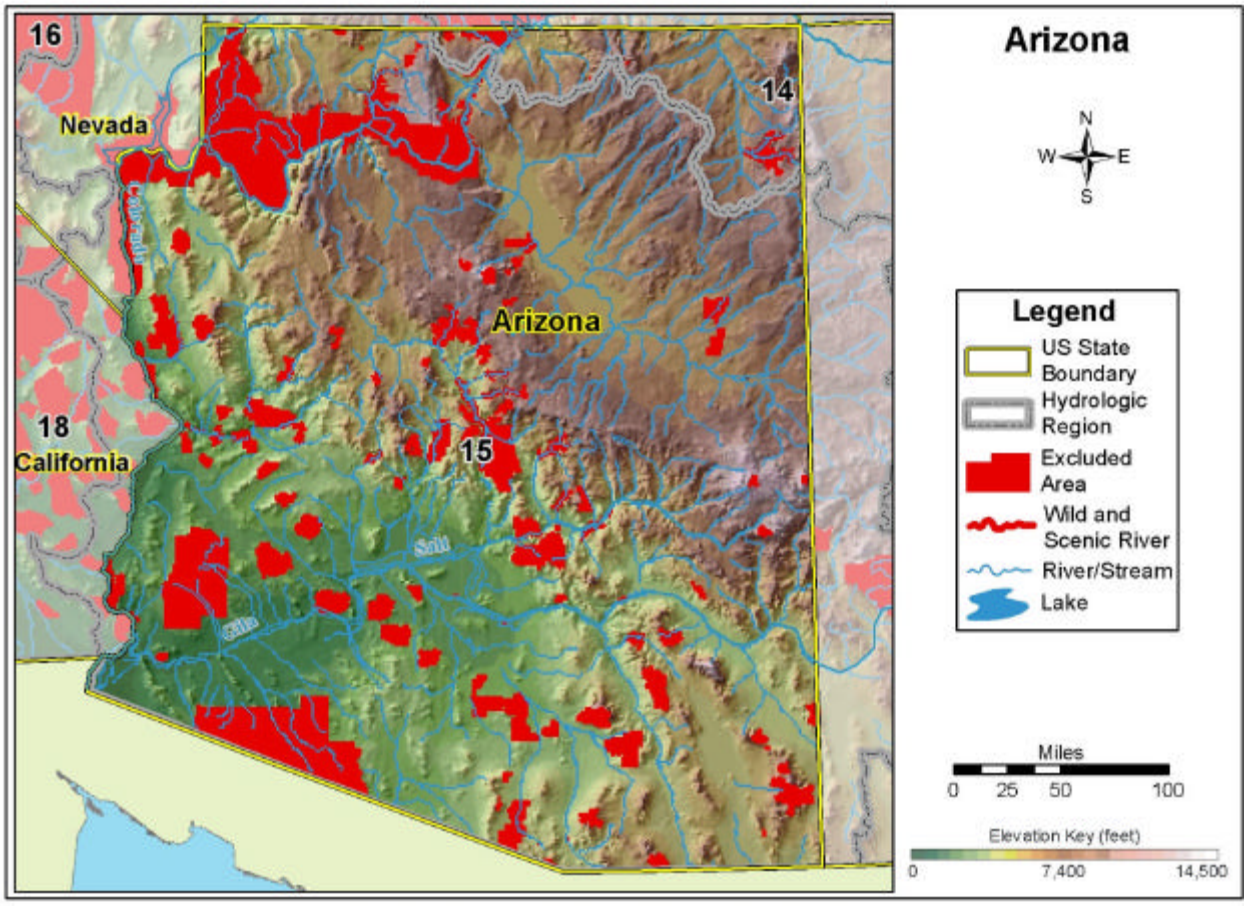


Figure B-11. Arizona.

Table B-3. Summary of results of water energy resource assessment of Arizona.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**3,587**	**928**	**1,244**	**1,415**
TOTAL HIGH POWER	**2,396**	**927**	**986**	**483**
High Head/High Power	**1,764**	**927**	**434**	**403**
Low Head/High Power	**632**	**0**	**552**	**80**
TOTAL LOW POWER	**1,191**	**1**	**258**	**932**
High Head/Low Power	**643**	**1**	**177**	**465**
Low Head/Low Power	**548**	**0**	**81**	**467**
Conventional Turbine	171	0	17	154
Unconventional Systems	50	0	12	38
Microhydro	327	0	52	275

a. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

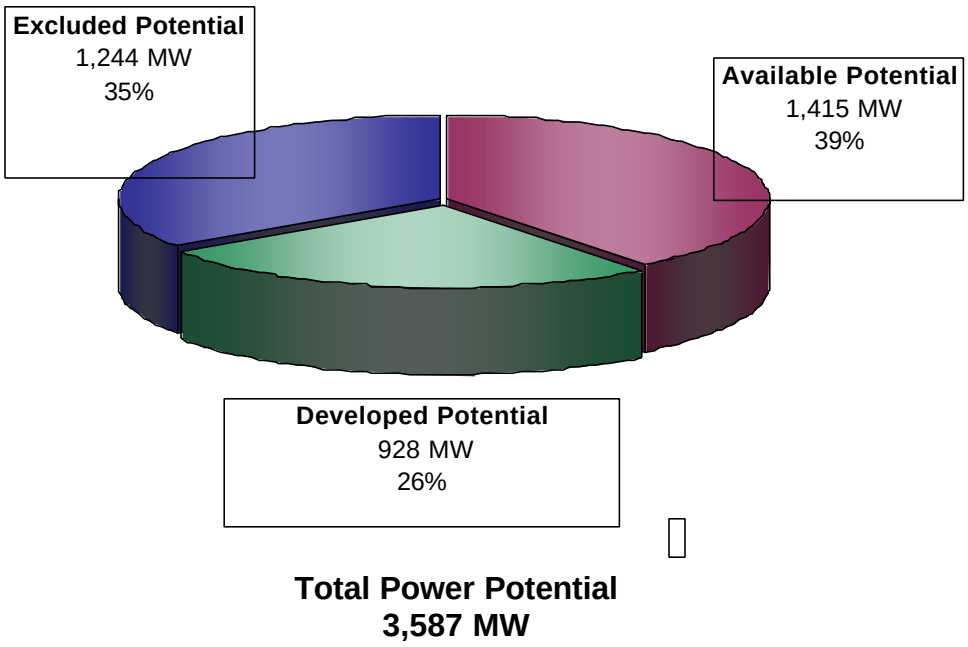


Figure B-12. Power category distribution of the total power potential (annual mean power) of water energy resources in Arizona.

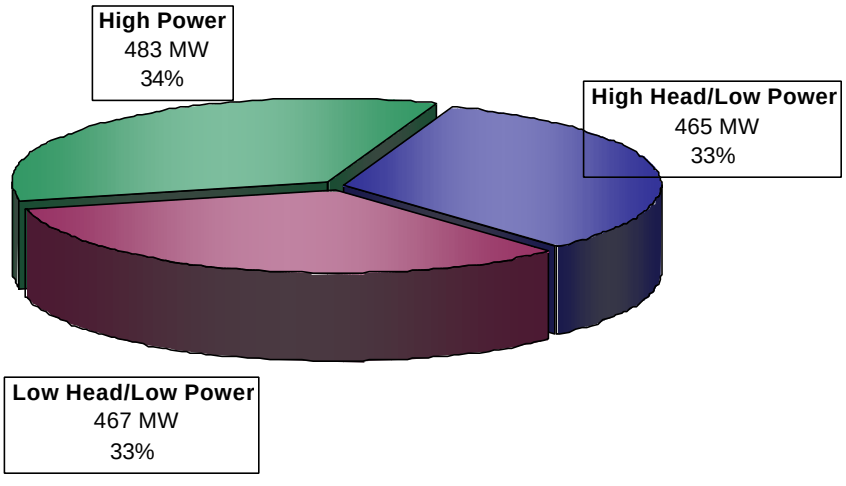


Figure B-13. Power class distribution of the available power potential (annual mean power) of water energy resources in Arizona.

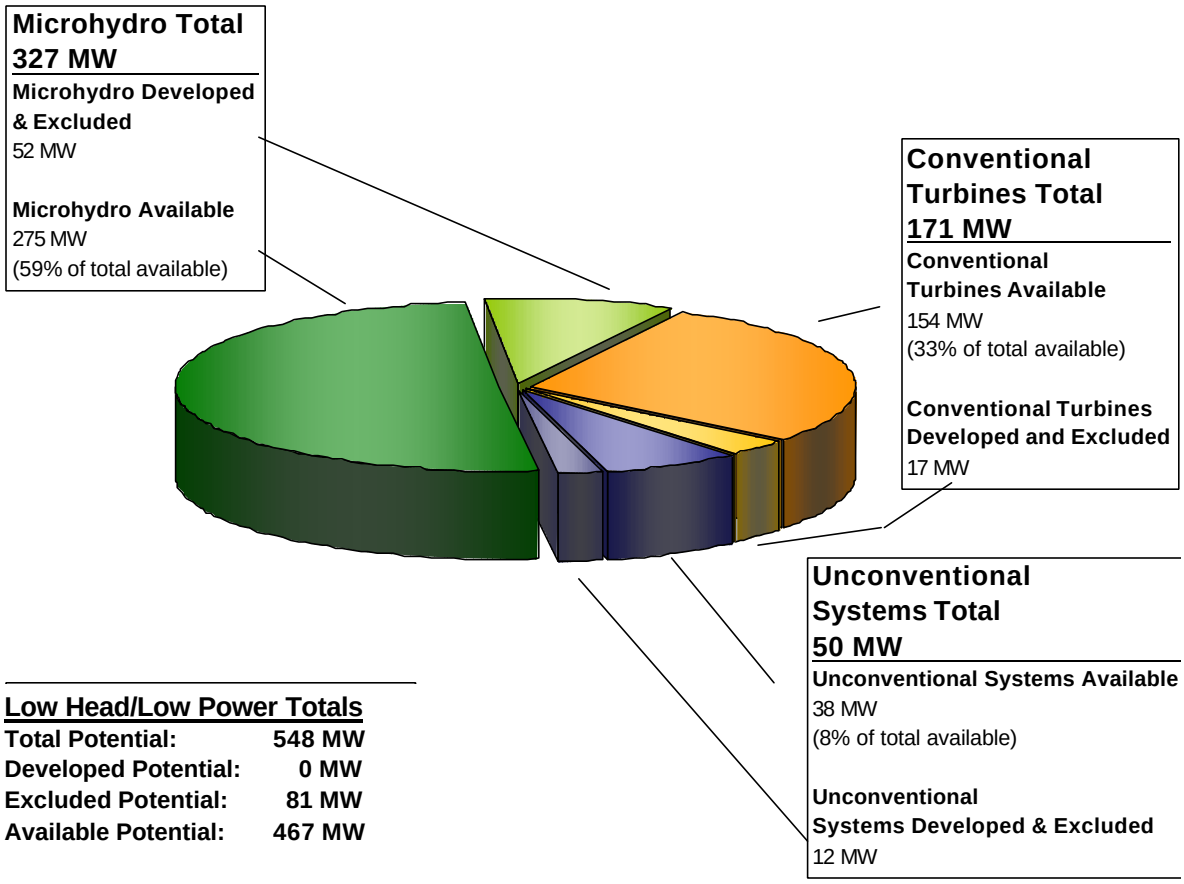


Figure B-14. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Arizona among three low head/low power hydropower technology classes.

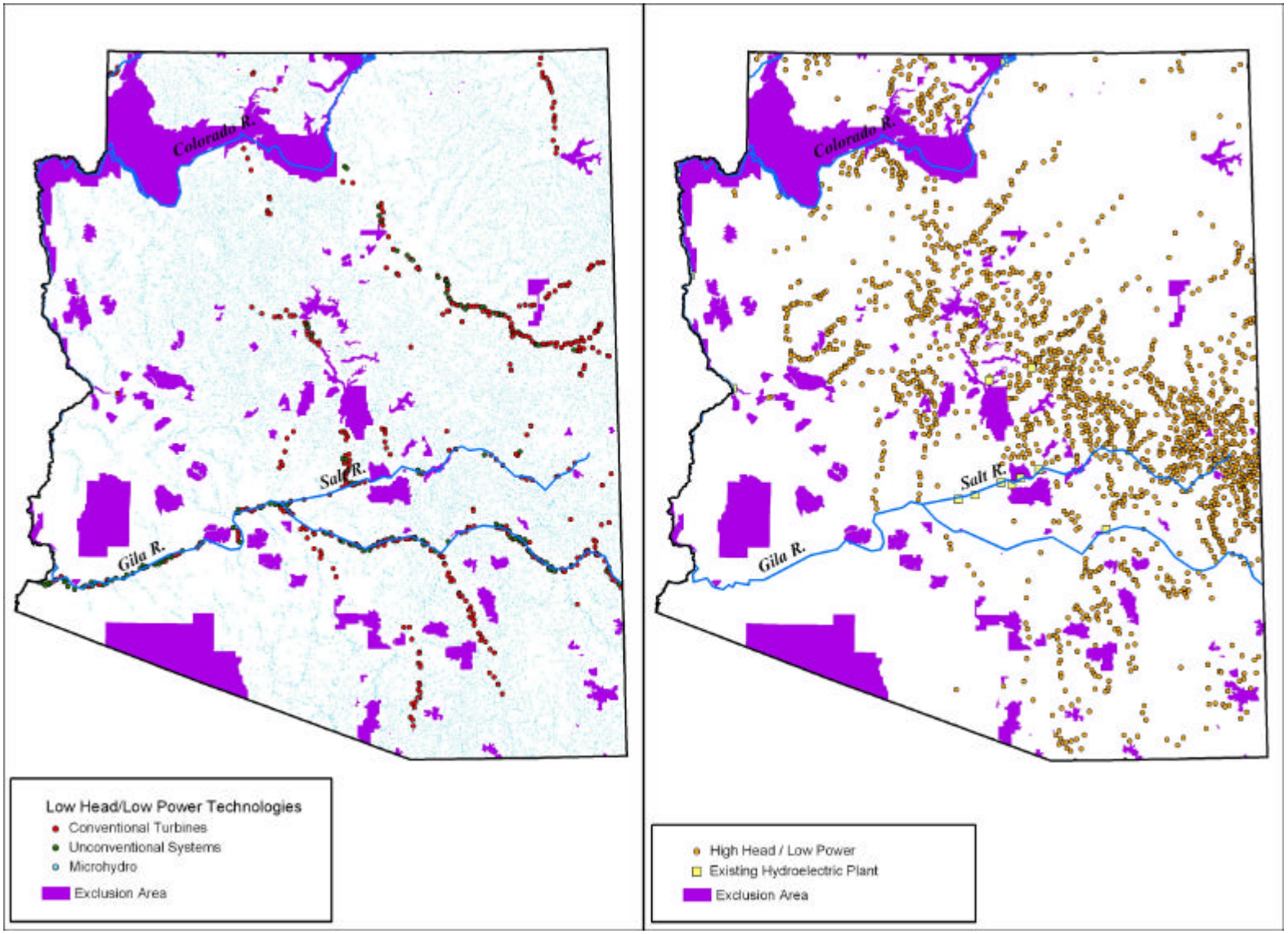


Figure B-15. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Arizona.

B.4 Arkansas

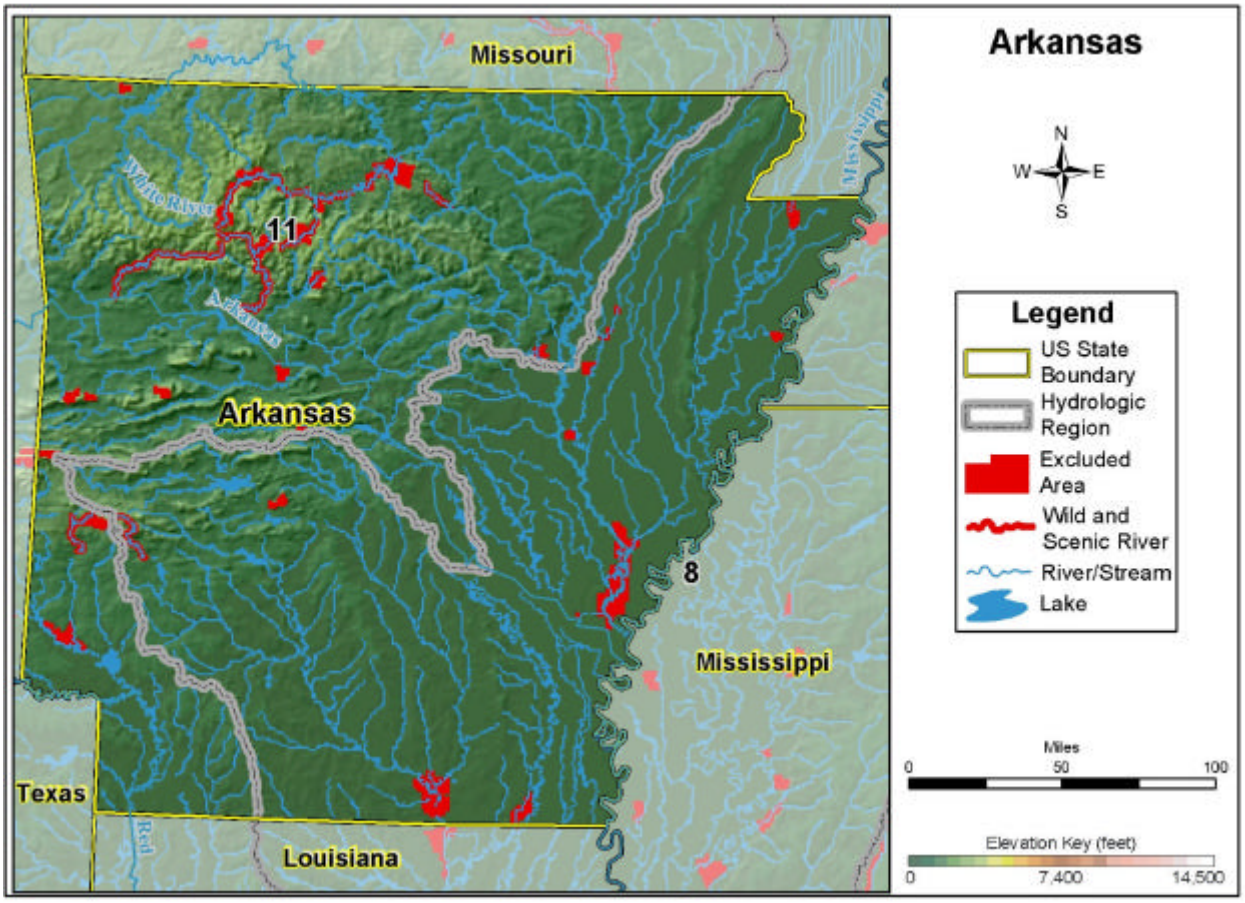


Figure B-16. Arkansas.

Table B-4. Summary of results of water energy resource assessment of Arkansas.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**4,904**	**405**	**407**	**4,092**
TOTAL HIGH POWER	**3,999**	**404**	**314**	**3,281**
High Head/High Power	**389**	**307**	**43**	**39**
Low Head/High Power	**3,610**	**97**	**271**	**3,242**
TOTAL LOW POWER	**905**	**1**	**93**	**811**
High Head/Low Power	**380**	**1**	**56**	**323**
Low Head/Low Power	**525**	**0**	**37**	**488**
Conventional Turbine	173	0	18	155
Unconventional Systems	118	0	8	110
Microhydro	234	0	11	223

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

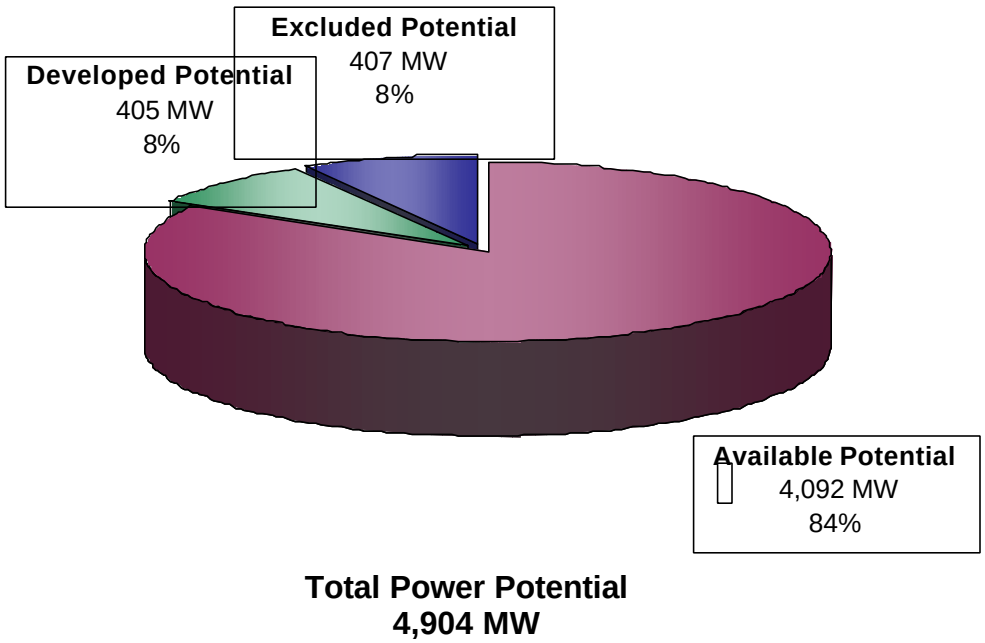


Figure B-17. Power category distribution of the total power potential (annual mean power) of water energy resources in Arkansas.

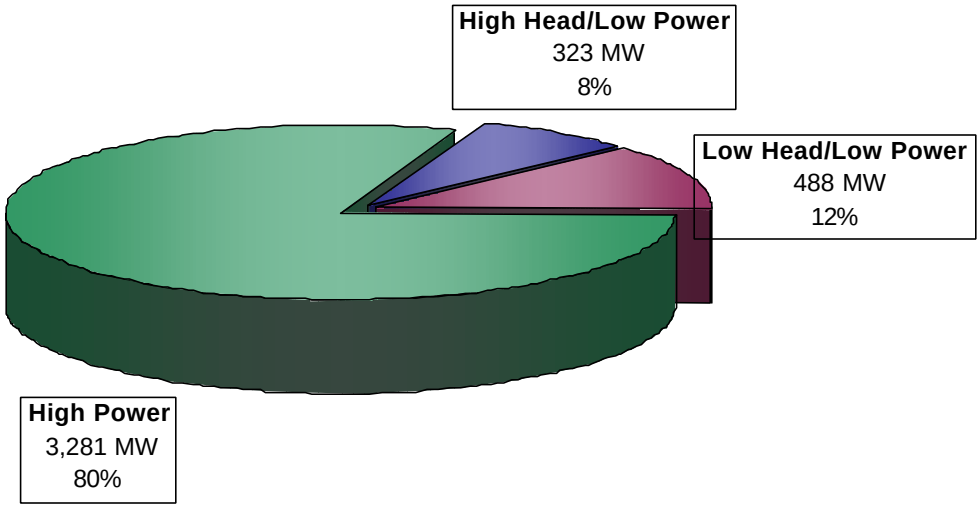


Figure B-18. Power class distribution of the available power potential (annual mean power) of water energy resources in Arkansas.

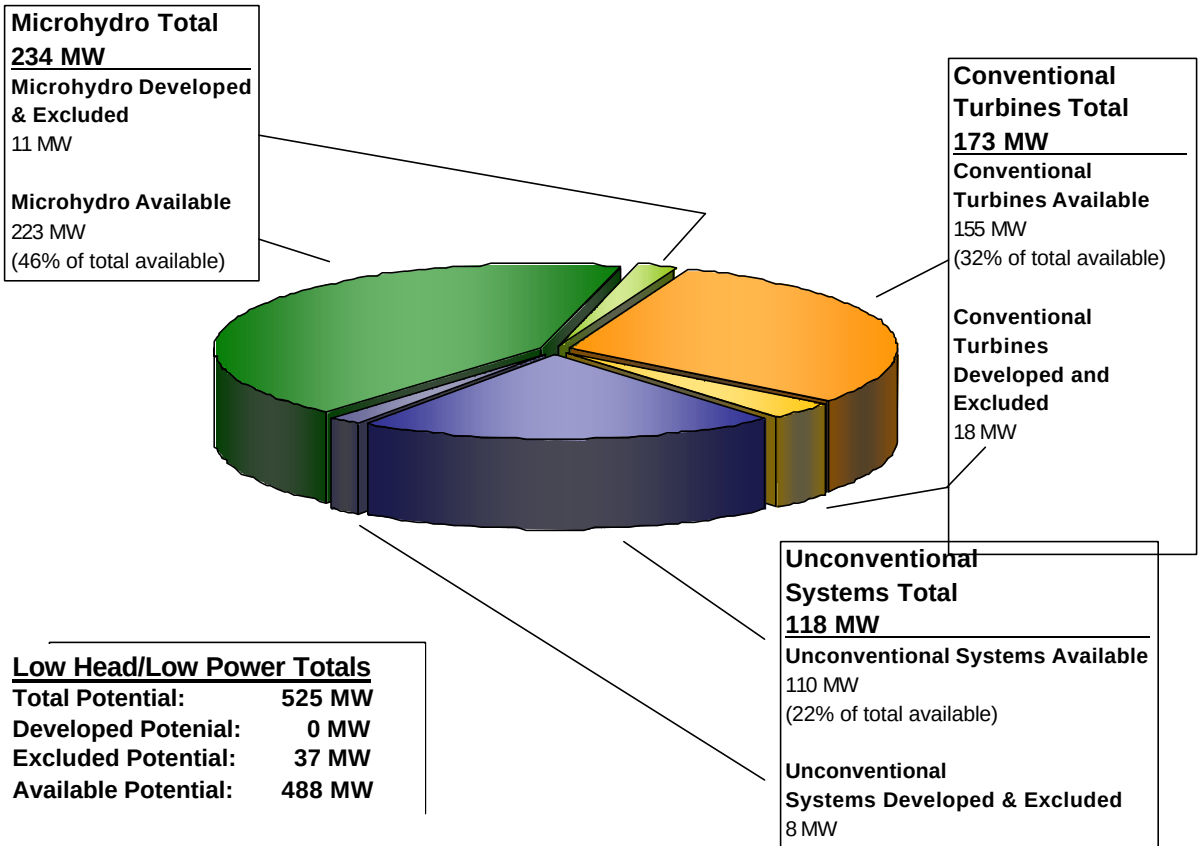


Figure B-19. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Arkansas among three low head/low power hydropower technology classes.

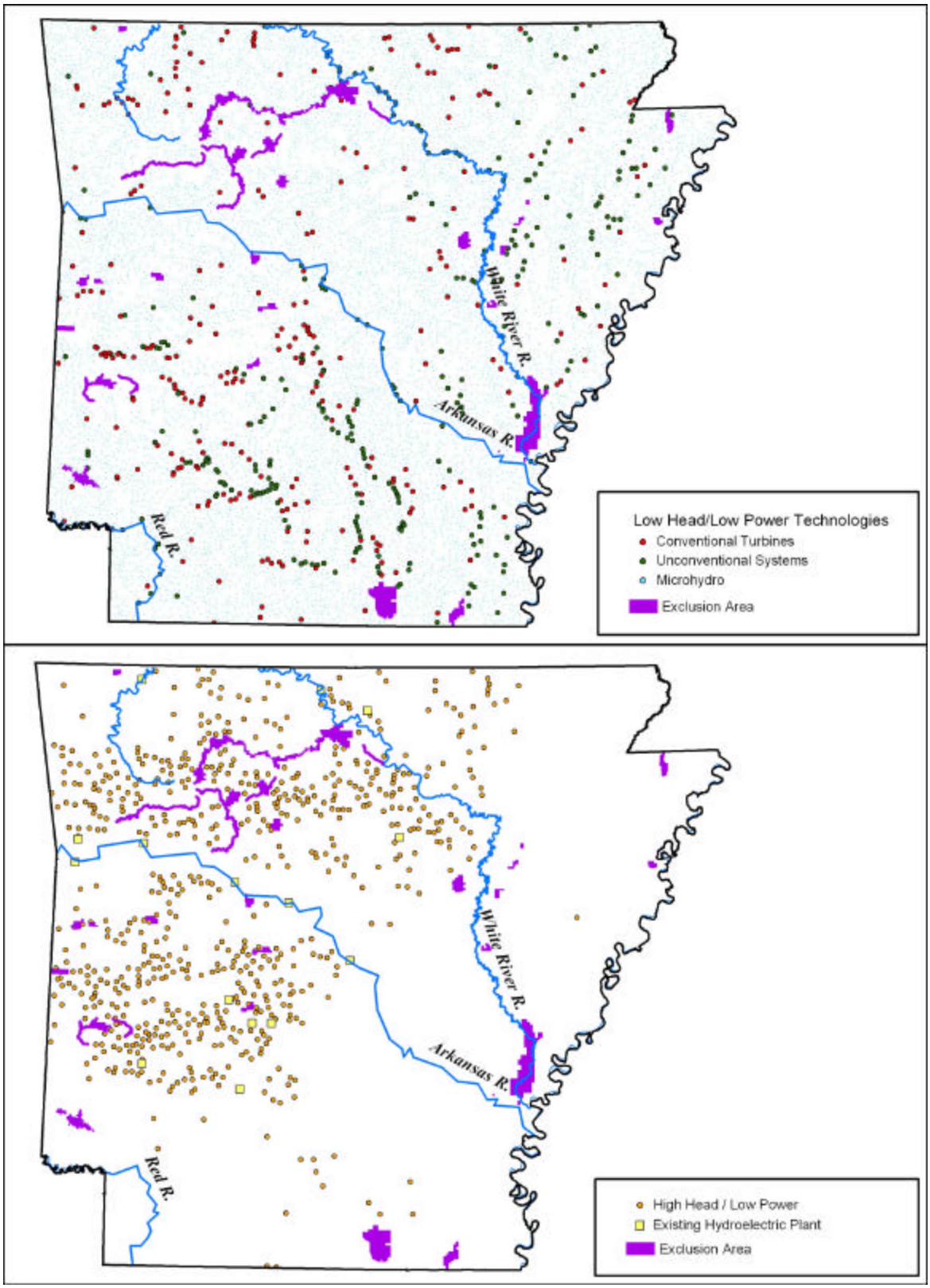


Figure B-20. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Arkansas.

B.5 California

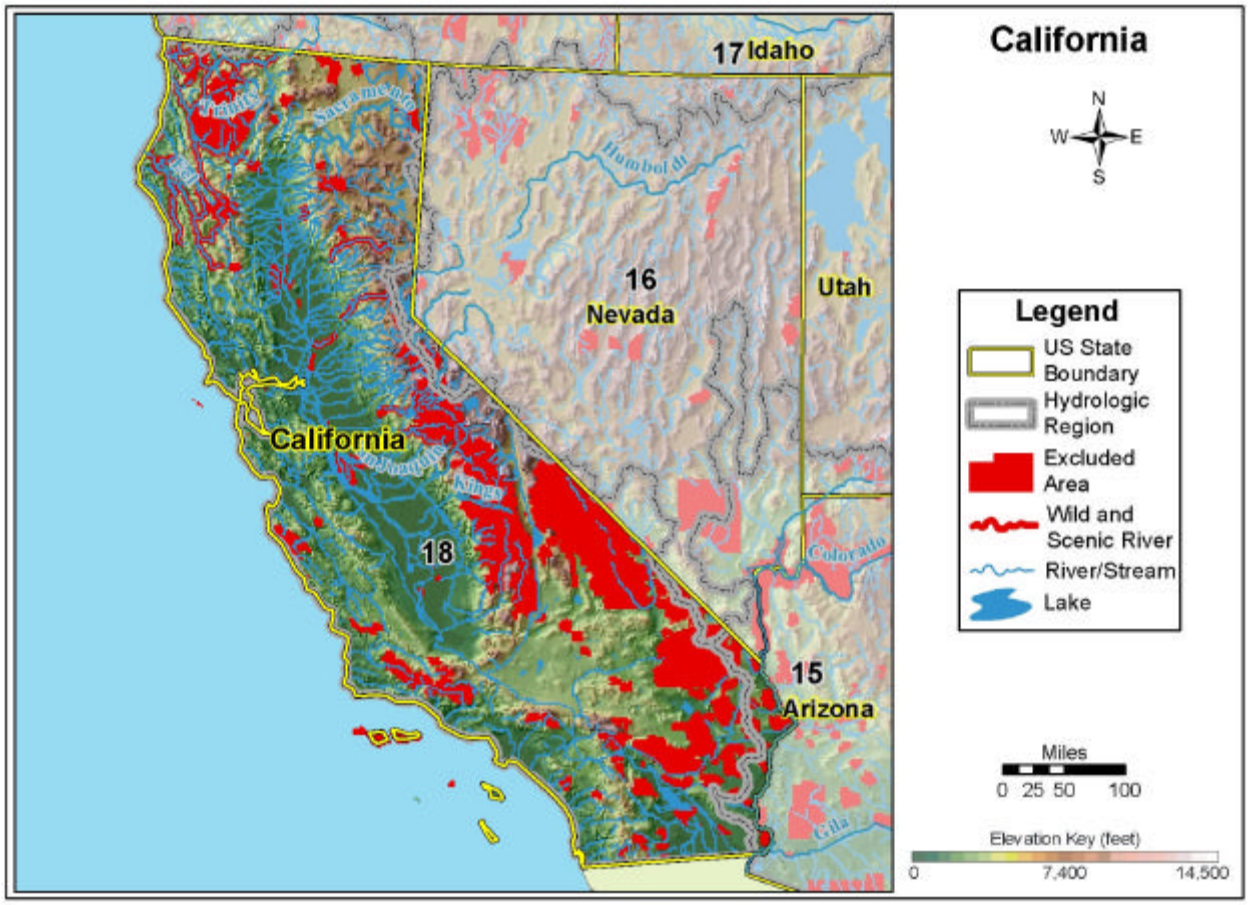


Figure B-21. California.

Table B-5. Summary of results of water energy assessment of California.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**26,638**	**4,699**	**11,628**	**10,311**
TOTAL HIGH POWER	**22,920**	**4,643**	**10,507**	**7,770**
High Head/High Power	**21,366**	**4,621**	**9,471**	**7,274**
Low Head/High Power	**1,554**	**22**	**1,036**	**496**
TOTAL LOW POWER	**3,718**	**56**	**1,121**	**2,541**
High Head/Low Power	**2,934**	**47**	**968**	**1,919**
Low Head/Low Power	**784**	**9**	**153**	**622**
Conventional Turbine	235	5	36	194
Unconventional Systems	101	1	24	76
Microhydro	448	3	93	352

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

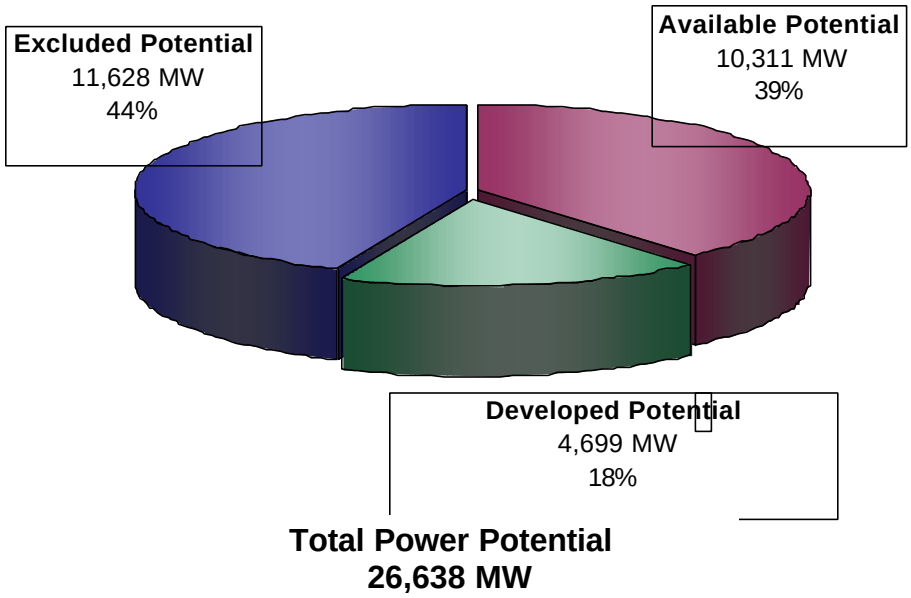


Figure B-22. Power category distribution of the total power potential (annual mean power) of water energy resources in California.

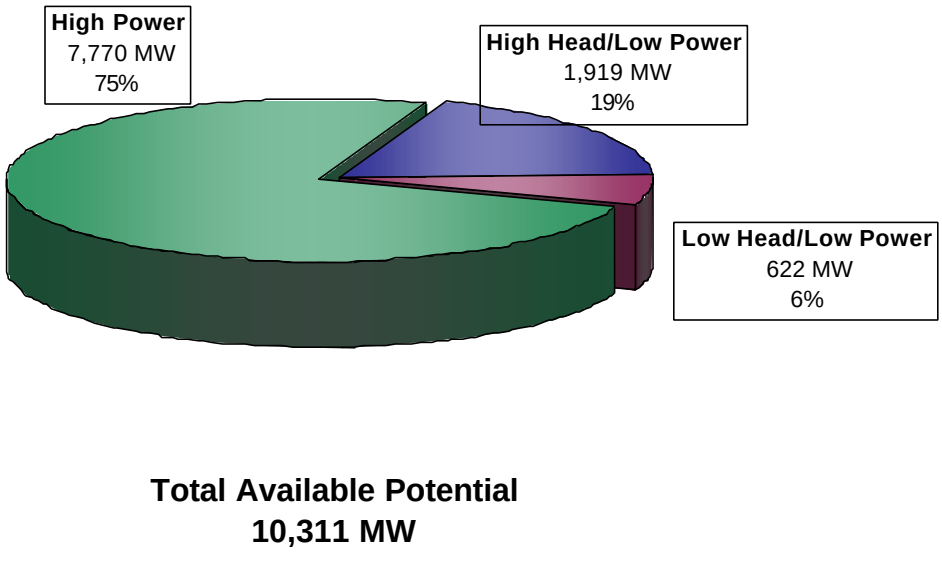


Figure B-23. Power class distribution of the available power potential (annual mean power) of water energy resources in California.

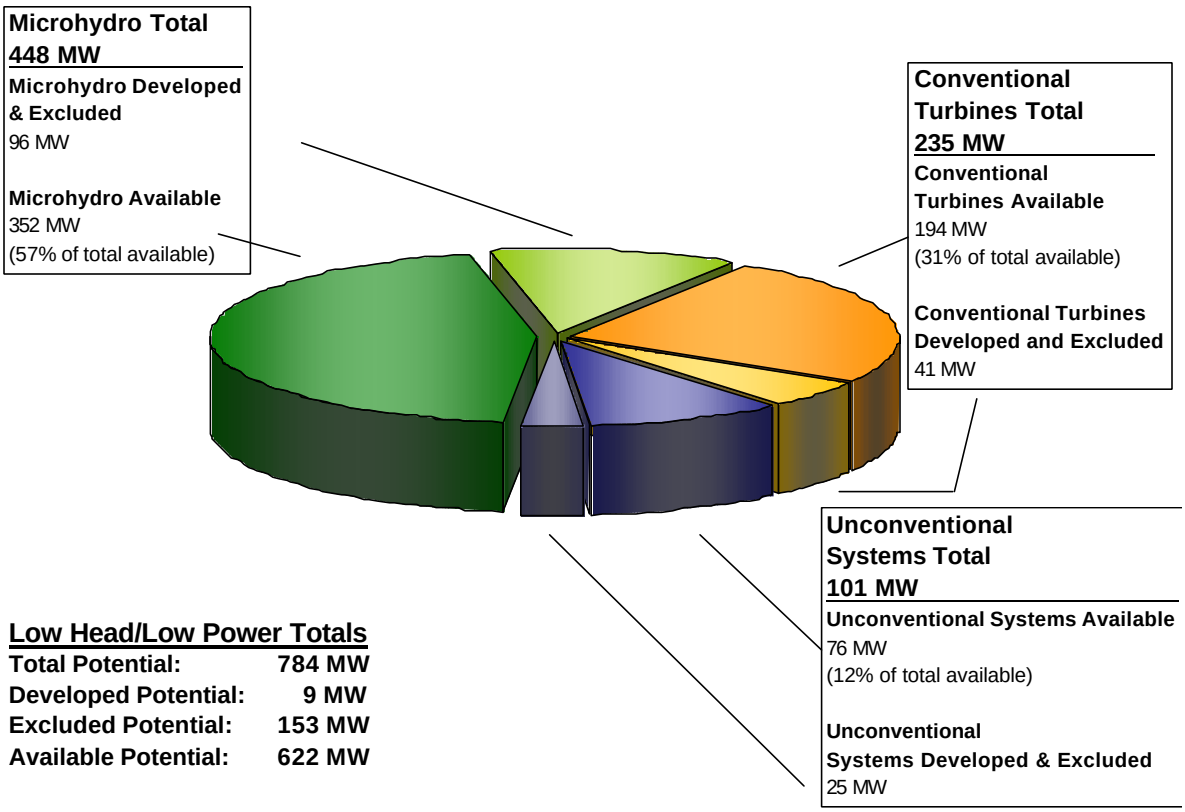


Figure B-24. Distribution of the low head/low power power potential (annual mean power) of water energy resources in California among three low head/low power hydropower technology classes.

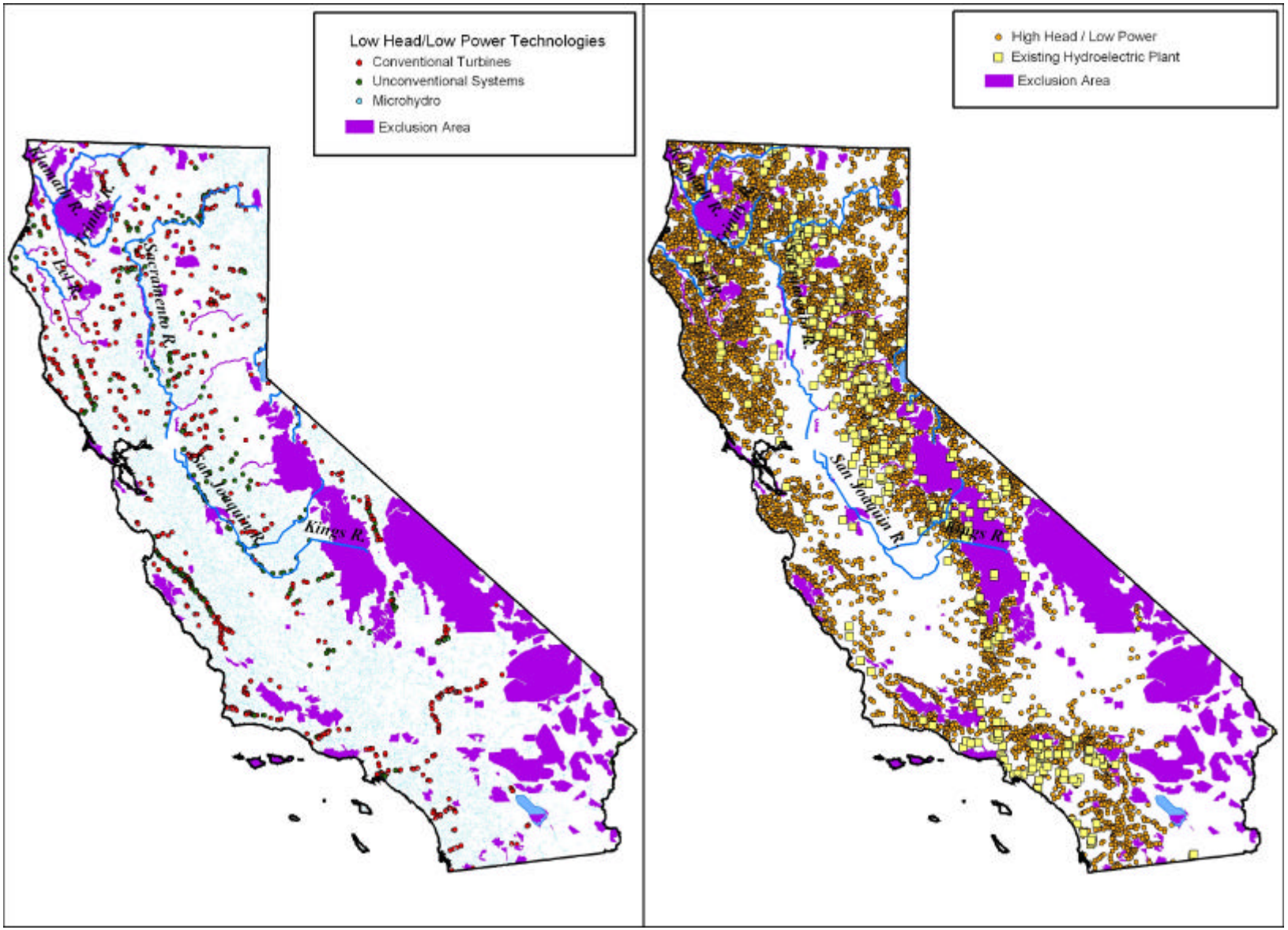


Figure B-25. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in California.

B.6 Colorado

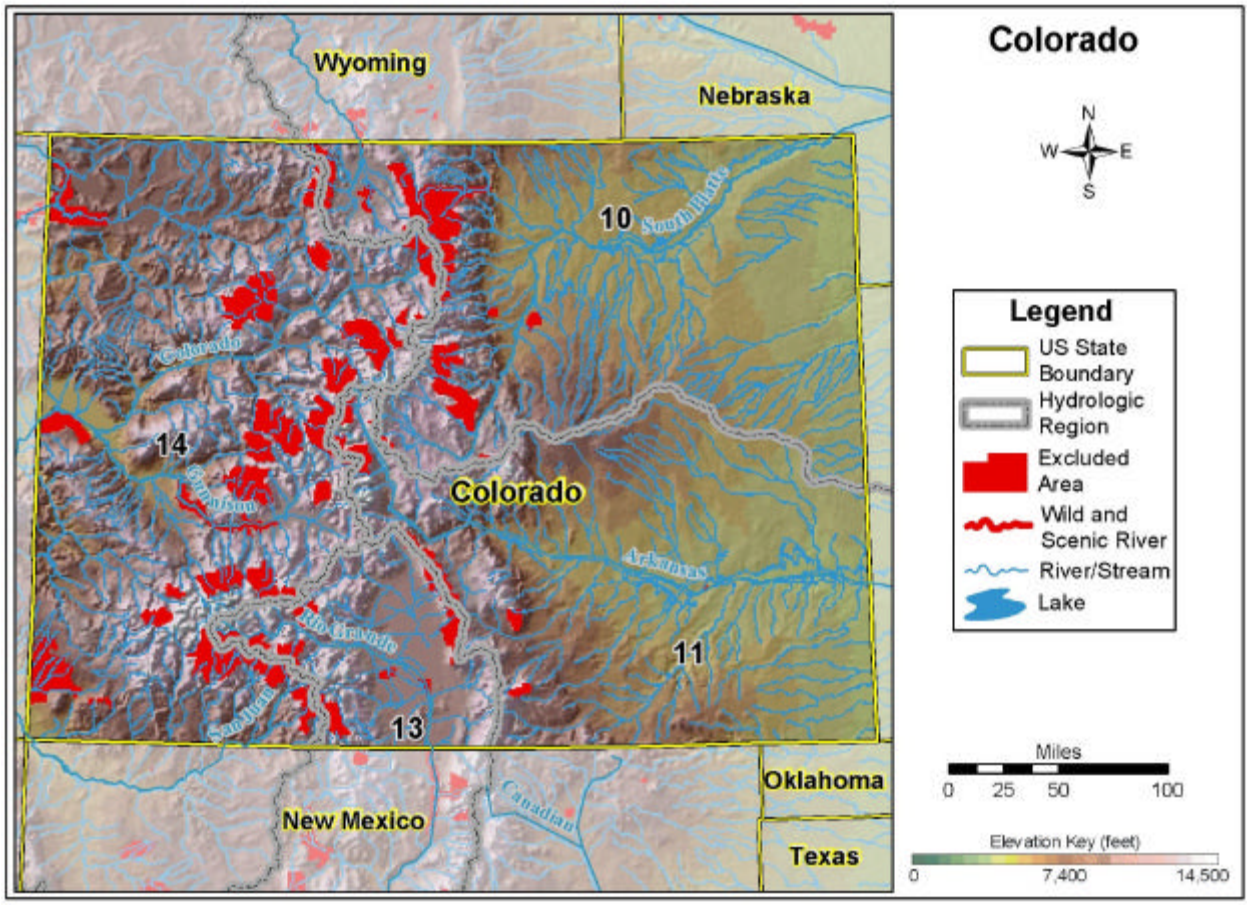


Figure B-26. Colorado.

Table B-6. Summary of results of water energy resource assessment of Colorado.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**7,413**	**246**	**2,275**	**4,892**
TOTAL HIGH POWER	**4,940**	**236**	**1,726**	**2,978**
High Head/High Power	**4,411**	**236**	**1,664**	**2,511**
Low Head/High Power	**529**	**0**	**62**	**467**
TOTAL LOW POWER	**2,473**	**10**	**549**	**1,914**
High Head/Low Power	**1,844**	**10**	**505**	**1,329**
Low Head/Low Power	**629**	**0**	**44**	**585**
Conventional Turbine	249	0	10	239
Unconventional Systems	65	0	6	59
Microhydro	315	0	28	287

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

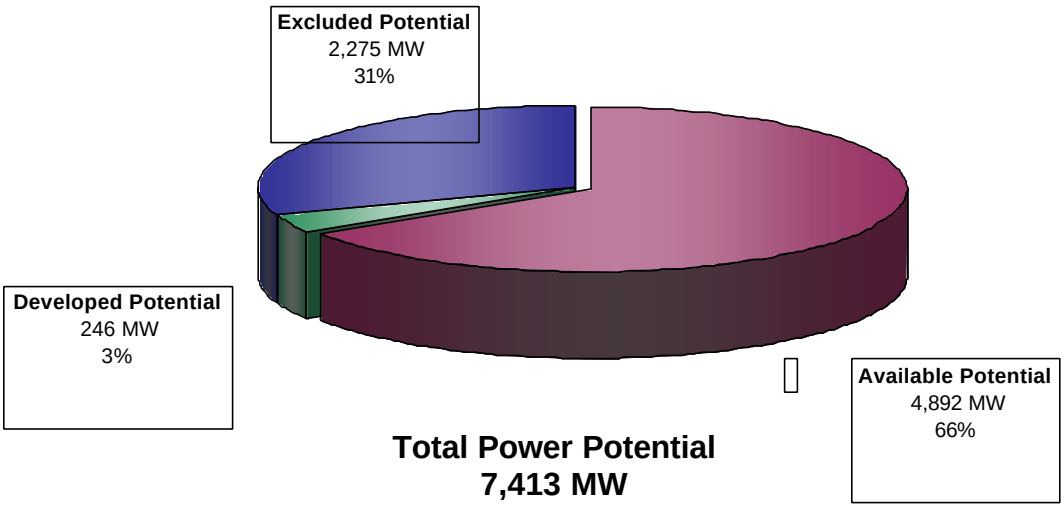


Figure B-27. Power category distribution of the total power potential (annual mean power) of water energy resources in Colorado.

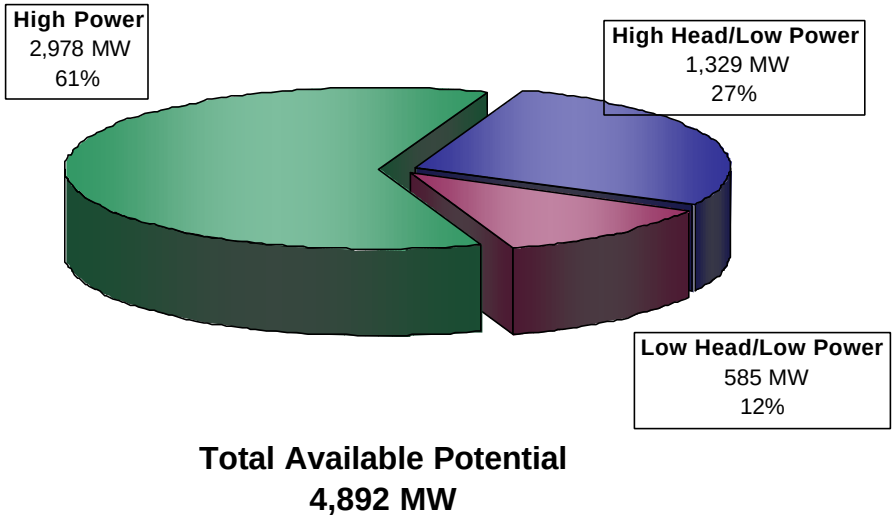


Figure B-28. Power class distribution of the available power potential (annual mean power) of water energy resources in Colorado.

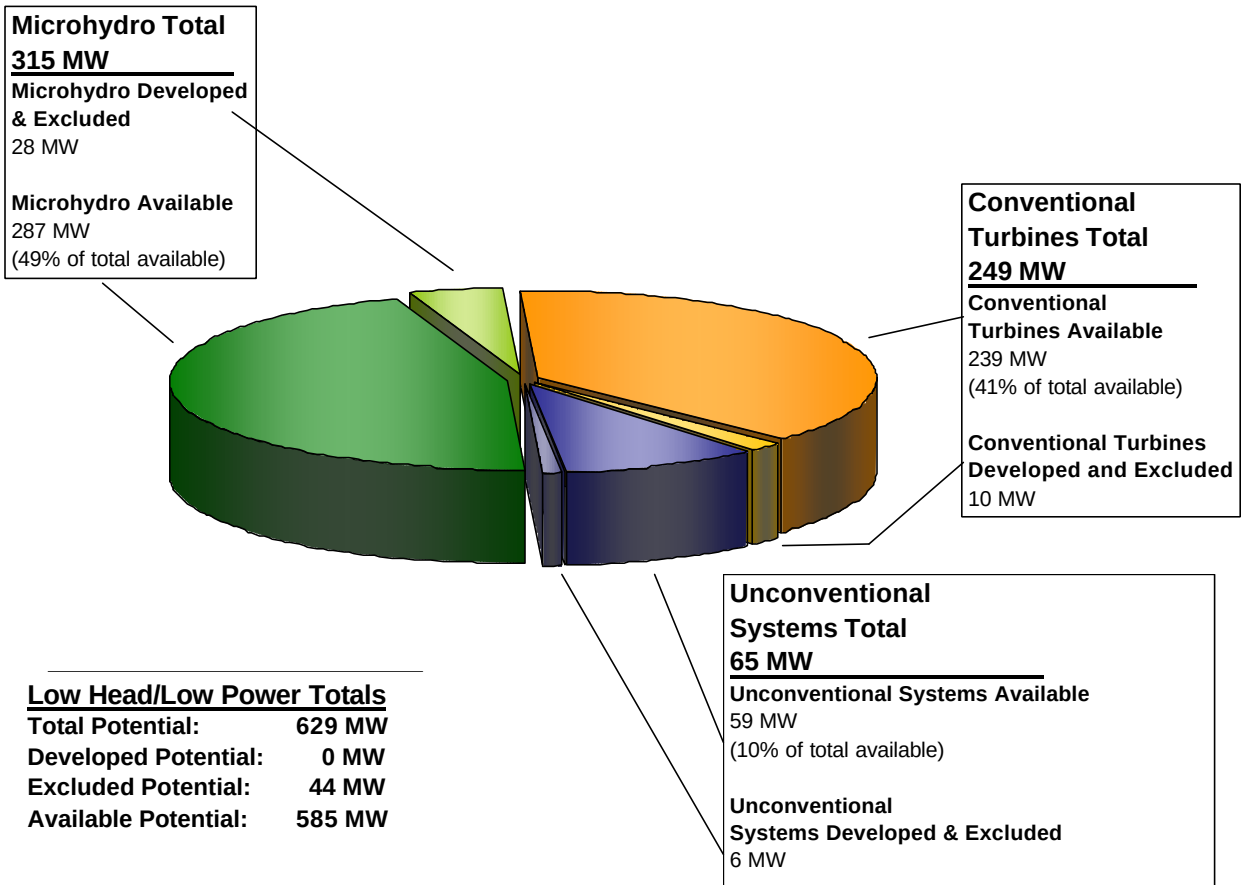


Figure B-29. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Colorado among three low head/low power hydropower technology classes.

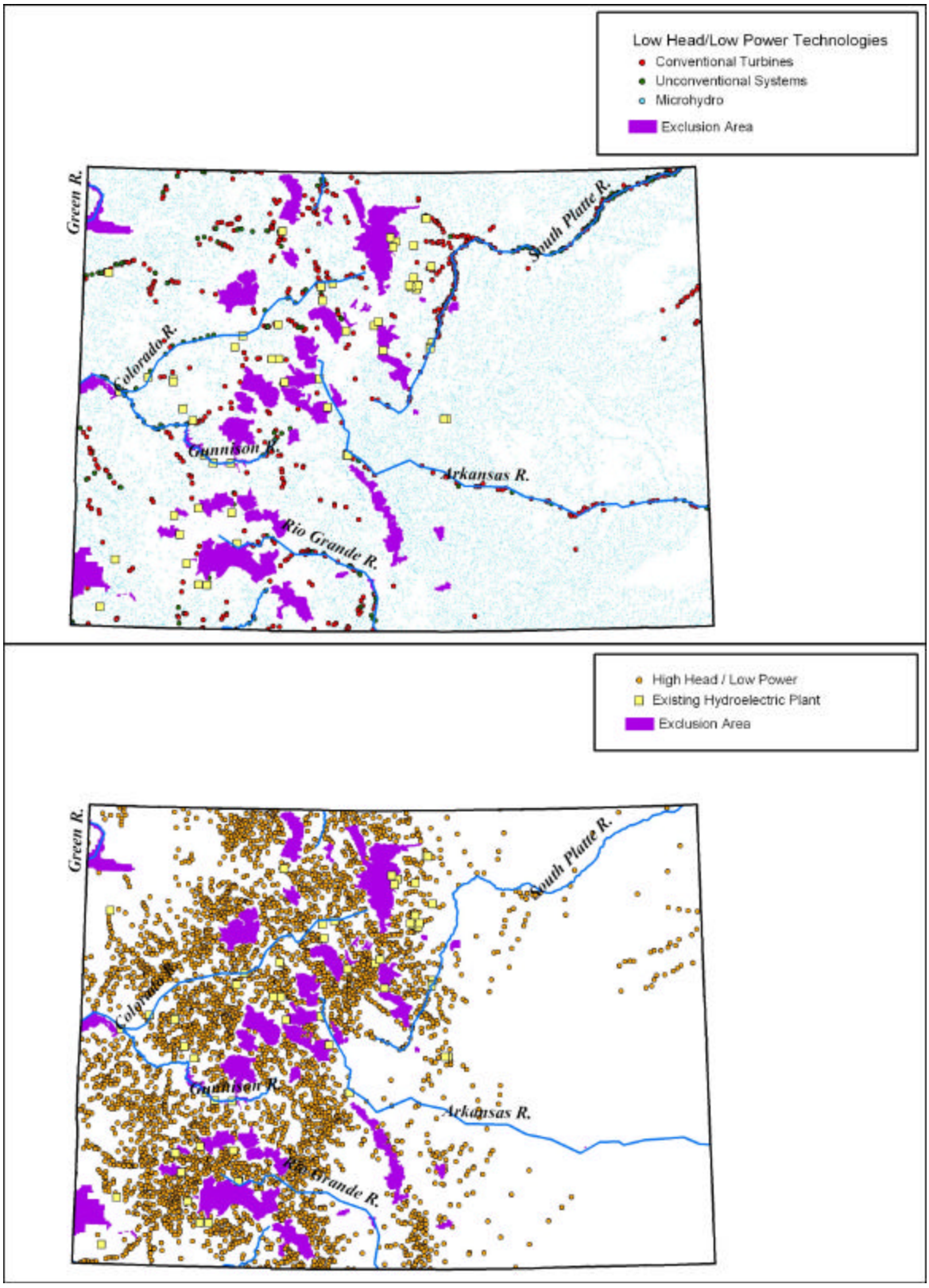


Figure B-30. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Colorado.

B.7 Connecticut

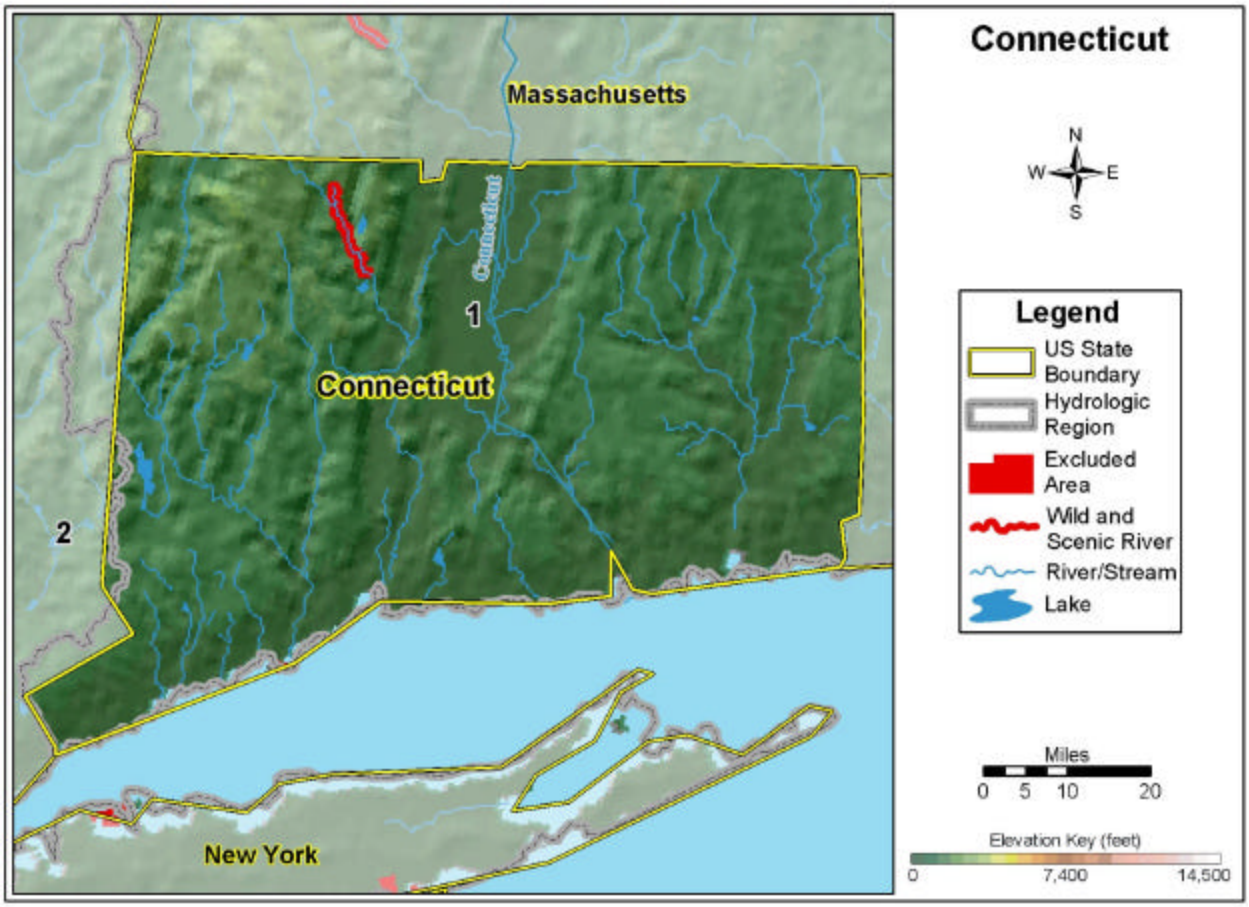


Figure B-31. Connecticut.

Table B-7. Summary of results of water energy resource assessment of Connecticut.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**432**	**55**	**18**	**359**
TOTAL HIGH POWER	**273**	**47**	**16**	**210**
High Head/High Power	**148**	**42**	**15**	**91**
Low Head/High Power	**125**	**5**	**1**	**119**
TOTAL LOW POWER	**159**	**8**	**2**	**149**
High Head/Low Power	**105**	**2**	**2**	**101**
Low Head/Low Power	**54**	**6**	**0**	**48**
Conventional Turbine	18	6	0	12
Unconventional Systems	11	0	0	11
Microhydro	25	0	0	25

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

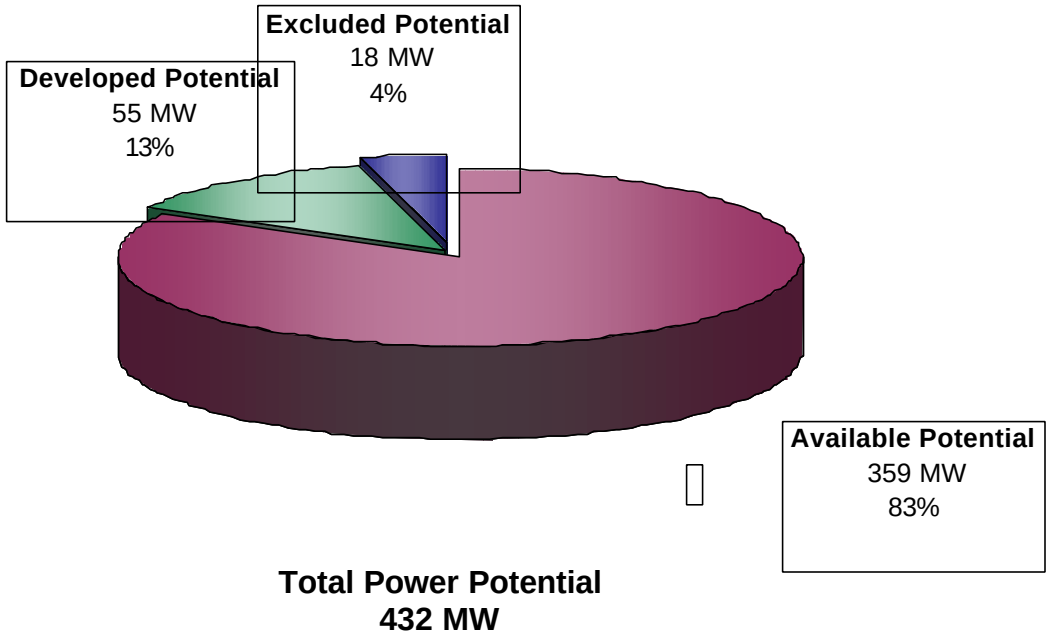


Figure B-32. Power category distribution of the total power potential (annual mean power) of water energy resources in Connecticut.

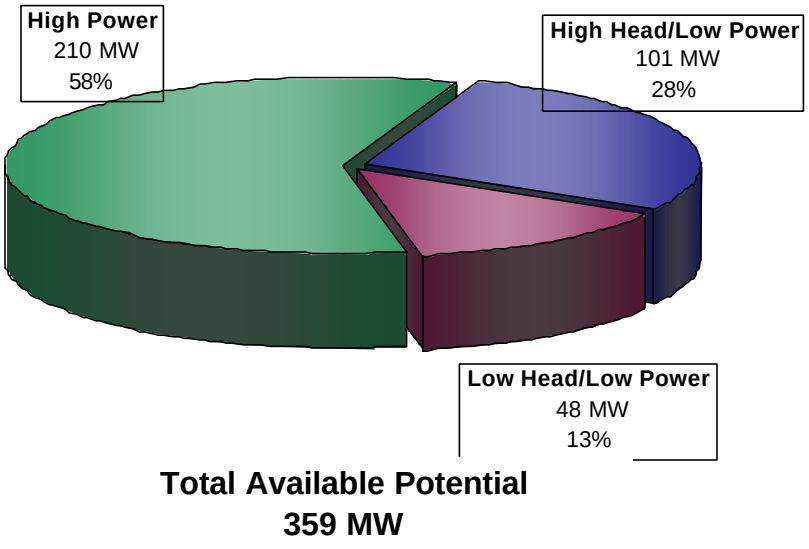


Figure B-33. Power class distribution of the available power potential (annual mean power) of water energy resources in Connecticut.

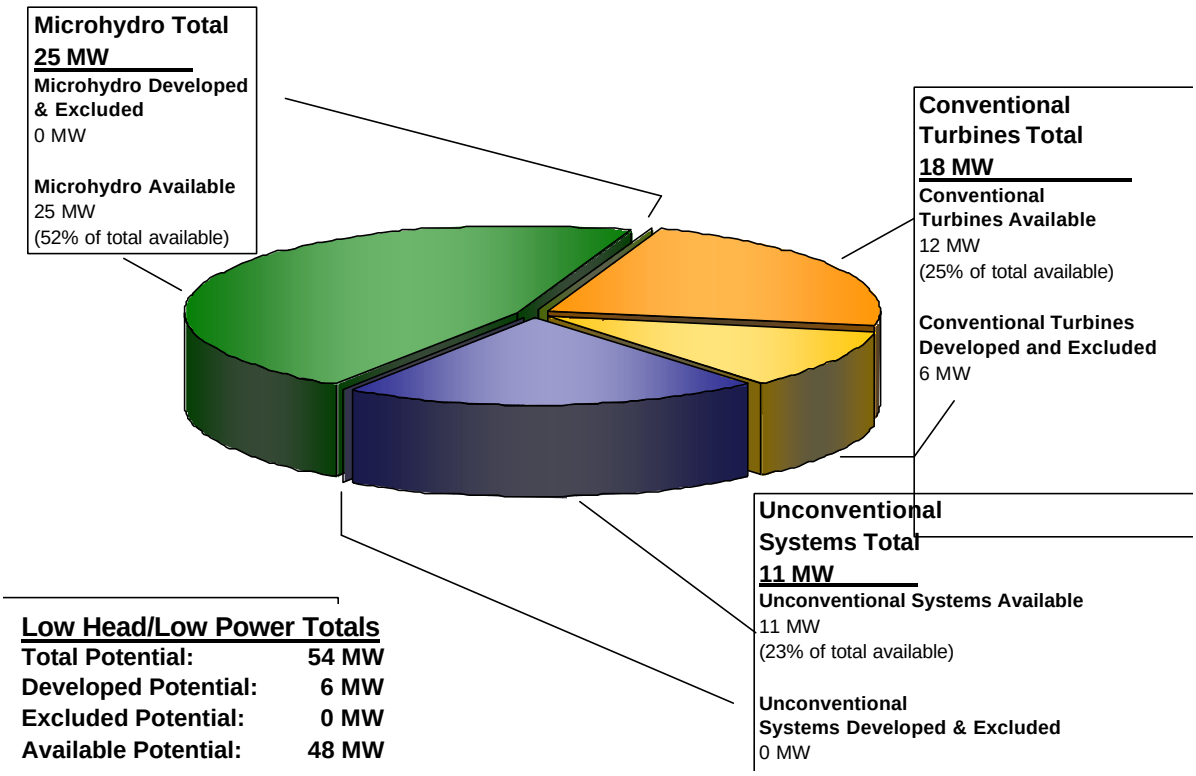


Figure B-34. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Connecticut among three low head/low power hydropower technology classes.

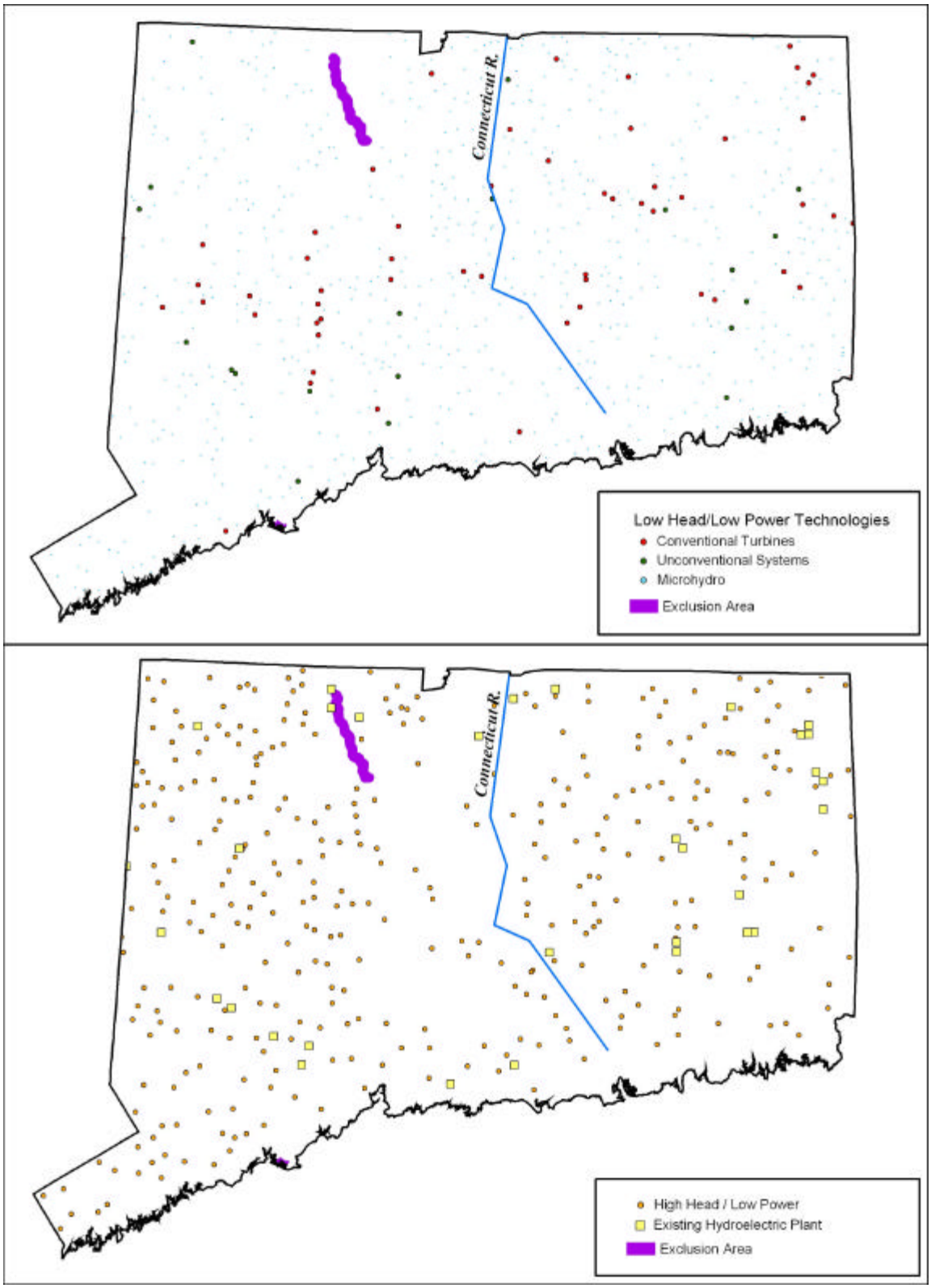


Figure B-35. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Connecticut.

B.8 Delaware

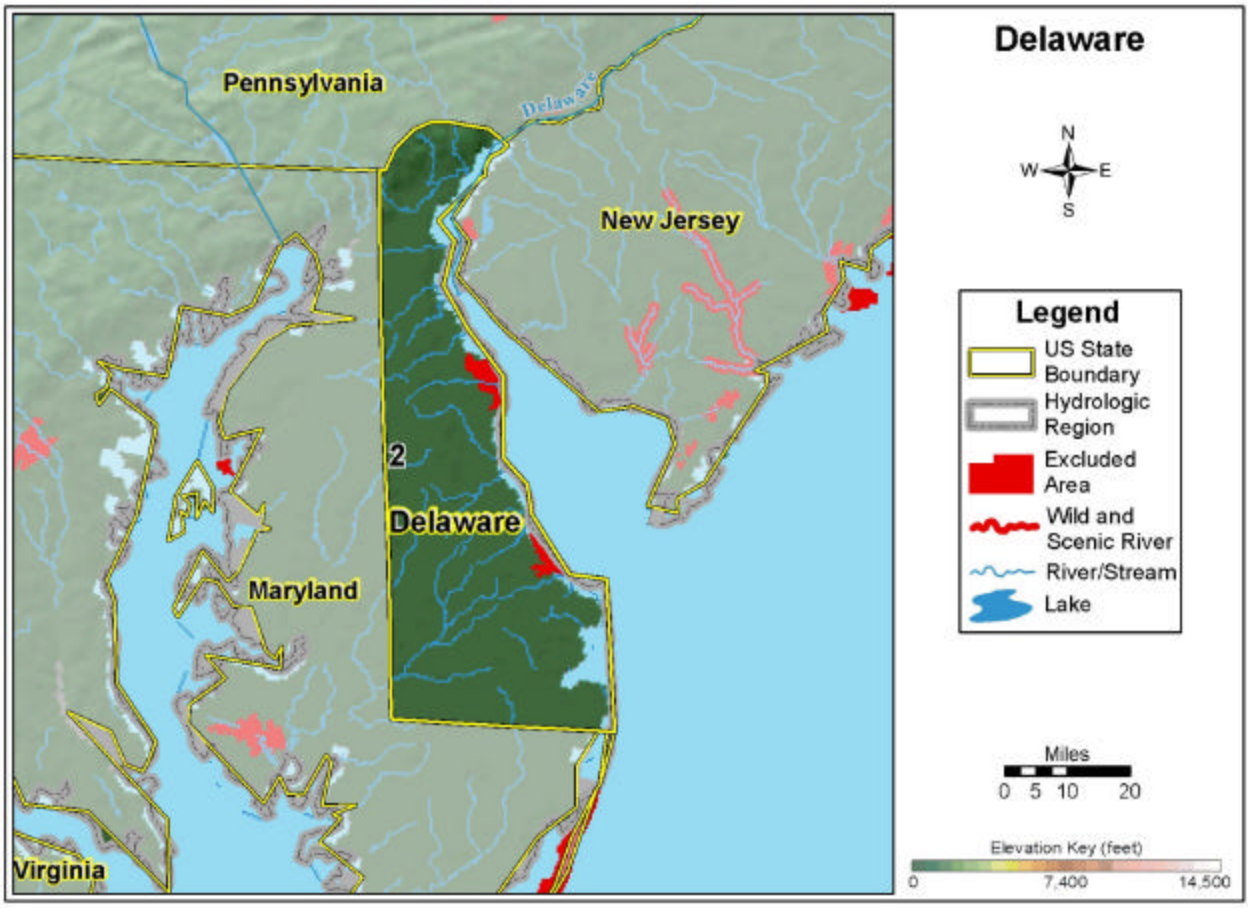


Figure B-36. Delaware.

Table B-8. Summary of results of water energy resource assessment of Delaware.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**24**	**0**	**0**	**24**
TOTAL HIGH POWER	**15**	**0**	**0**	**15**
High Head/High Power	**5**	**0**	**0**	**5**
Low Head/High Power	**10**	**0**	**0**	**10**
TOTAL LOW POWER	**9**	**0**	**0**	**9**
High Head/Low Power	**2**	**0**	**0**	**2**
Low Head/Low Power	**7**	**0**	**0**	**7**
Conventional Turbine	1	0	0	1
Unconventional Systems	2	0	0	2
Microhydro	4	0	0	4

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

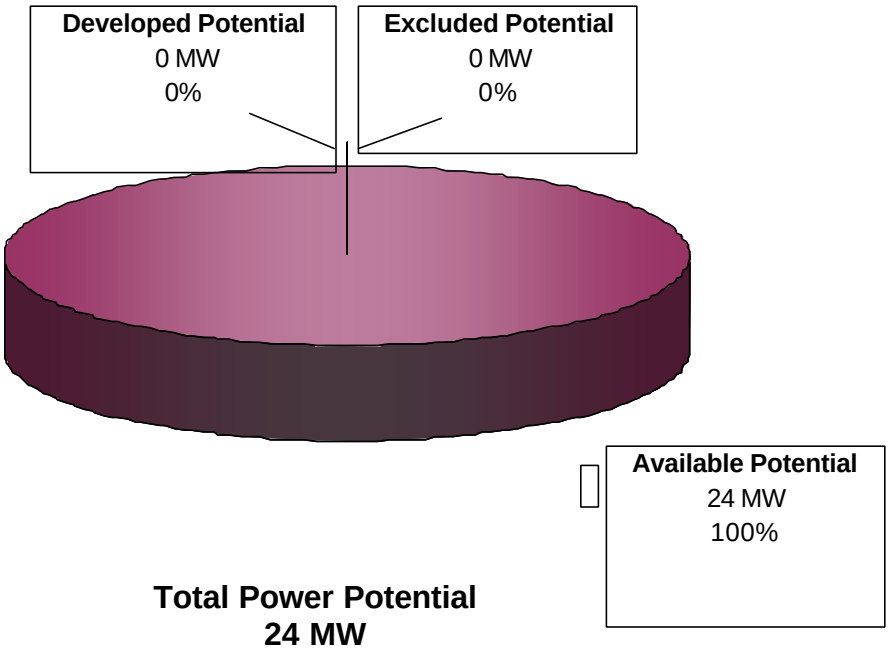


Figure B-37. Power category distribution of the total power potential (annual mean power) of water energy resources in Delaware.

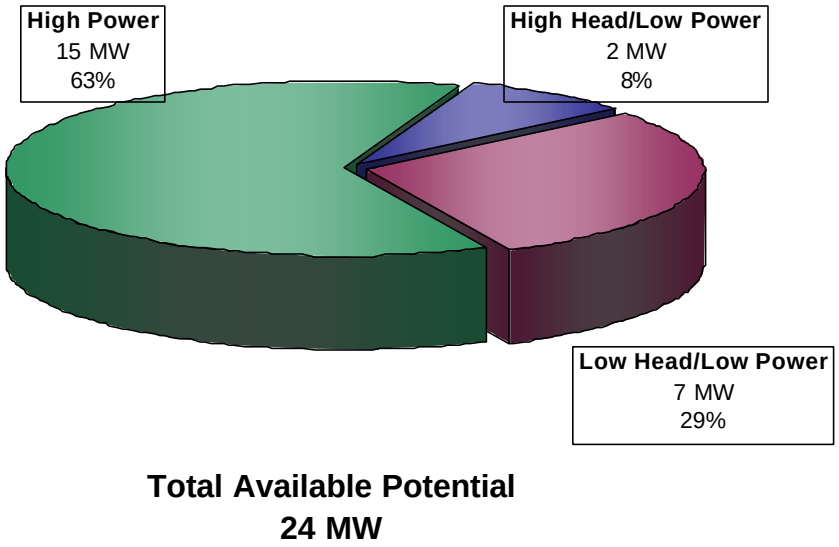


Figure B-38. Power class distribution of the available power potential (annual mean power) of water energy resources in Delaware.

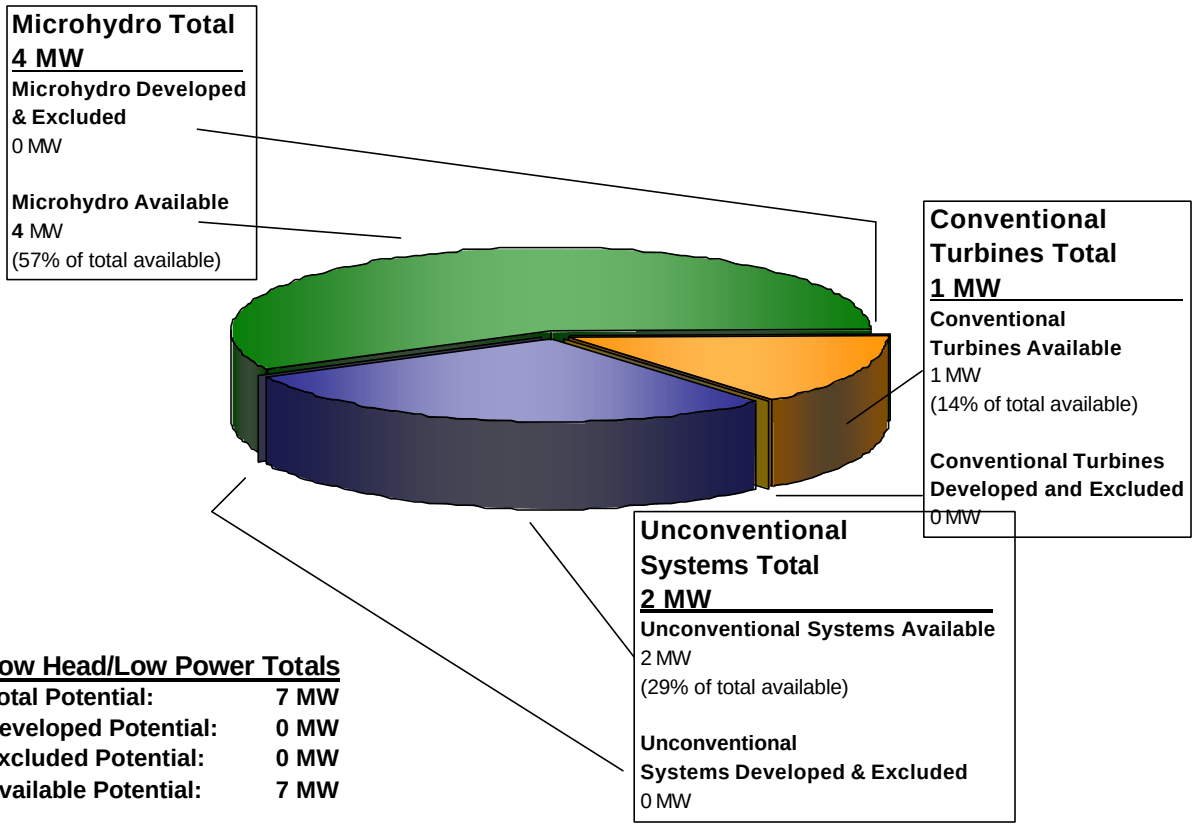


Figure B-39. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Delaware among three low head/low power hydropower technology classes.

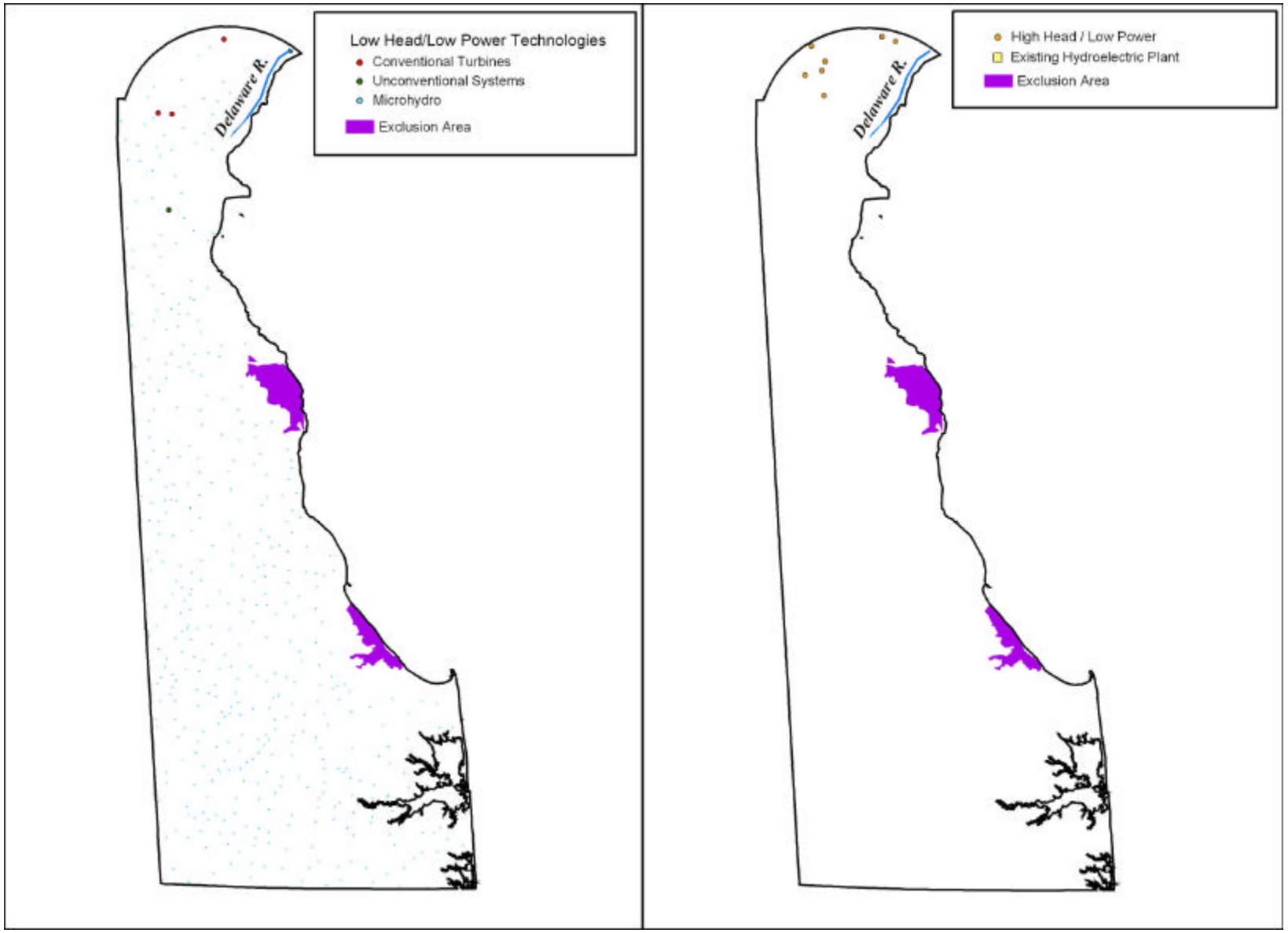


Figure B-40. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Delaware.

B.9 Florida

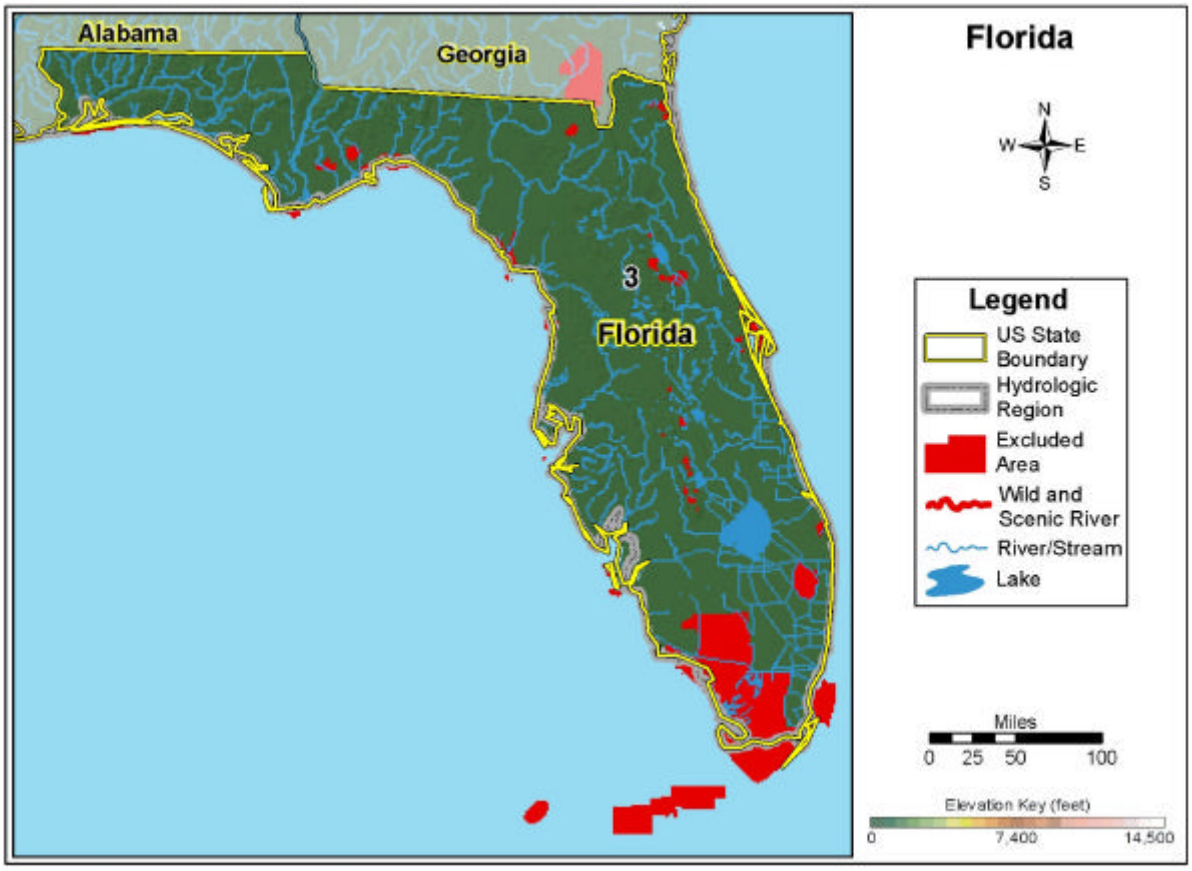


Figure B-41. Florida.

Table B-9. Summary of results of water energy resource assessment of Florida.

Annual Mean Power (MW)	Total	Developed[a]	Excluded	Available[a,b]
TOTAL POWER	**446**	**32**	**14**	**400**
TOTAL HIGH POWER	**214**	**32**	**6**	**176**
High Head/High Power	**24**	**24**	**0**	**0**
Low Head/High Power	**190**	**8**	**6**	**176**
TOTAL LOW POWER	**232**	**0**	**8**	**224**
High Head/Low Power	**13**	**0**	**0**	**13**
Low Head/Low Power	**219**	**0**	**8**	**211**
Conventional Turbine	43	0	2	41
Unconventional Systems	74	0	4	70
Microhydro	102	0	2	100

b. Developed high head/high power potential exceeded total potential in this power class probably because the developed power is made up of resources in other power classes. “Excess” developed power in the high head/high power class (8 MW) was rolled downward into the low head/high power power class.

a. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

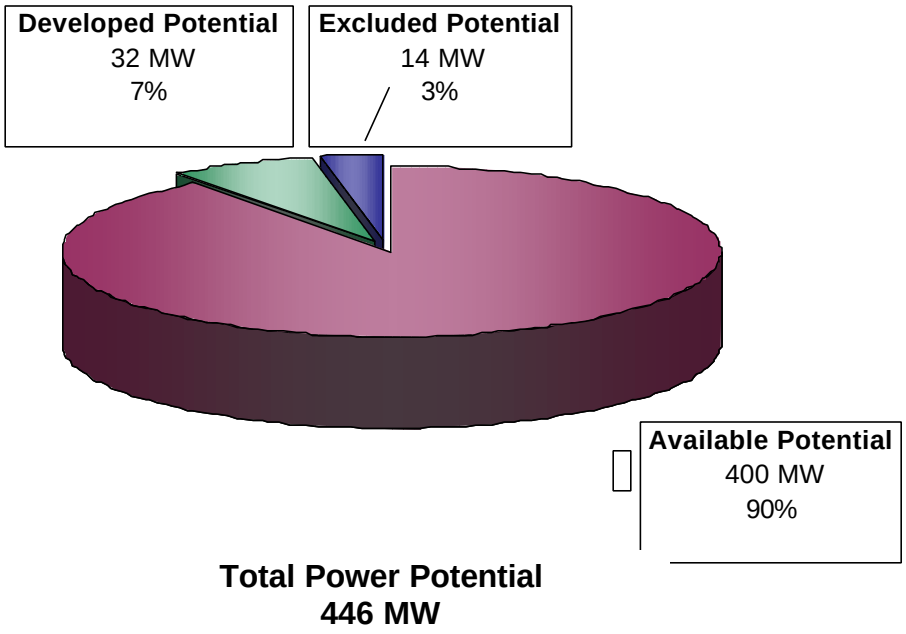


Figure B-42. Power category distribution of the total power potential (annual mean power) of water energy resources in Florida.

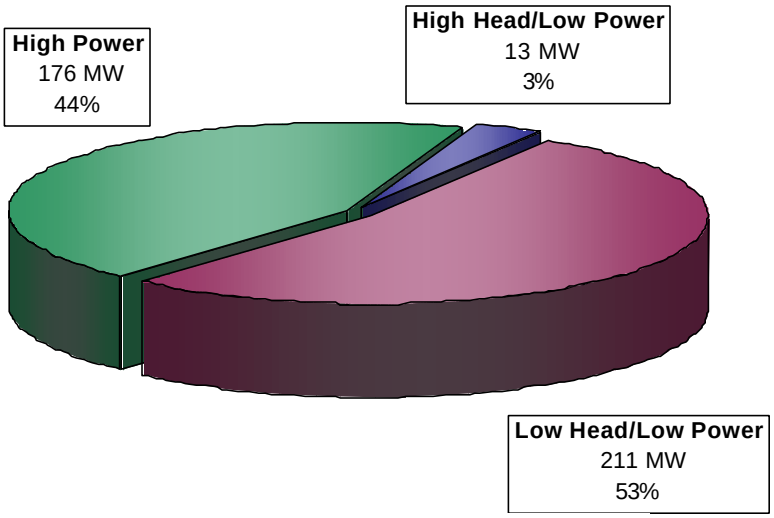


Figure B-43. Power class distribution of the available power potential (annual mean power) of water energy resources in Florida.

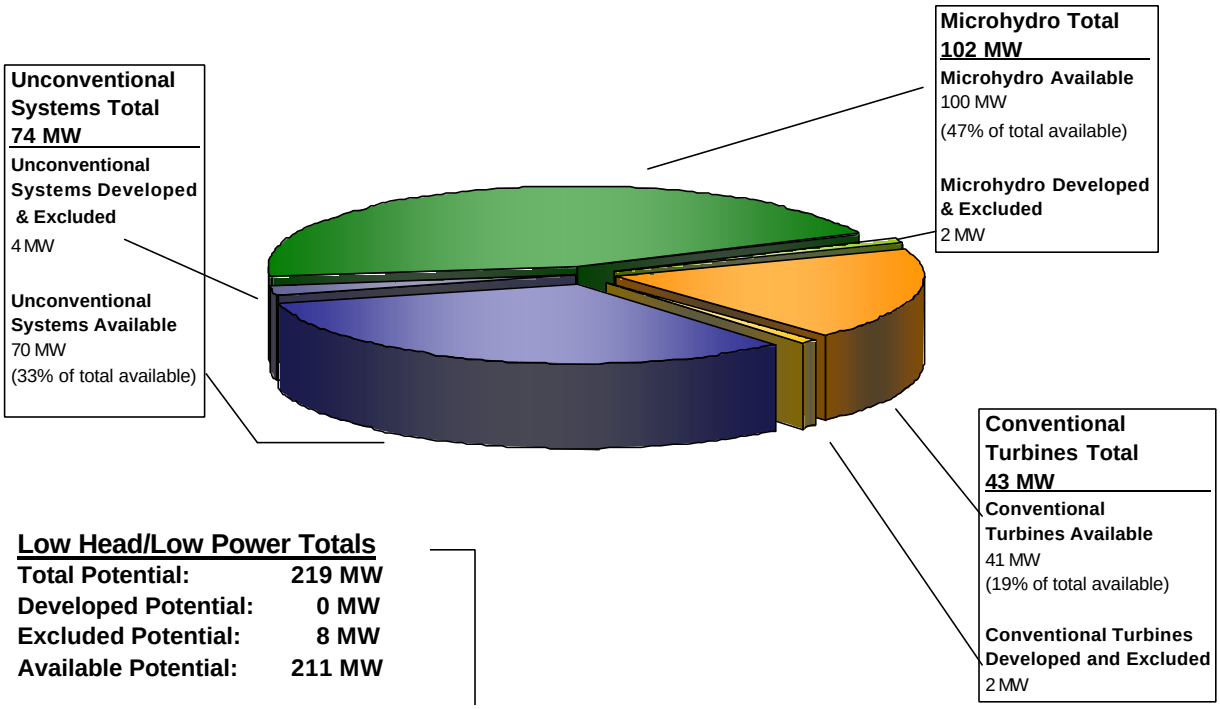


Figure B-44. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Florida among three low head/low power hydropower technology classes.

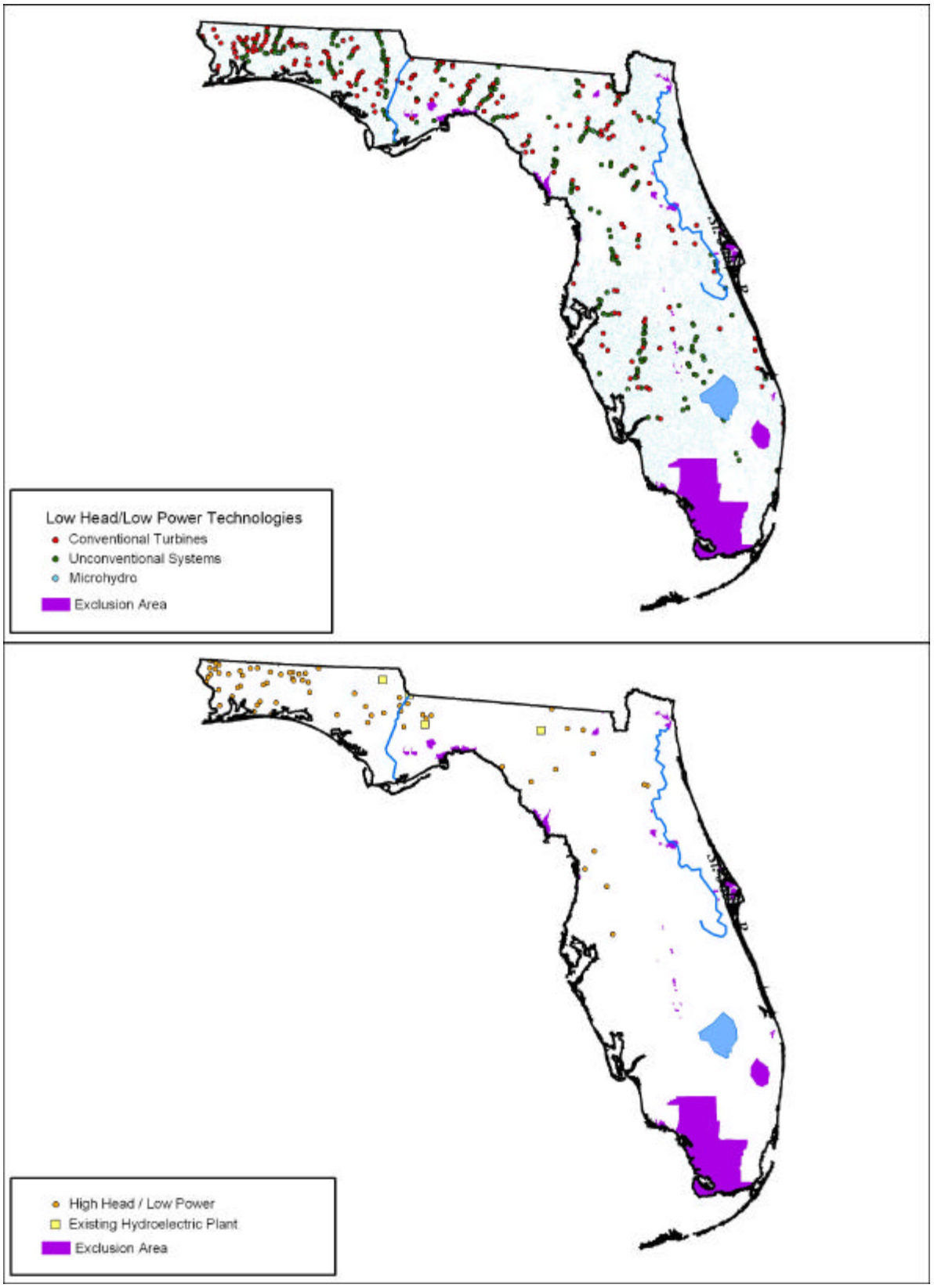


Figure B-45. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Florida.

B.10 Georgia

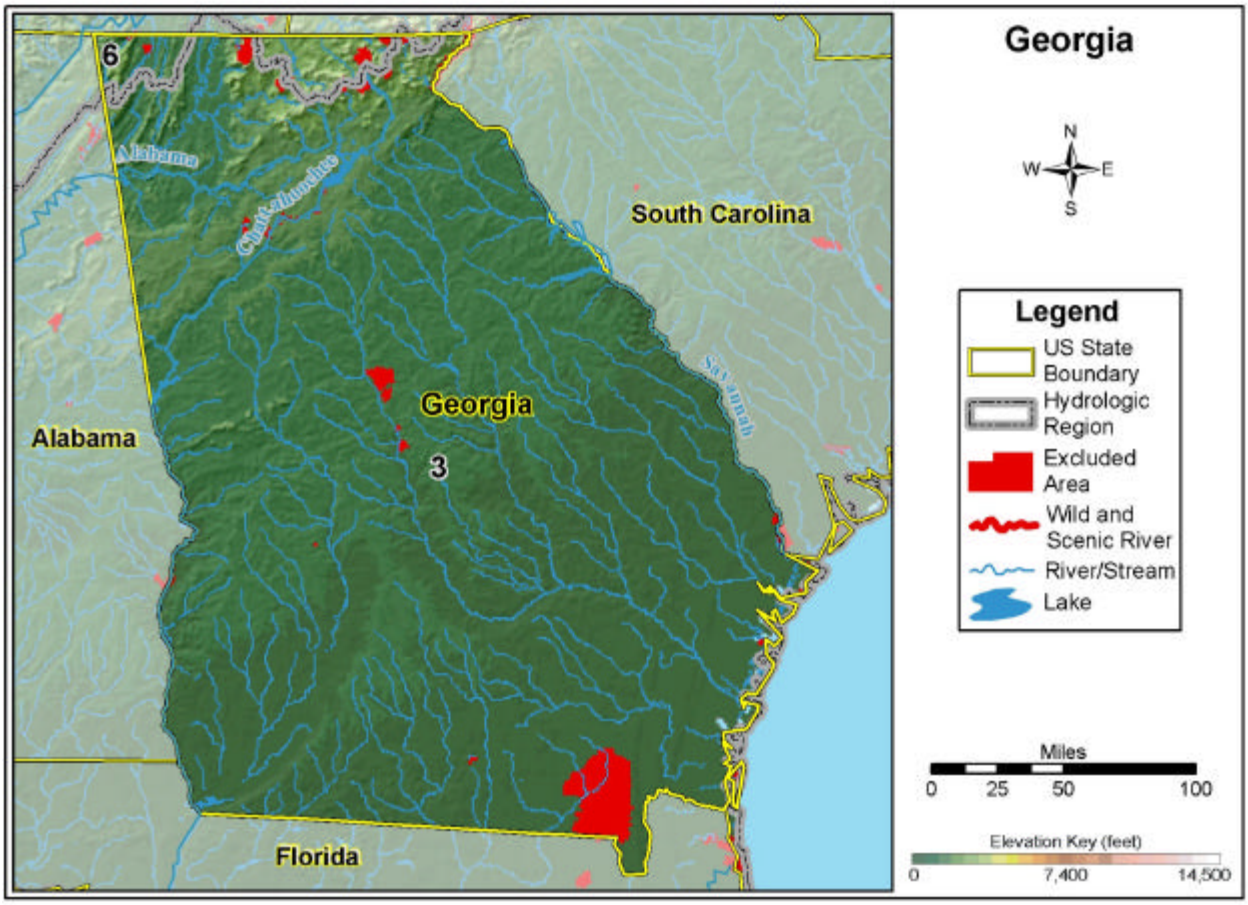


Figure B-46. Georgia.

Table B-10. Summary of results of water energy resource assessment of Georgia.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**2,249**	**429**	**208**	**1,612**
TOTAL HIGH POWER	**1,436**	**424**	**181**	**831**
High Head/High Power	**804**	**403**	**161**	**240**
Low Head/High Power	**632**	**21**	**20**	**591**
TOTAL LOW POWER	**813**	**5**	**27**	**781**
High Head/Low Power	**250**	**3**	**18**	**229**
Low Head/Low Power	**563**	**2**	**9**	**552**
Conventional Turbine	191	2	3	186
Unconventional Systems	126	0	3	123
Microhydro	246	0	3	243

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

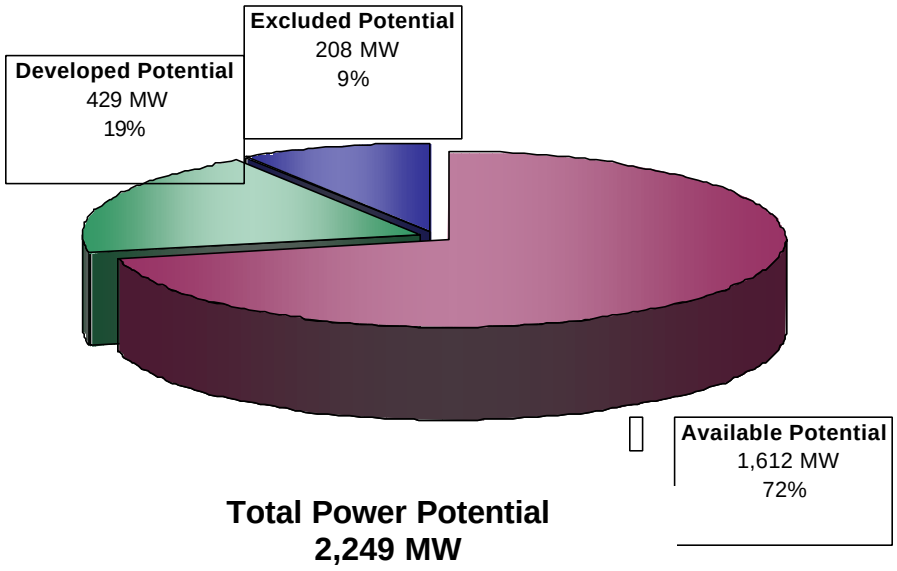


Figure B-47. Power category distribution of the total power potential (annual mean power) of water energy resources in Georgia.

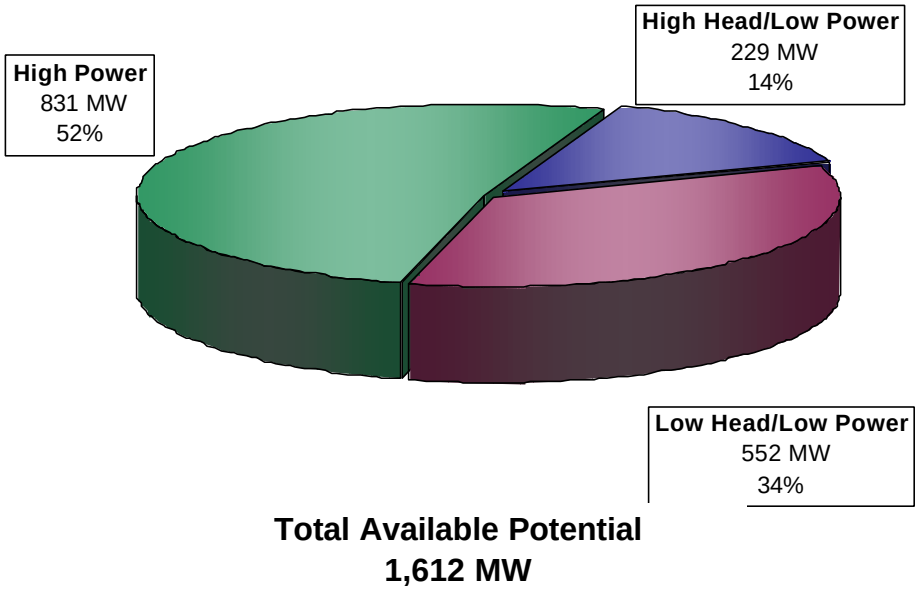


Figure B-48. Power class distribution of the available power potential (annual mean power) of water energy resources in Georgia.

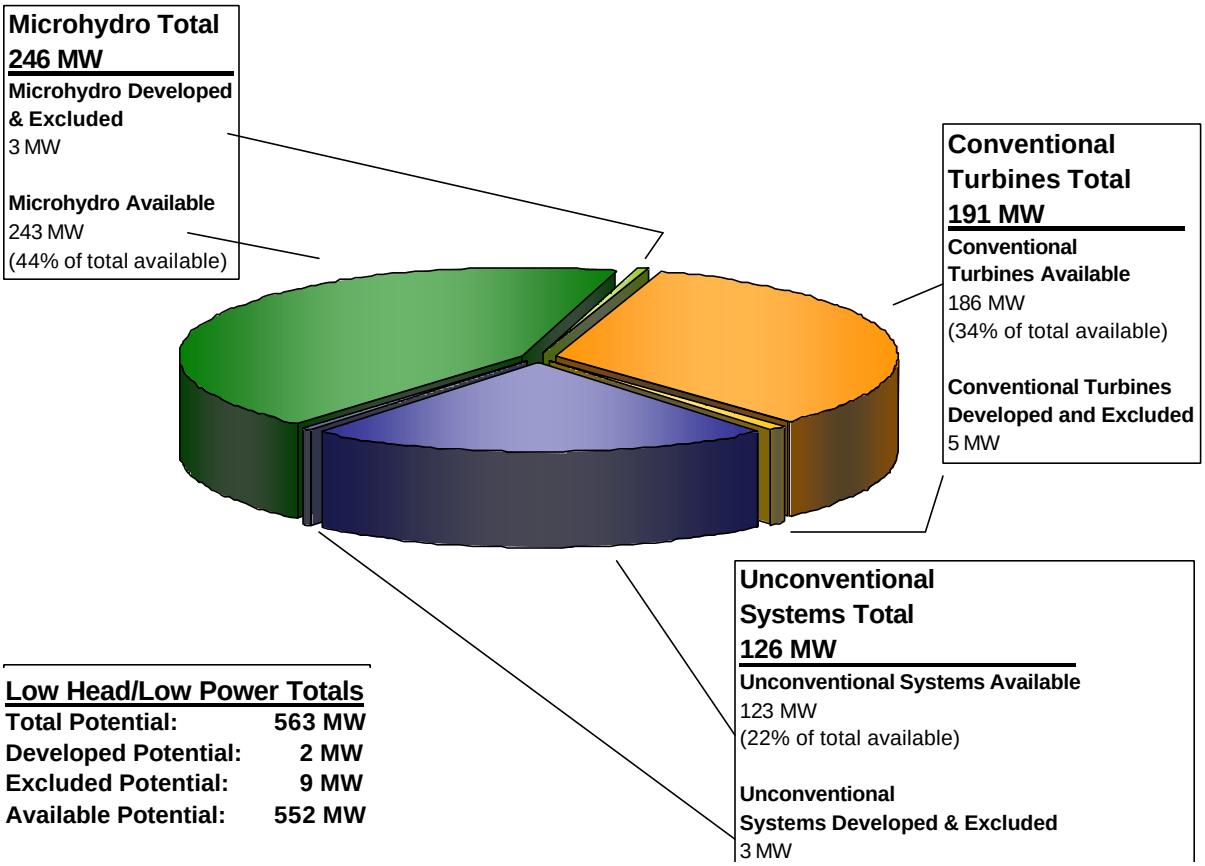


Figure B-49. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Georgia among three low head/low power hydropower technology classes.

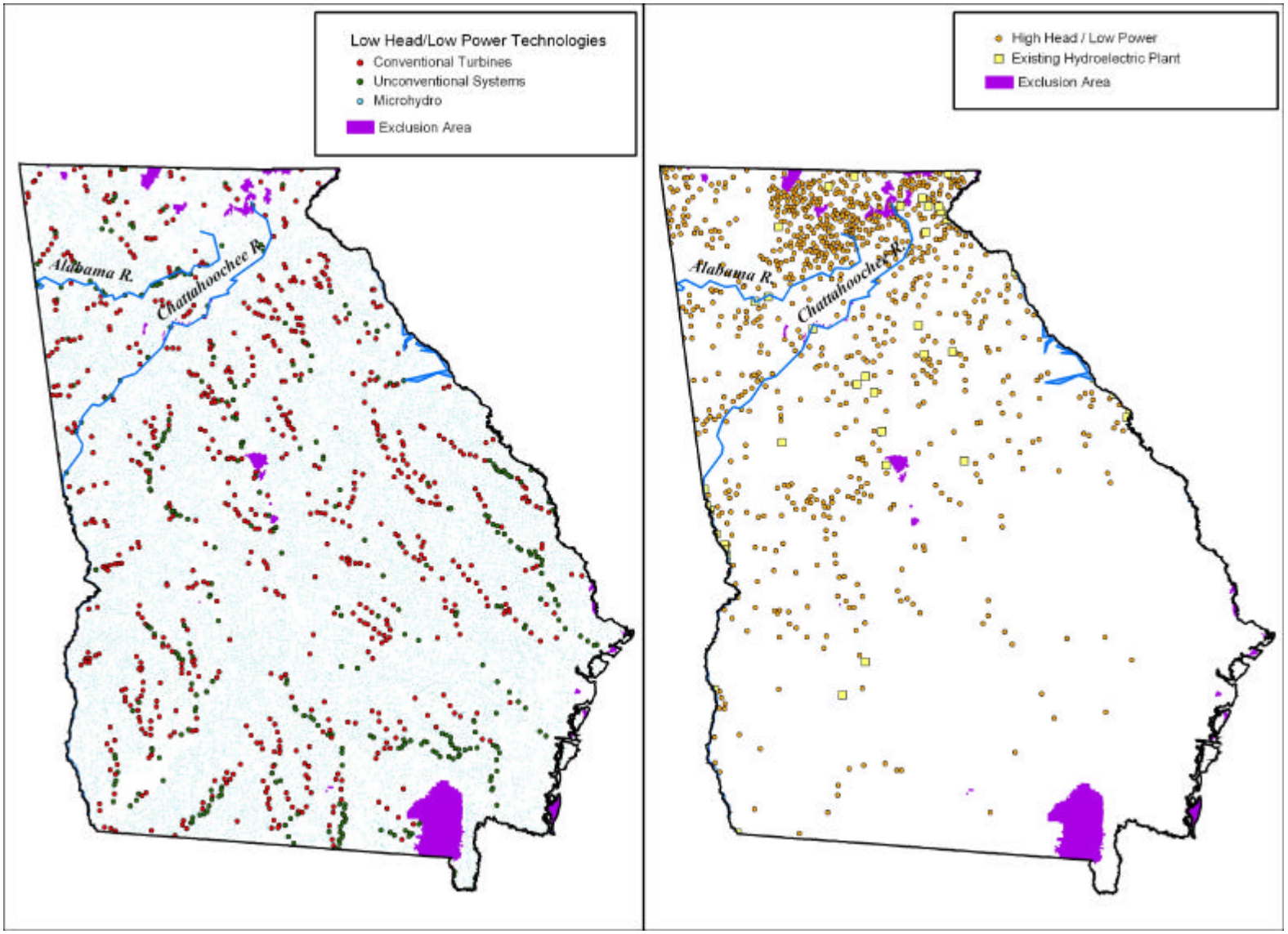


Figure B-50. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Georgia.

B.11 Hawaii

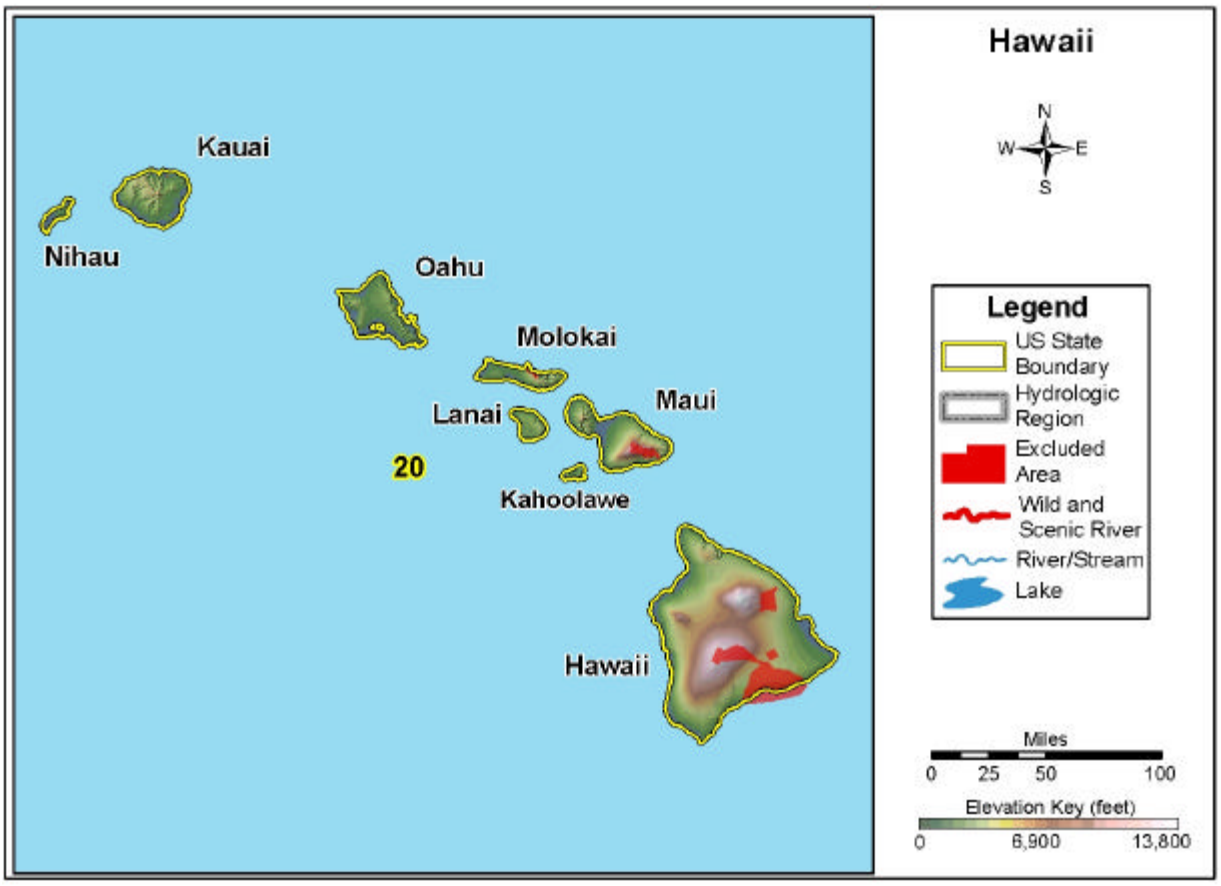


Figure B-51. Hawaii.

Table B-11. Summary of results of water energy resource assessment of Hawaii.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**2,304**	**20**	**459**	**1,825**
TOTAL HIGH POWER	**2,138**	**17**	**439**	**1,682**
High Head/High Power	**2,138**	**17**	**439**	**1,682**
Low Head/High Power	**0**	**0**	**0**	**0**
TOTAL LOW POWER	**166**	**3**	**20**	**143**
High Head/Low Power	**156**	**3**	**19**	**134**
Low Head/Low Power	**10**	**0**	**1**	**9**
Conventional Turbine	1	0	0	1
Unconventional Systems	0	0	0	0
Microhydro	9	0	1	8

a. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

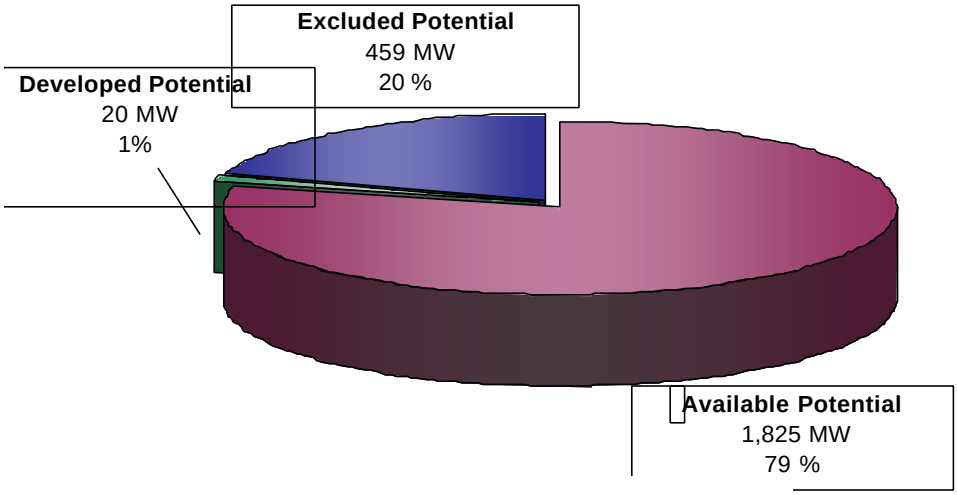


Figure B-52. Power category distribution of the total power potential (annual mean power) of water energy resources in Hawaii.

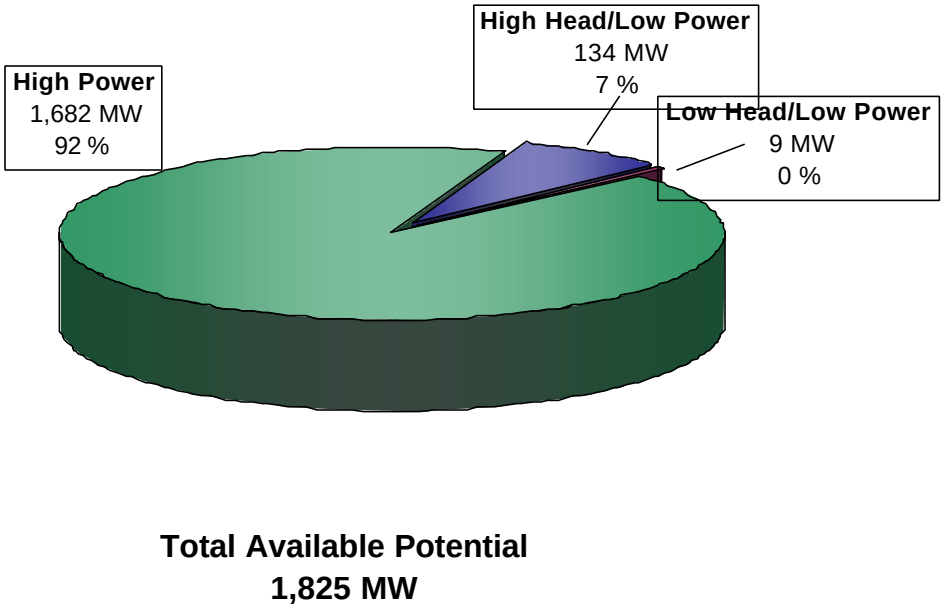
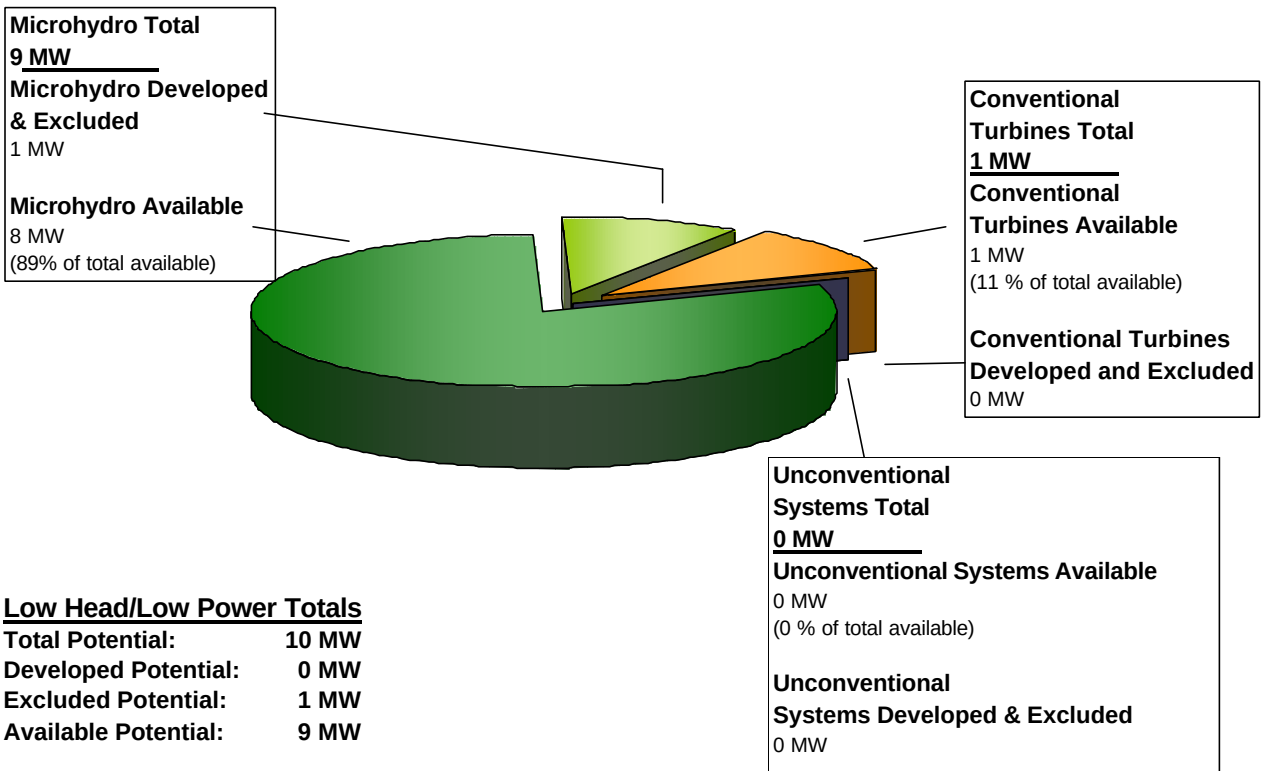


Figure B-53. Power class distribution of the available power potential (annual mean power) of water energy resources in Hawaii.



Low Head/Low Power Totals

Total Potential:	**10 MW**
Developed Potential:	**0 MW**
Excluded Potential:	**1 MW**
Available Potential:	**9 MW**

Figure B-54. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Hawaii among three low head/low power hydropower technology classes.

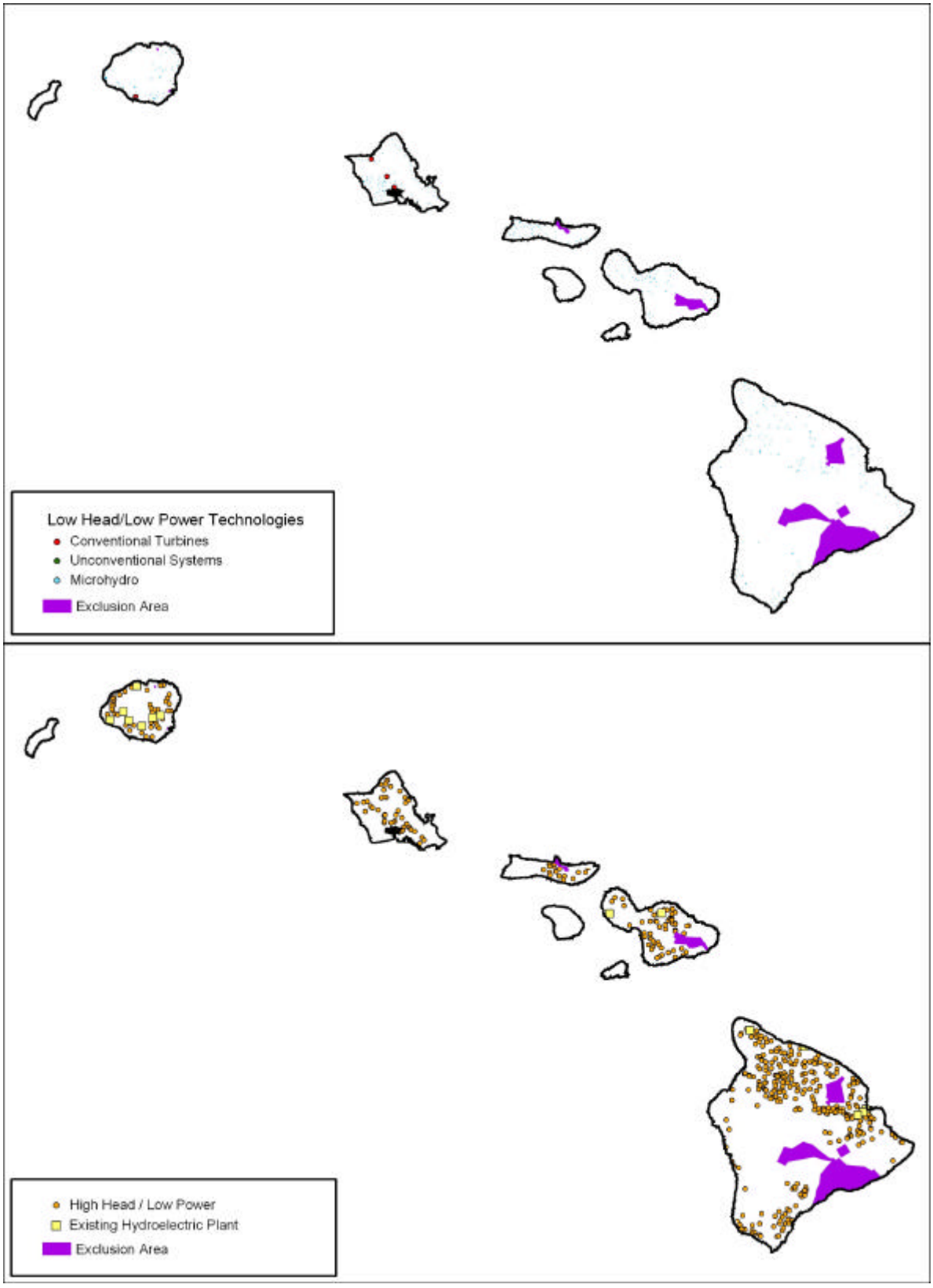


Figure B-55. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Hawaii.

B.12 Idaho

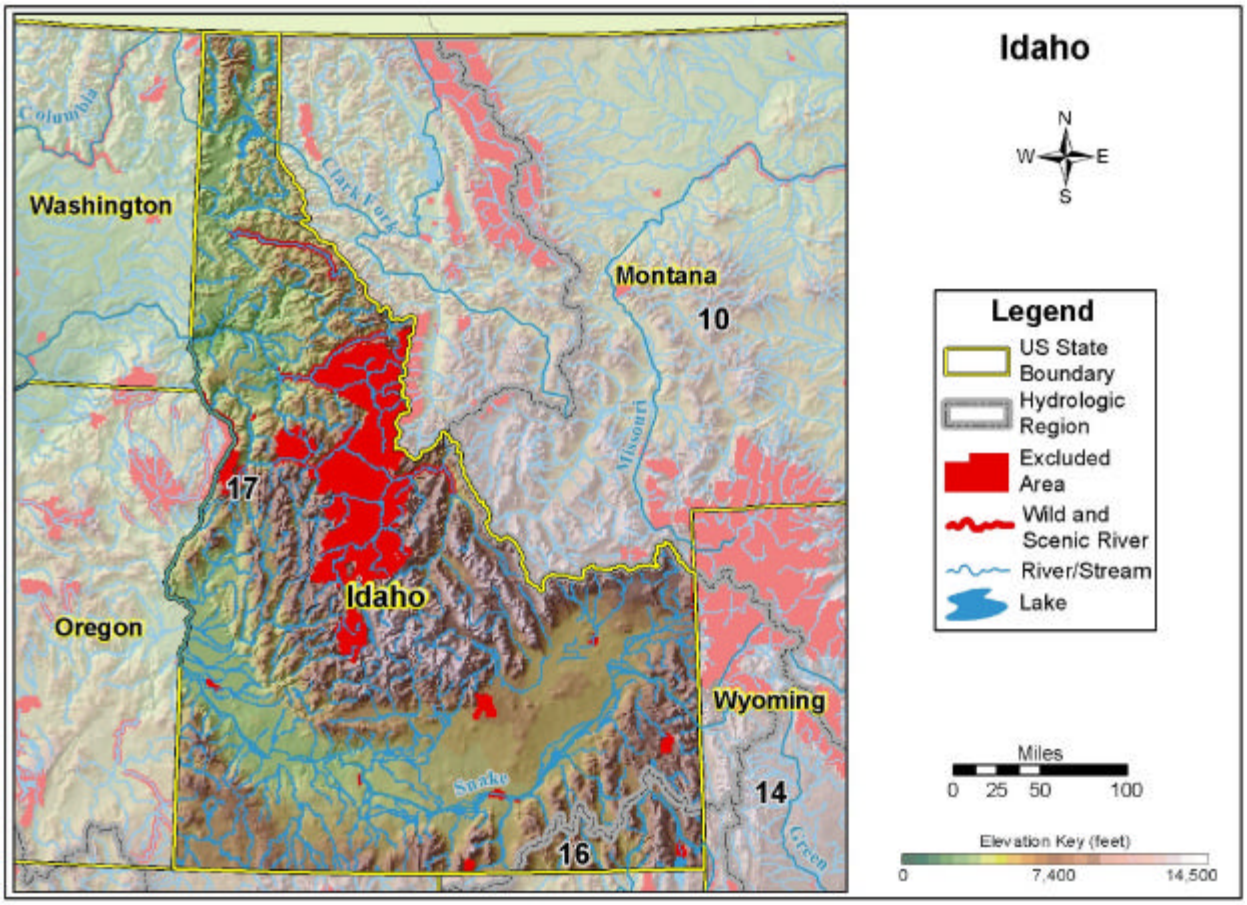


Figure B-56. Idaho.

Table B-12. Summary of results of water energy resource assessment of Idaho.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**18,794**	**1,288**	**5,545**	**11,961**
TOTAL HIGH POWER	**15,677**	**1,266**	**5,025**	**9,386**
High Head/High Power	**12,207**	**1,194**	**3,890**	**7,123**
Low Head/High Power	**3,470**	**72**	**1,135**	**2,263**
TOTAL LOW POWER	**3,117**	**22**	**520**	**2,575**
High Head/Low Power	**2,532**	**18**	**478**	**2,036**
Low Head/Low Power	**585**	**4**	**42**	**539**
Conventional Turbine	190	3	9	178
Unconventional Systems	88	0	17	71
Microhydro	307	1	16	290

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

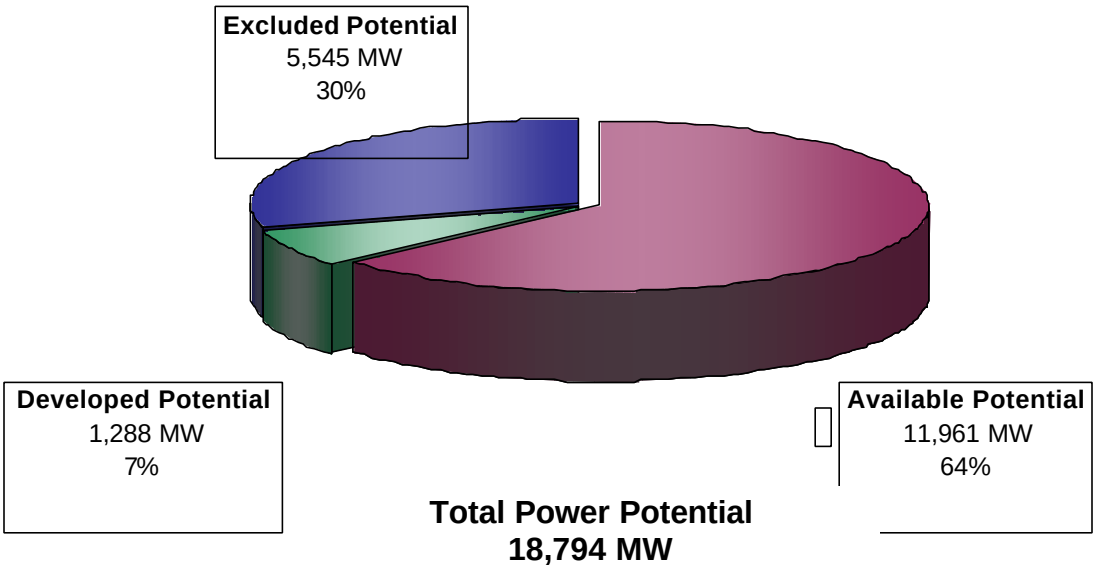


Figure B-57. Power category distribution of the total power potential (annual mean power) of water energy resources in Idaho.

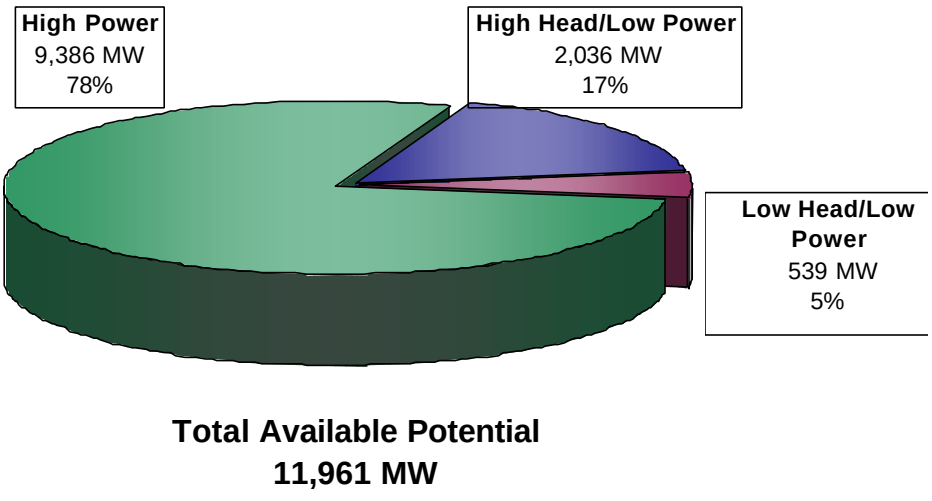


Figure B-58. Power class distribution of the available power potential (annual mean power) of water energy resources in Idaho.

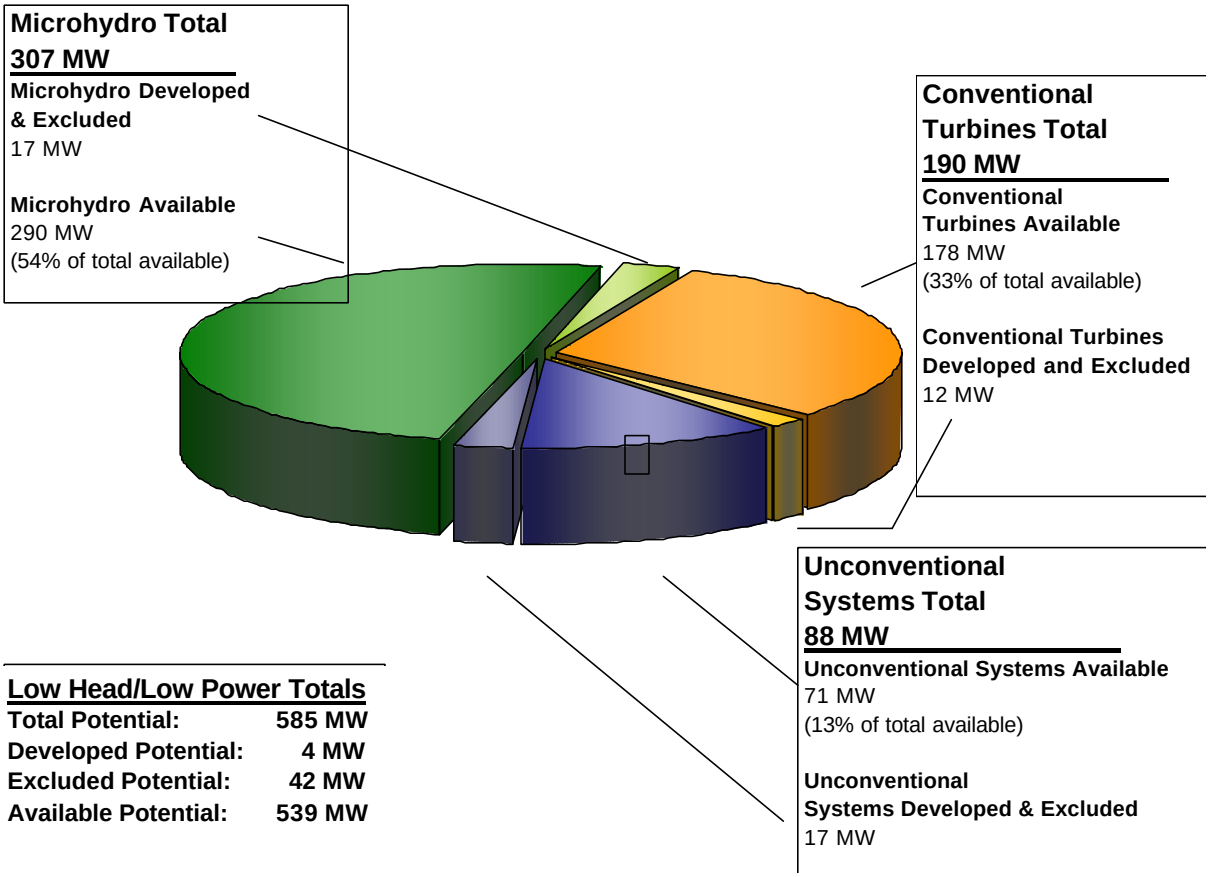


Figure B-59. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Idaho among three low head/low power hydropower technology classes.

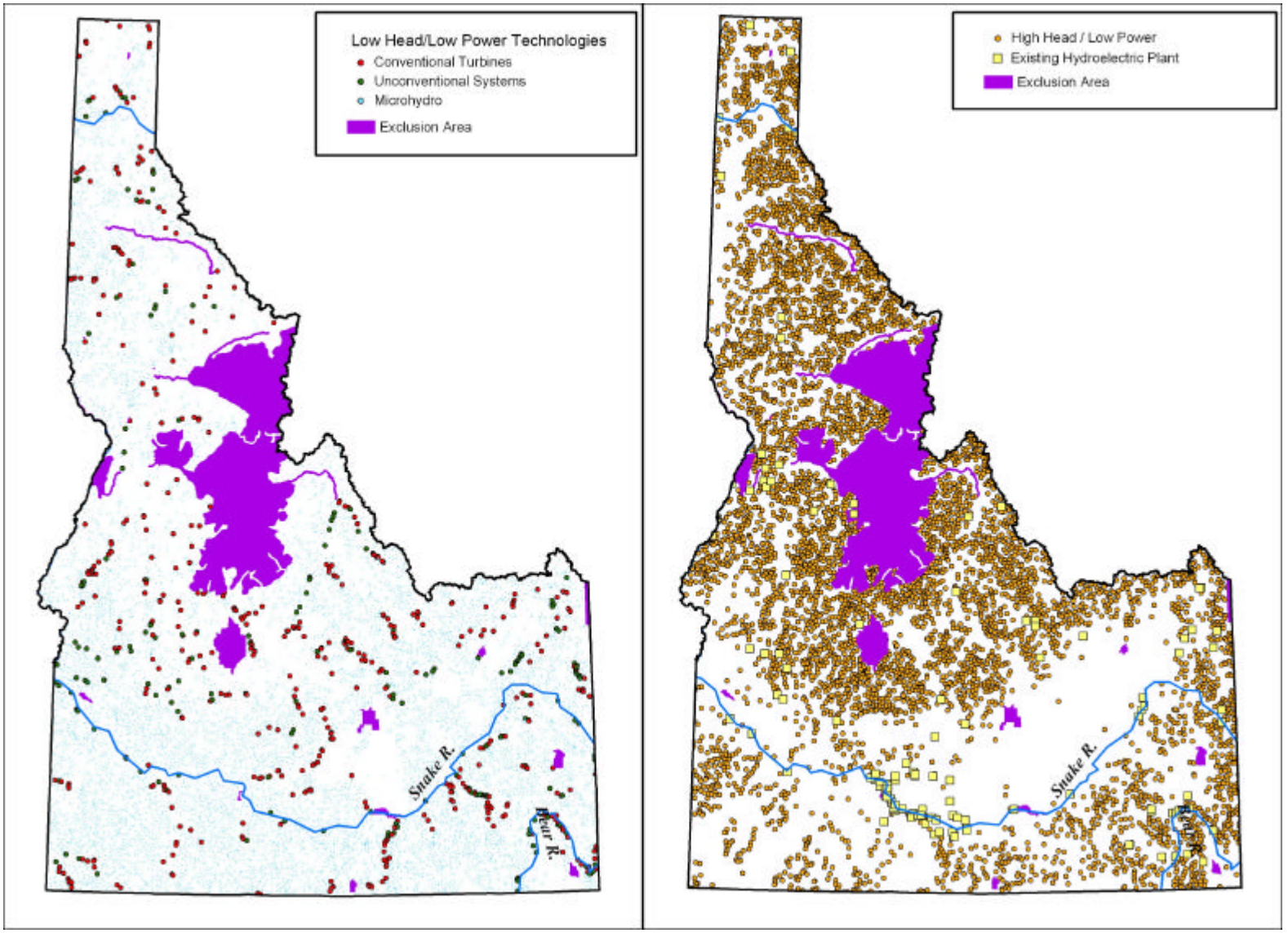


Figure B-60. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Idaho.

B.13 Illinois

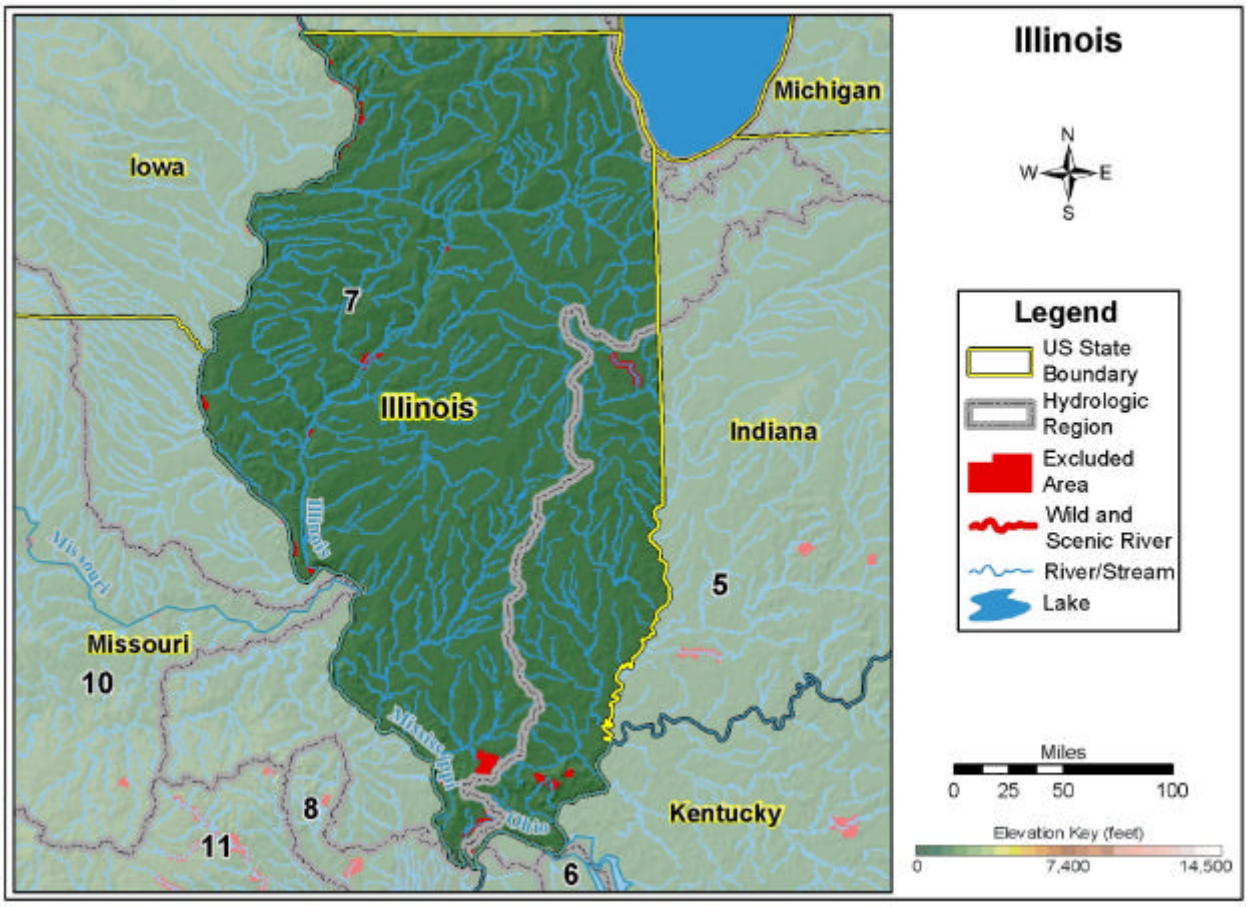


Figure B-61. Illinois.

Table B-13. Summary of results of water energy resource assessment of Illinois.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**1,902**	**27**	**297**	**1,578**
TOTAL HIGH POWER	**1,395**	**25**	**224**	**1,146**
High Head/High Power	**12**	**10**	**0**	**2**
Low Head/High Power	**1,383**	**15**	**224**	**1,144**
TOTAL LOW POWER	**507**	**2**	**73**	**432**
High Head/Low Power	**41**	**0**	**2**	**39**
Low Head/Low Power	**466**	**2**	**71**	**393**
Conventional Turbine	109	2	4	103
Unconventional Systems	103	0	3	100
Microhydro	254	0	64	190

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

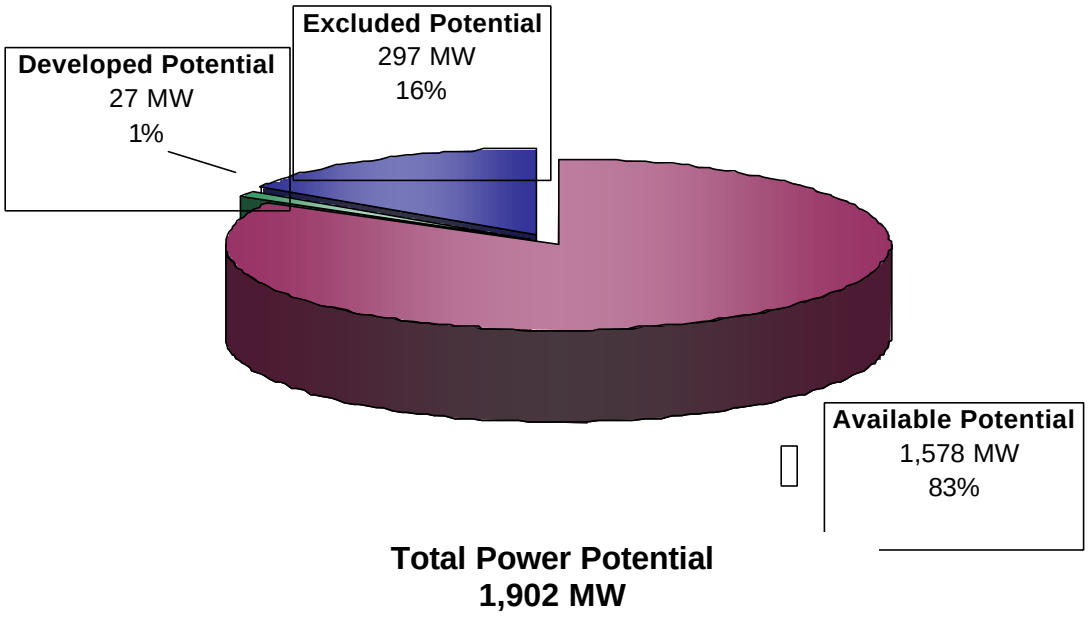


Figure B-62. Power category distribution of the total power potential (annual mean power) of water energy resources in Illinois.

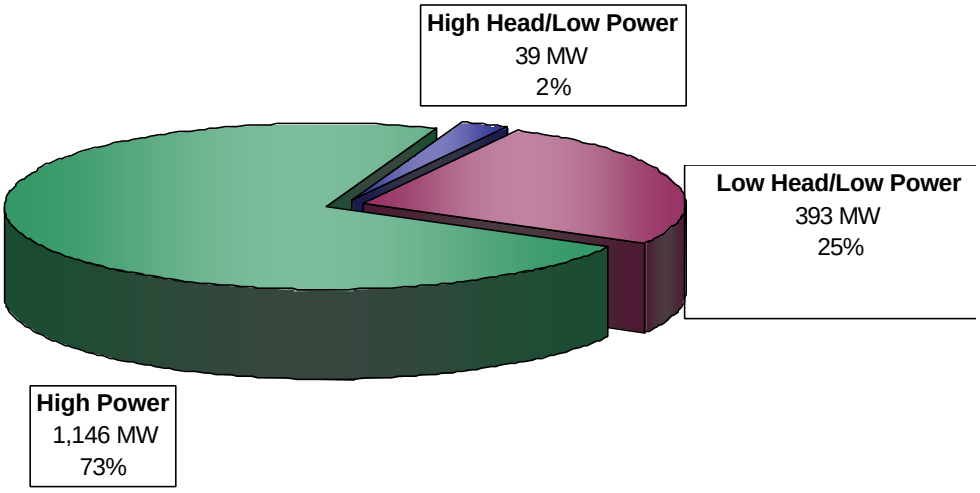


Figure B-63. Power class distribution of the available power potential (annual mean power) of water energy resources in Illinois.

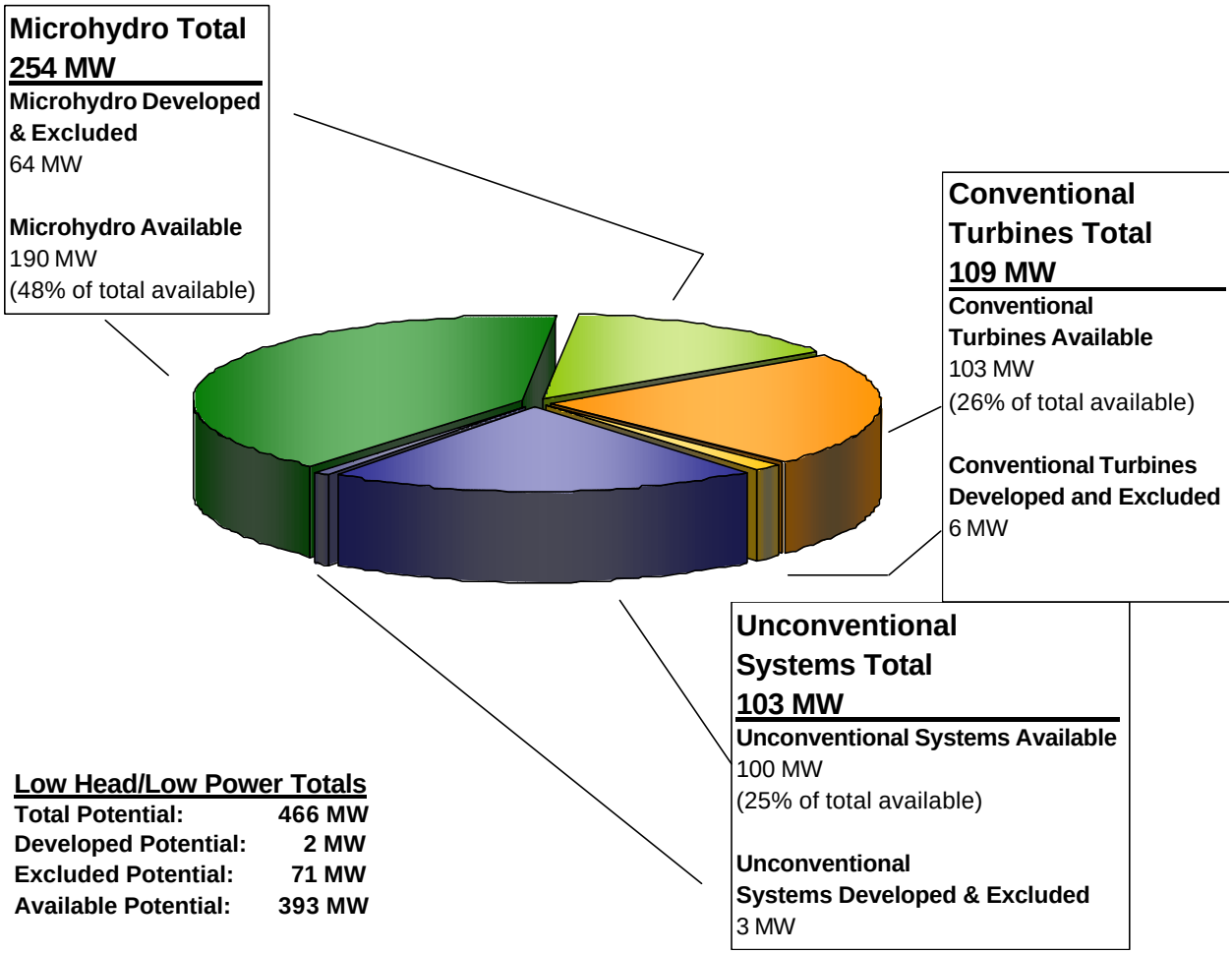


Figure B-64. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Illinois among three low head/low power hydropower technology classes.

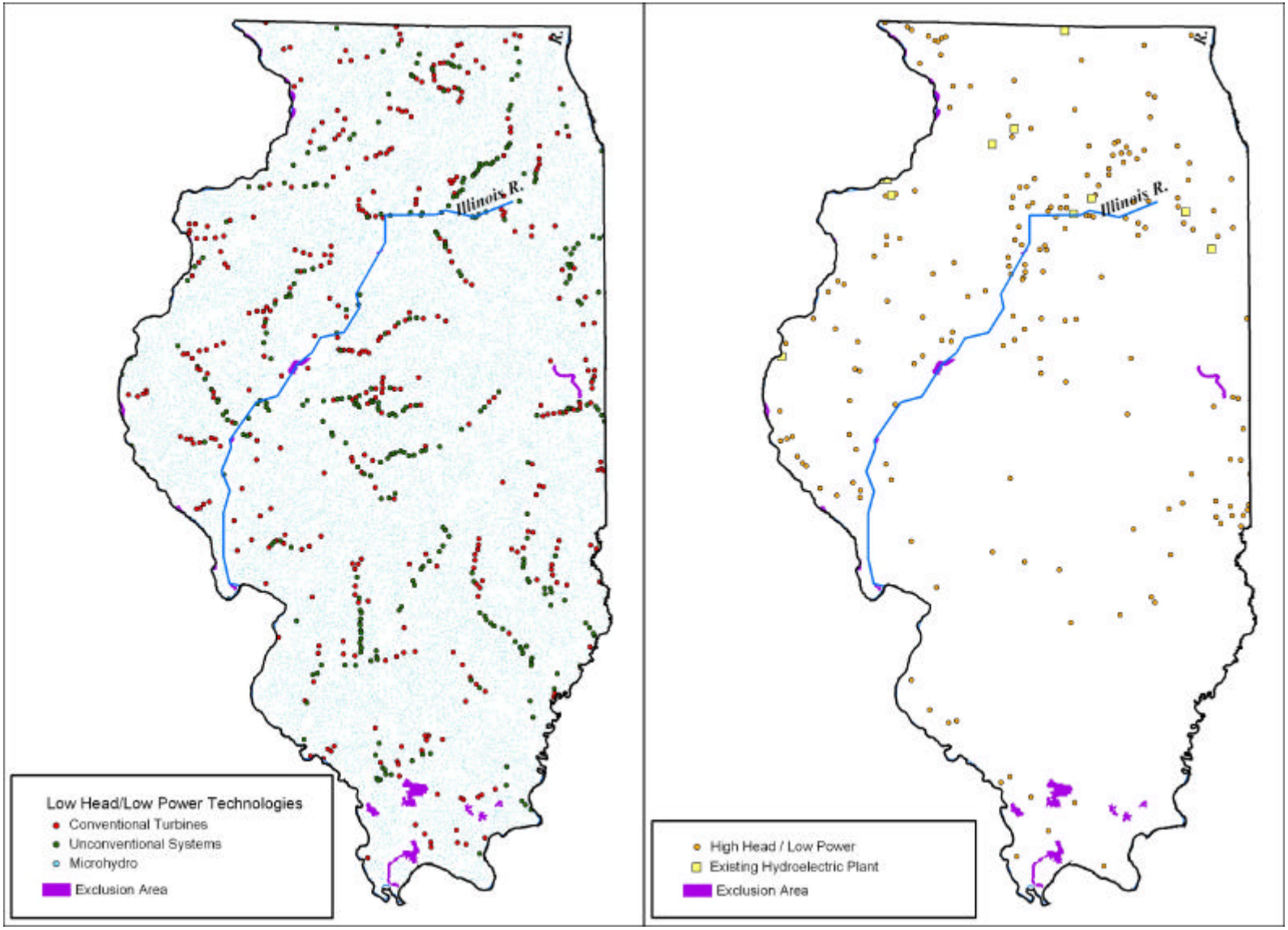


Figure B-65. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Illinois.

B.14 Indiana

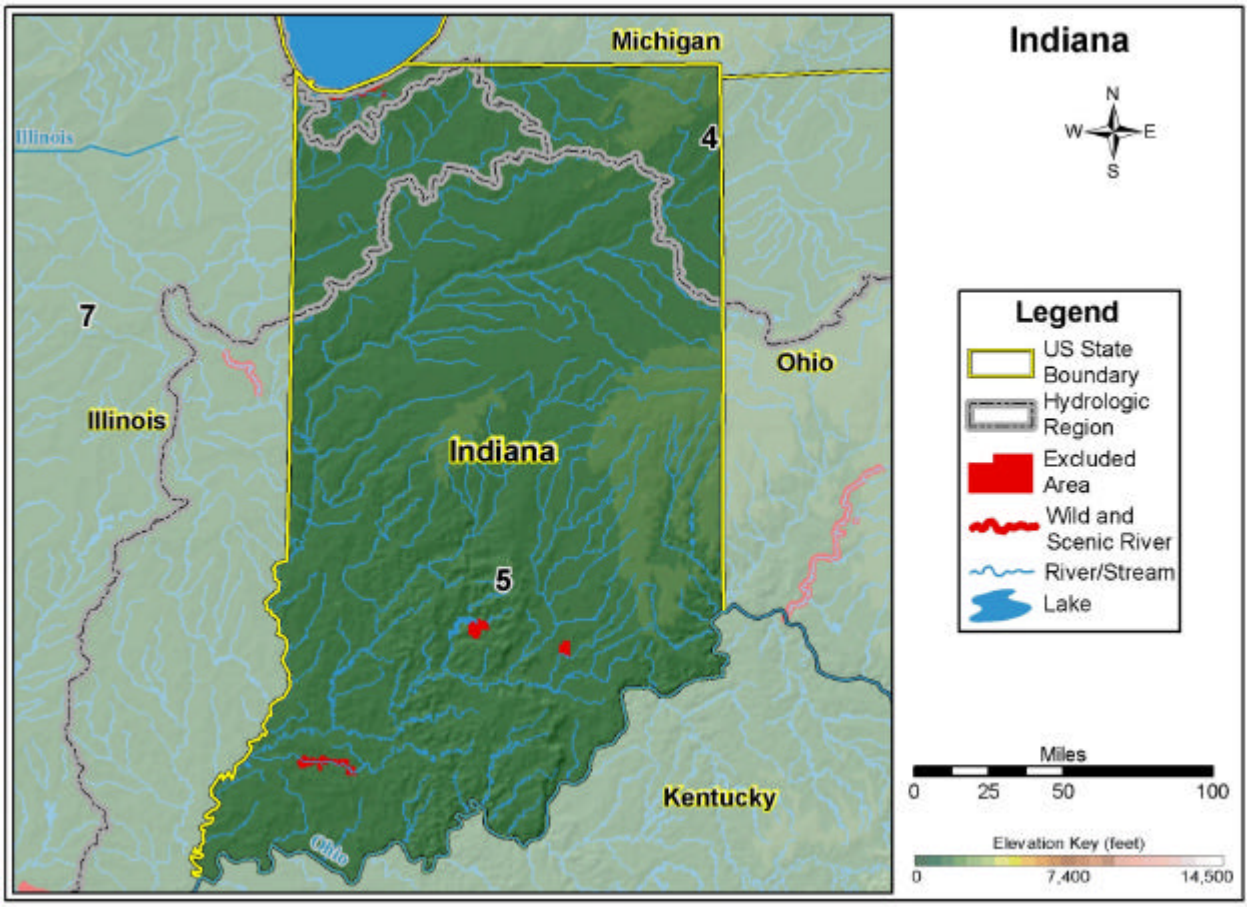


Figure B-66. Indiana.

Table B-14. Summary of results of water energy resource assessment of Indiana.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**1,587**	**67**	**4**	**1,516**
TOTAL HIGH POWER	**1,192**	**67**	**1**	**1,124**
High Head/High Power	**353**	**63**	**0**	**290**
Low Head/High Power	**839**	**4**	**1**	**834**
TOTAL LOW POWER	**395**	**0**	**3**	**392**
High Head/Low Power	**82**	**0**	**0**	**82**
Low Head/Low Power	**313**	**0**	**3**	**310**
Conventional Turbine	117	0	1	116
Unconventional Systems	62	0	1	61
Microhydro	134	0	1	133

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

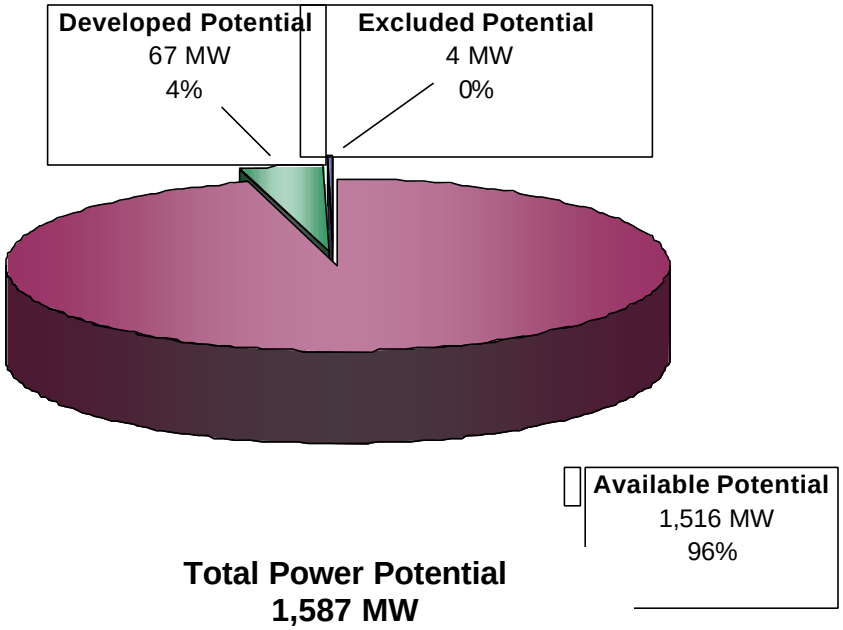


Figure B-67. Power category distribution of the total power potential (annual mean power) of water energy resources in Indiana.

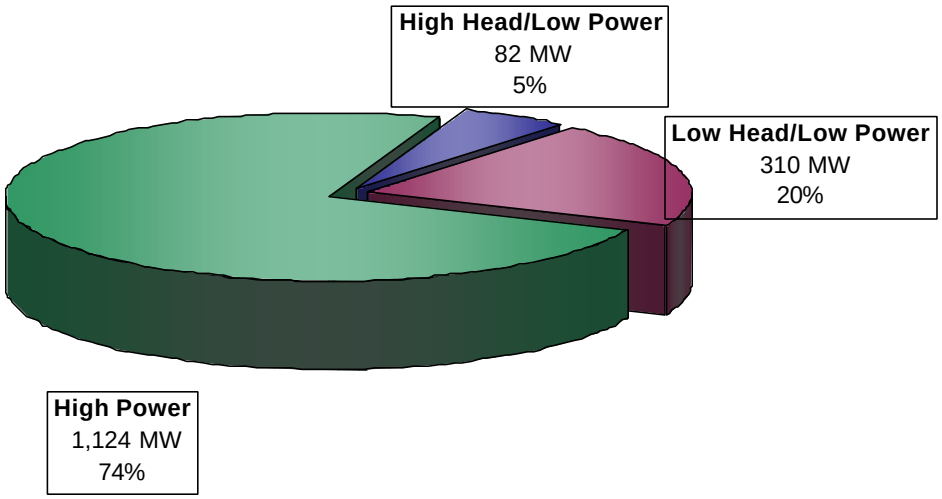


Figure B-68. Power class distribution of the available power potential (annual mean power) of water energy resources in Indiana.

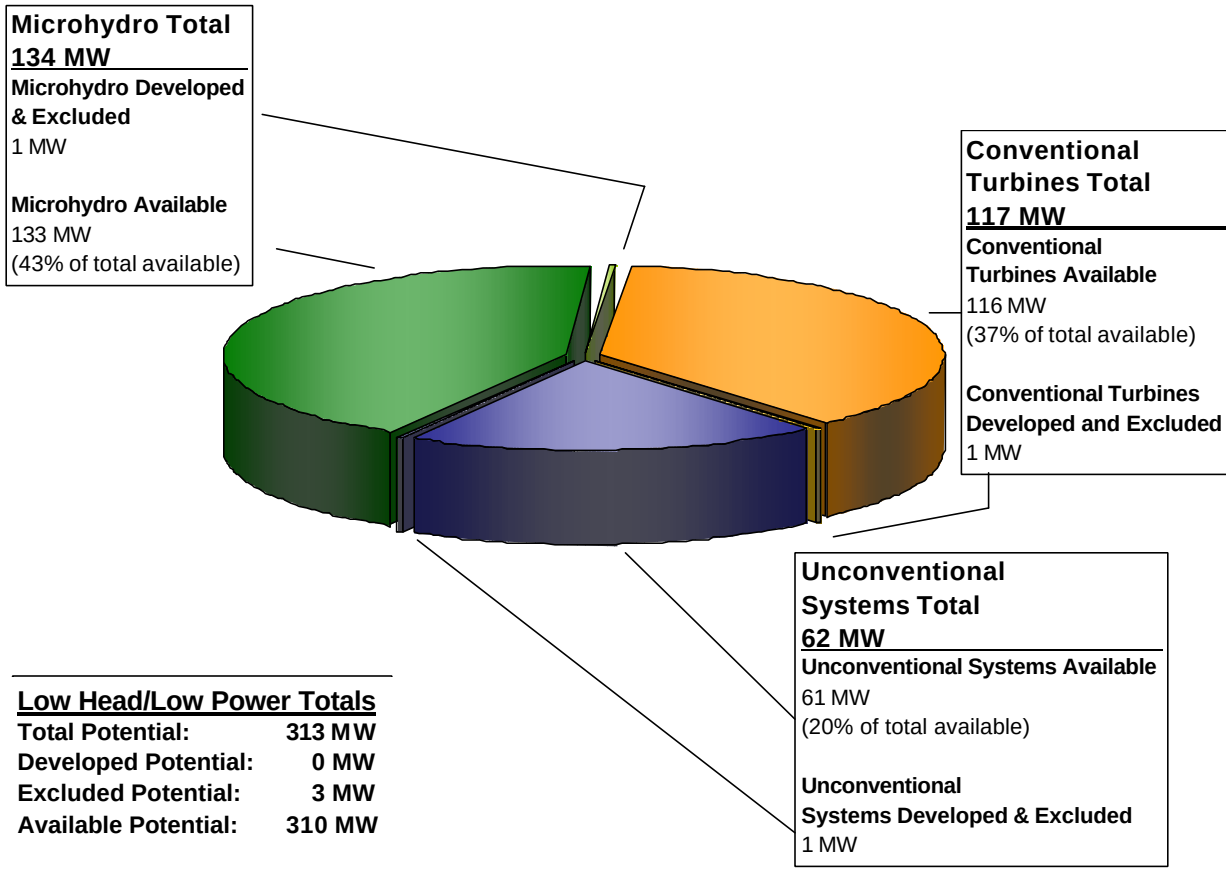


Figure B-69. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Indiana among three low head/low power hydropower technology classes.

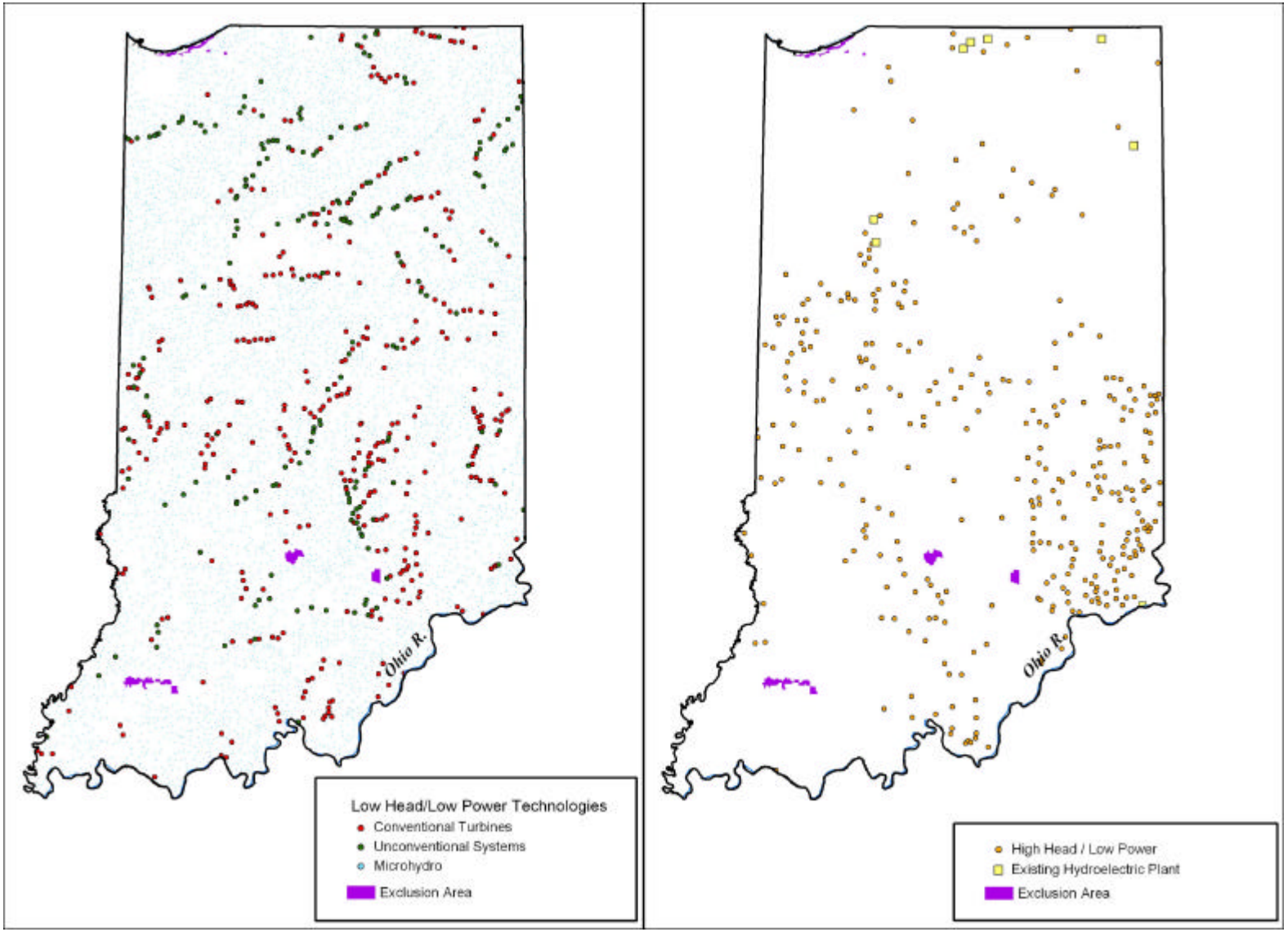


Figure B-70. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Indiana.

B.15 Iowa

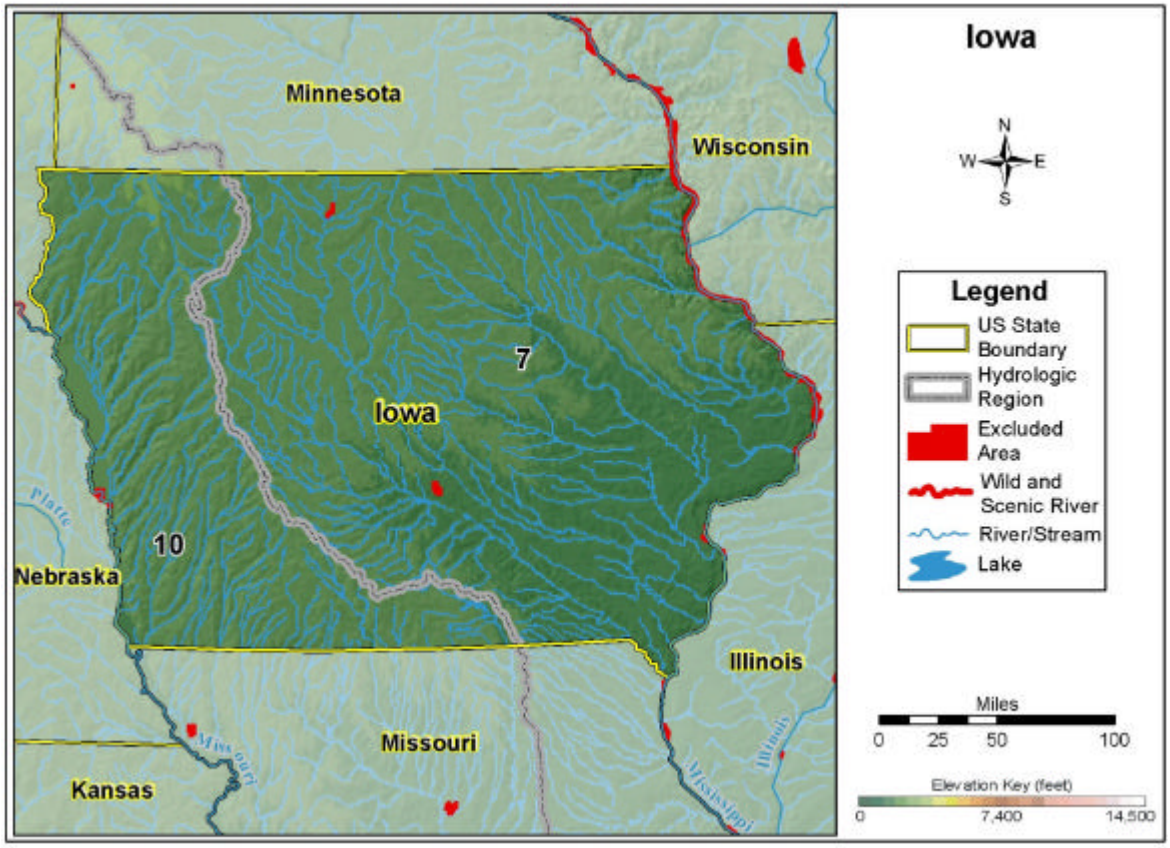


Figure B-71. Iowa.

Table B-15. Summary of results of water energy resource assessment of Iowa.

Annual Mean Power (MW)	Total	Developed[a]	Excluded	Available[a,b]
TOTAL POWER	**1,124**	**95**	**127**	**902**
TOTAL HIGH POWER	**578**	**94**	**123**	**361**
High Head/High Power	**40**	**40**	**0**	**0**
Low Head/High Power	**538**	**54**	**123**	**361**
TOTAL LOW POWER	**546**	**1**	**4**	**541**
High Head/Low Power	**49**	**0**	**0**	**49**
Low Head/Low Power	**497**	**1**	**4**	**492**
Conventional Turbine	185	**1**	1	**183**
Unconventional Systems	110	**0**	2	**108**
Microhydro	202	**0**	1	**201**

a. Developed high head/high power potential exceeded total potential in this power class probably because the developed power is made up of resources in other power classes. “Excess” developed power in the high head/high power class (52 MW) was rolled downward into the low head/high power power class.

b. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

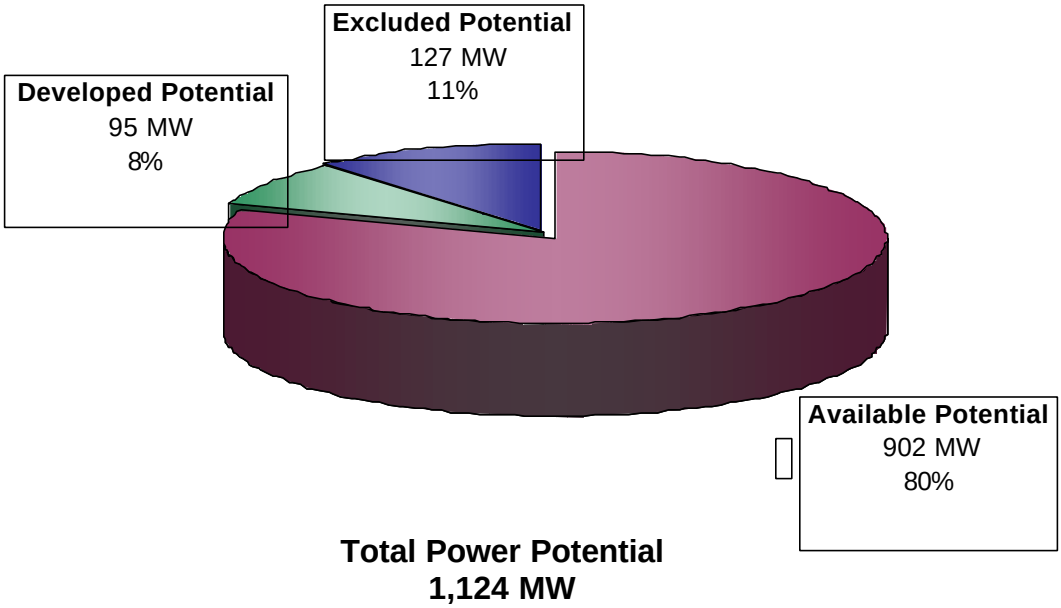


Figure B-72. Power category distribution of the total power potential (annual mean power) of water energy resources in Iowa.

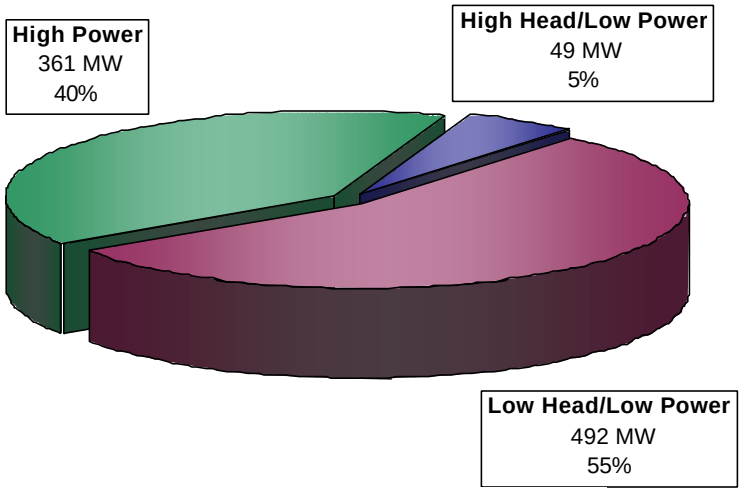


Figure B-73. Power class distribution of the available power potential (annual mean power) of water energy resources in Iowa.

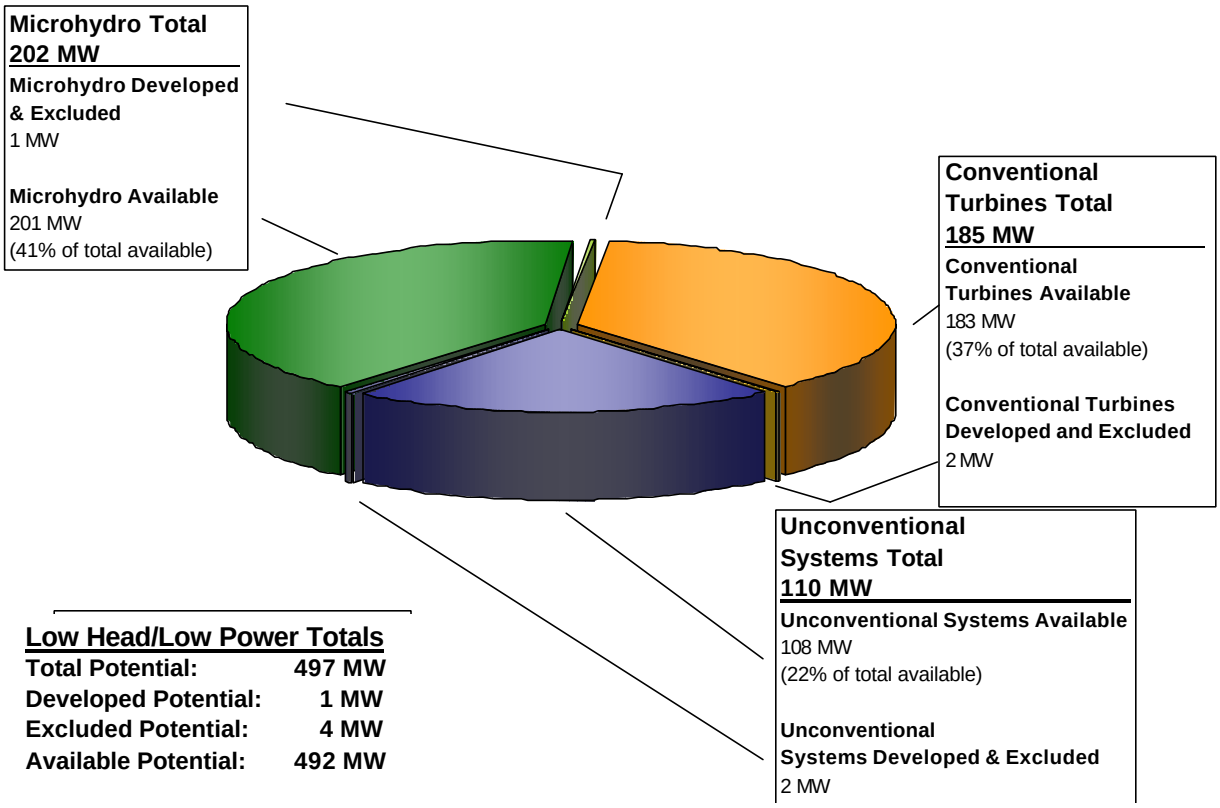


Figure B-74. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Iowa among three low head/low power hydropower technology classes.

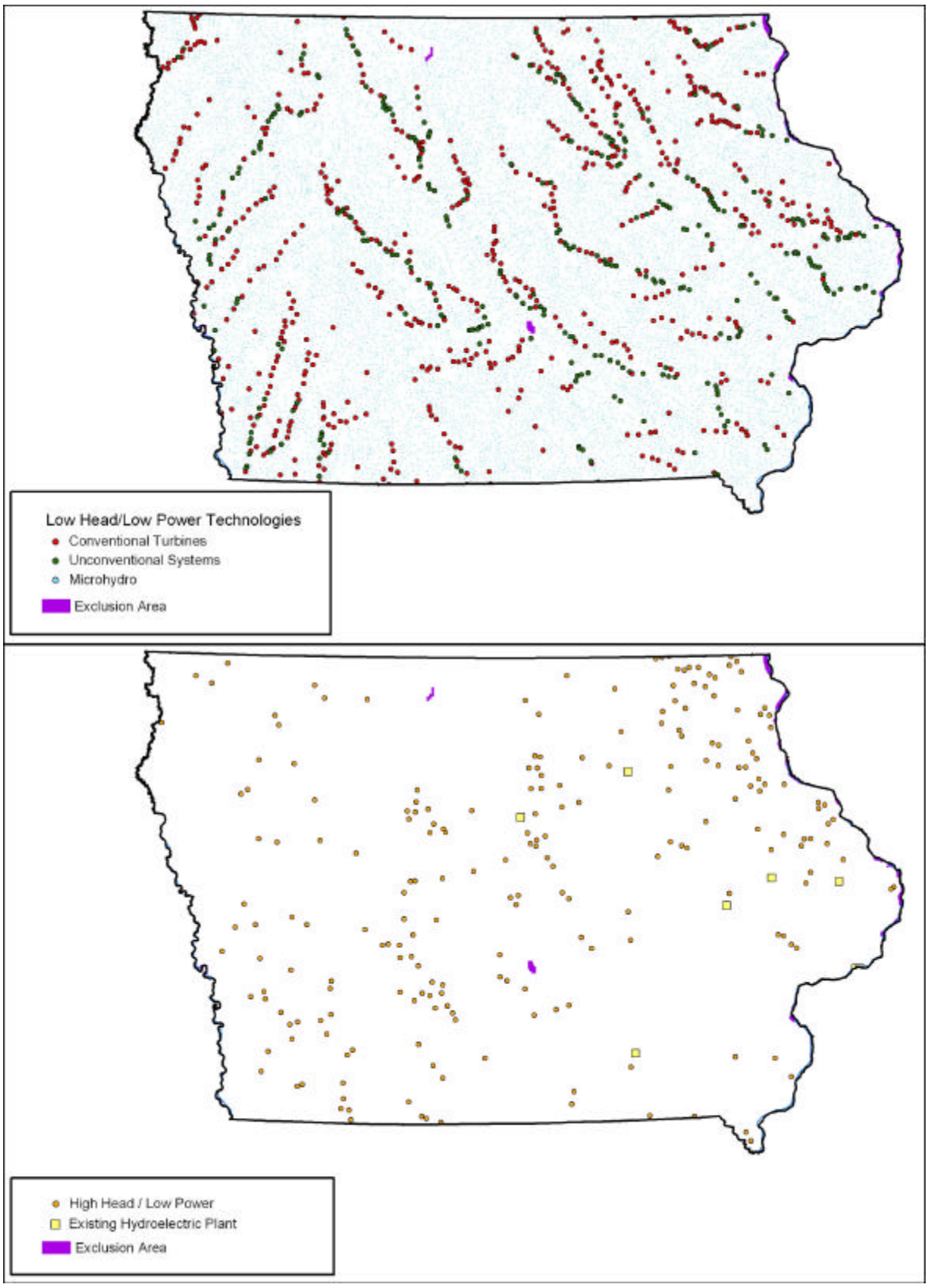


Figure B-75. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Iowa.

B.16 Kansas

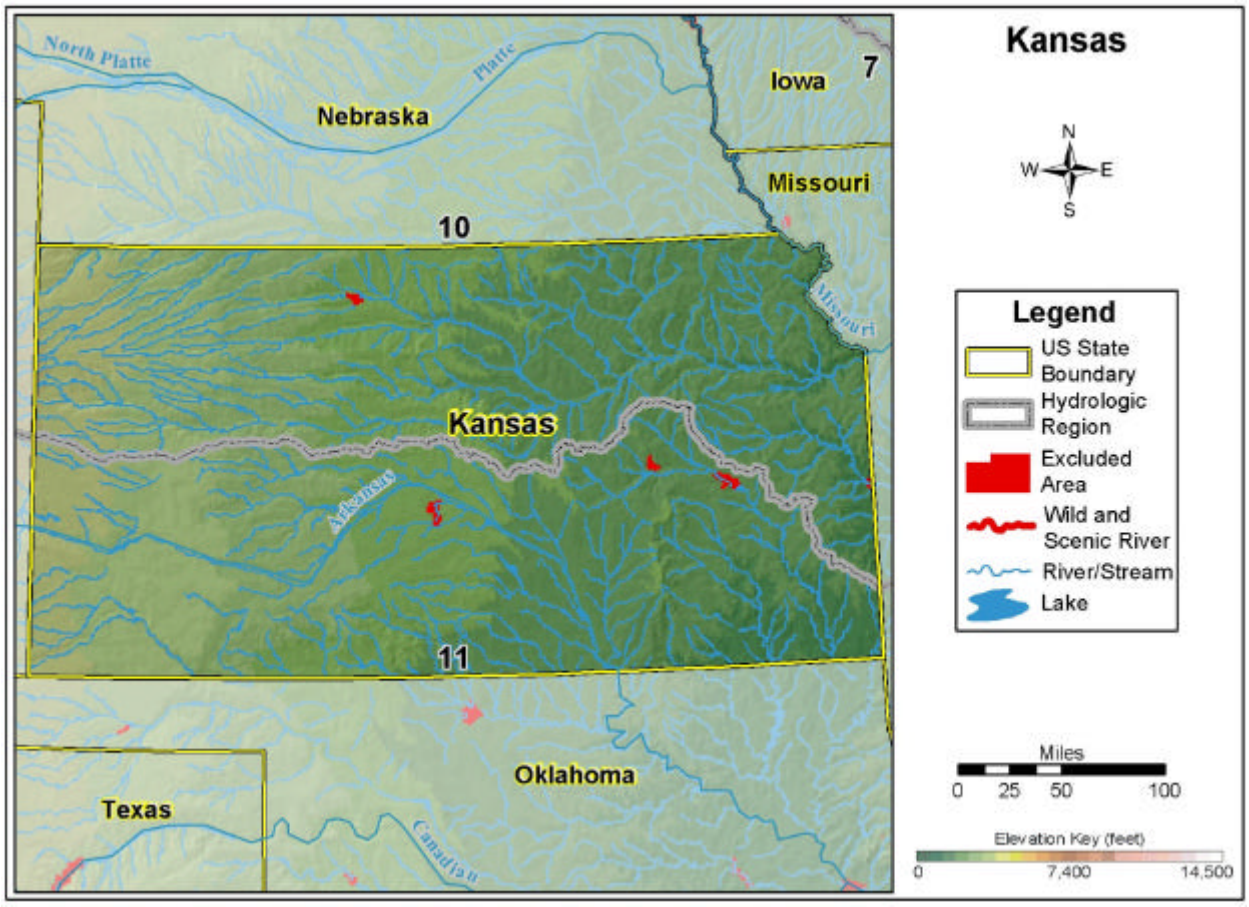


Figure B-76. Kansas.

Table B-16. Summary of results of water energy resource assessment of Kansas.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**989**	**1**	**3**	**985**
TOTAL HIGH POWER	**418**	**0**	**0**	**418**
High Head/High Power	**49**	**0**	**0**	**49**
Low Head/High Power	**369**	**0**	**0**	**369**
TOTAL LOW POWER	**571**	**1**	**3**	**567**
High Head/Low Power	**38**	**0**	**0**	**38**
Low Head/Low Power	**533**	**1**	**3**	**529**
Conventional Turbine	192	1	1	190
Unconventional Systems	81	0	1	80
Microhydro	260	0	1	259

a. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

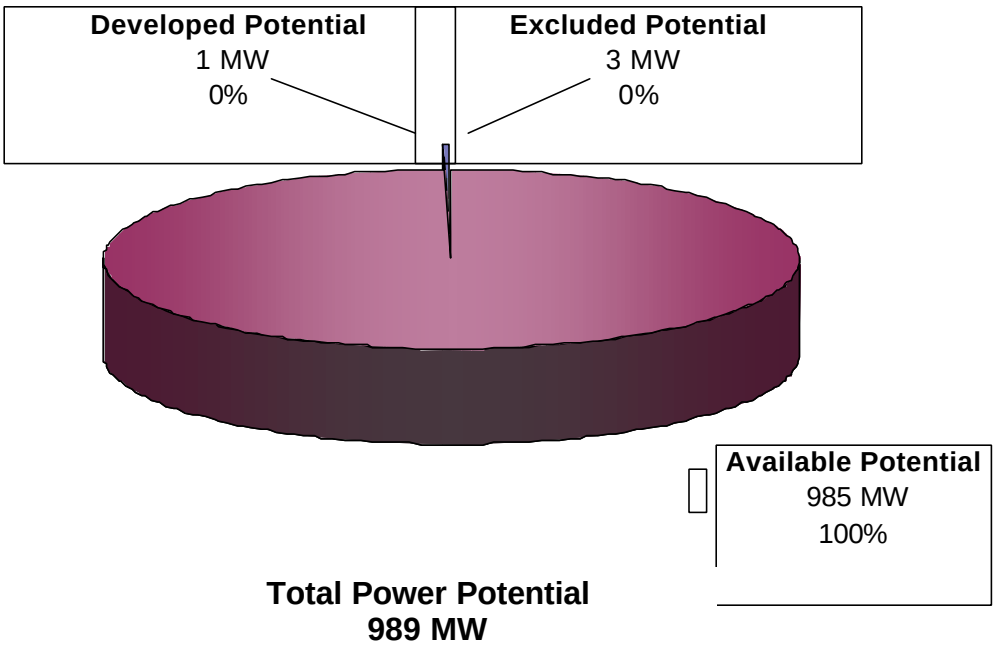


Figure B-77. Power category distribution of the total power potential (annual mean power) of water energy resources in Kansas.

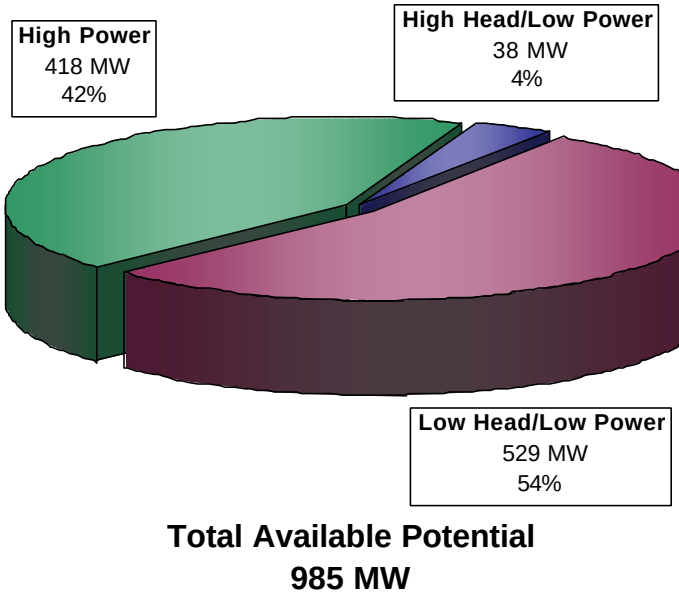


Figure B-78. Power class distribution of the available power potential (annual mean power) of water energy resources in Kansas.

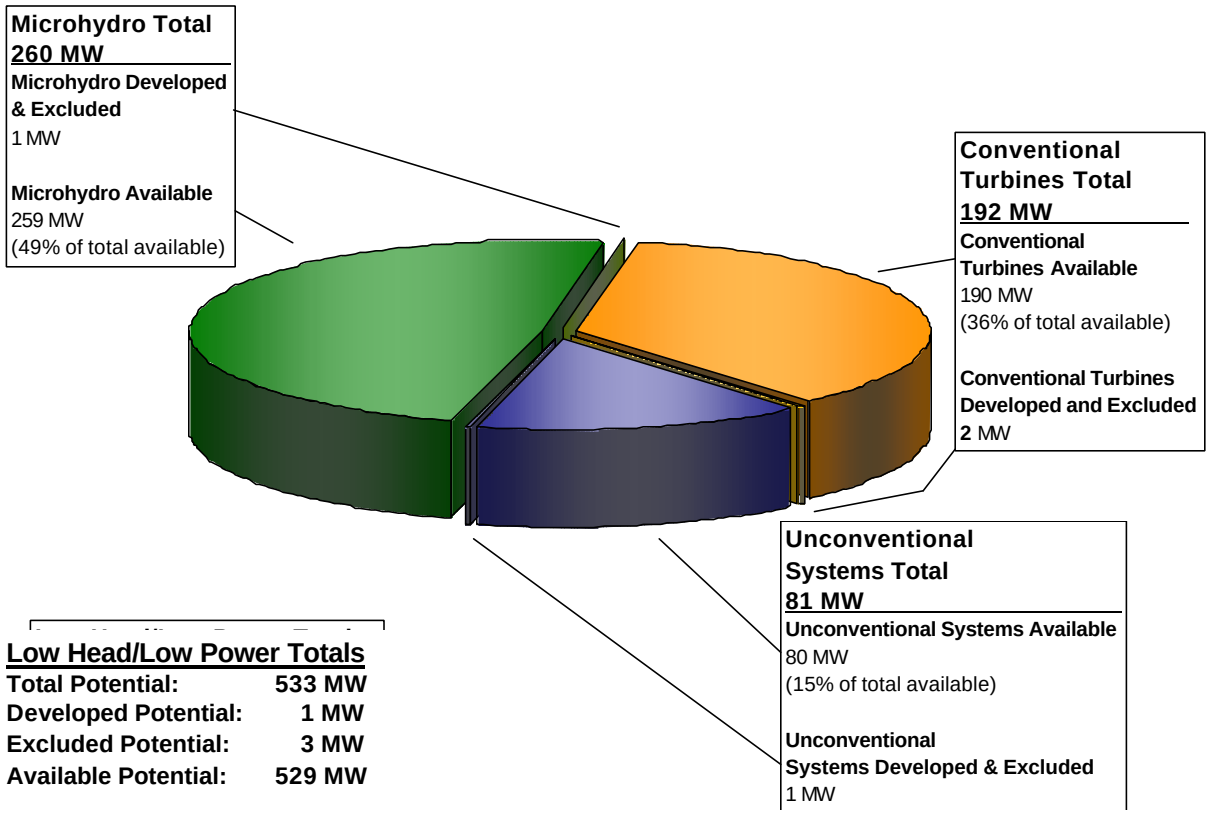


Figure B-79. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Kansas among three low head/low power hydropower technology classes.

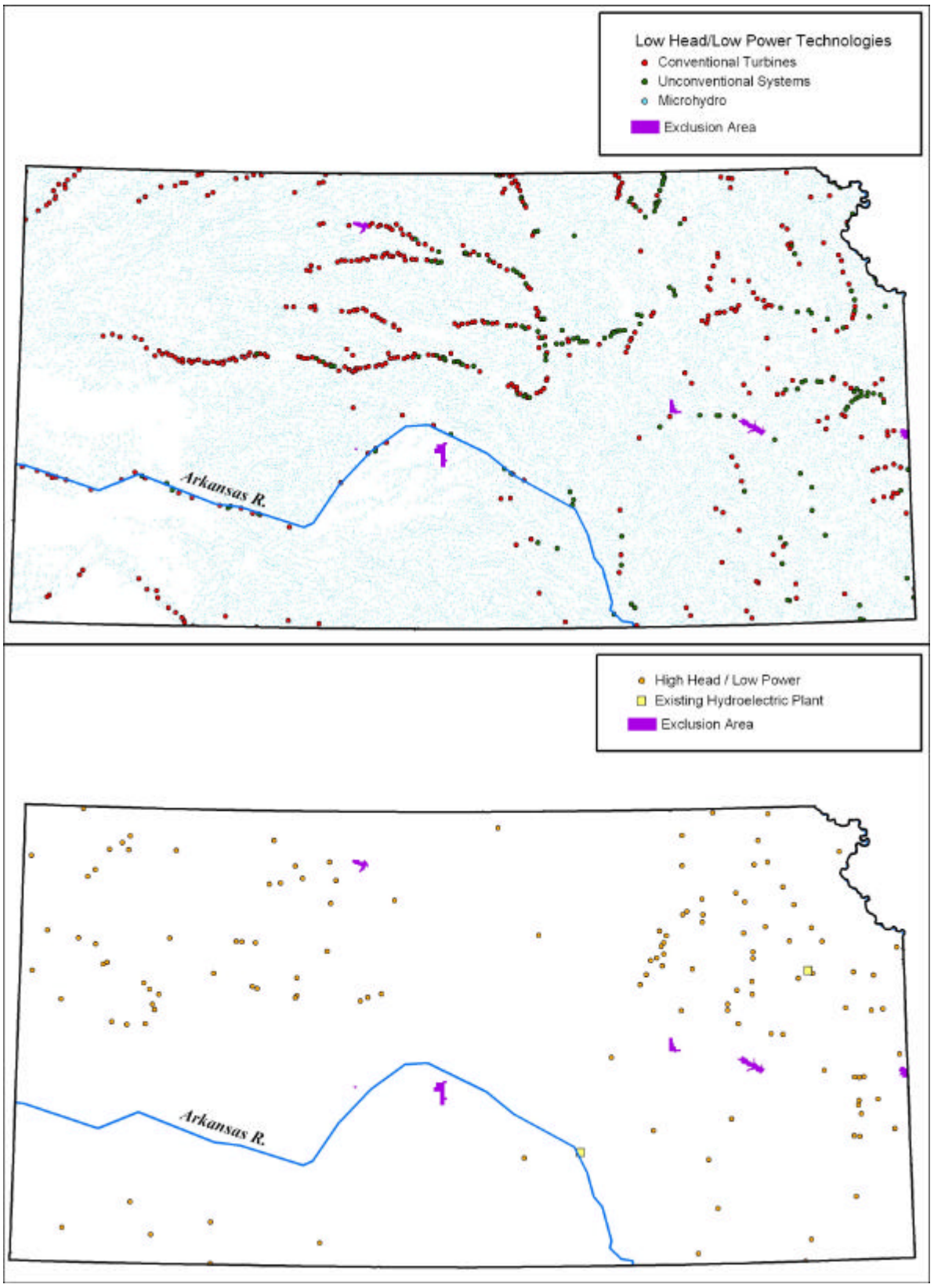


Figure B-80. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Kansas.

B.17 Kentucky

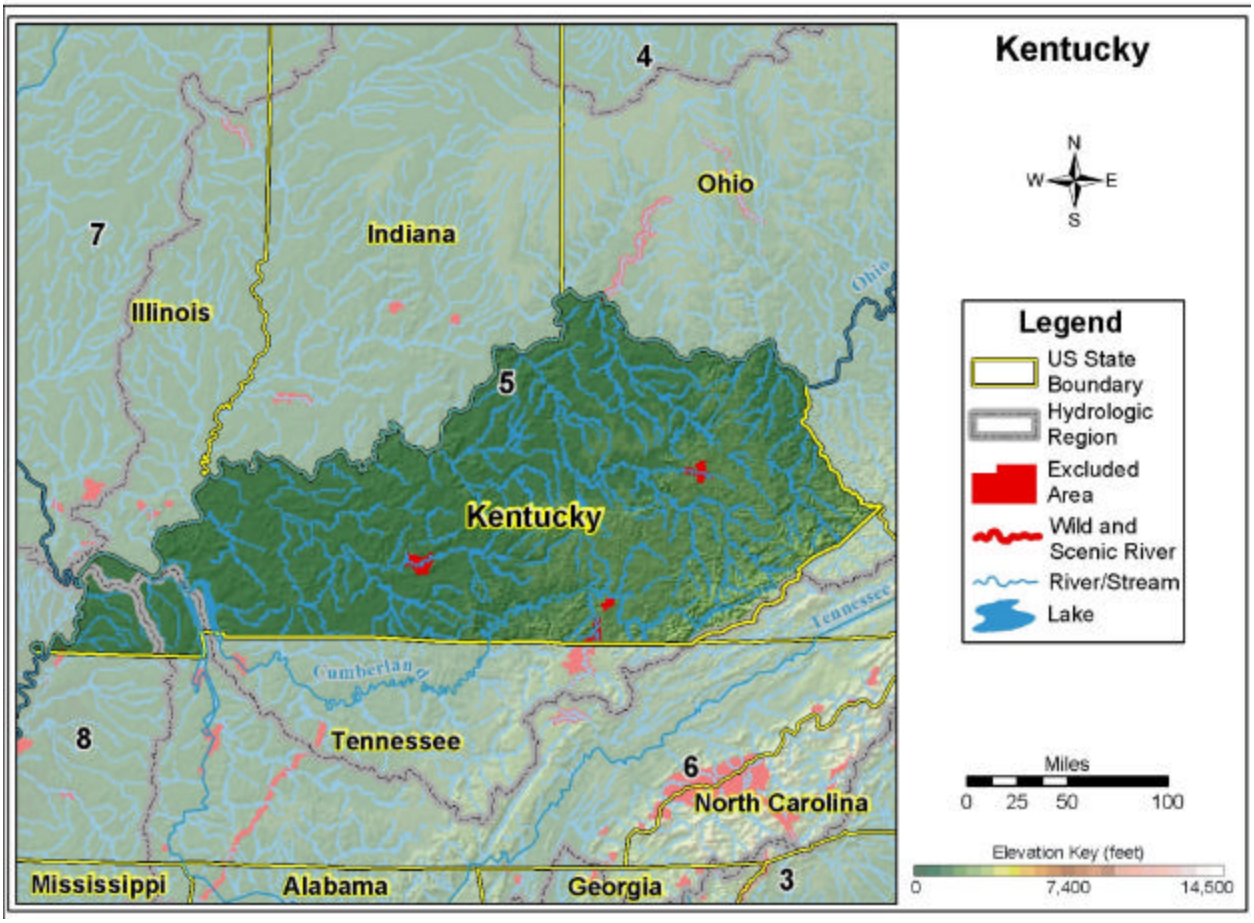


Figure B-81. Kentucky.

Table B-17. Summary of results of water energy resource assessment of Kentucky.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**4,116**	**383**	**46**	**3,687**
TOTAL HIGH POWER	**3,526**	**381**	**33**	**3,112**
High Head/High Power	**780**	**381**	**16**	**383**
Low Head/High Power	**2,746**	**0**	**17**	**2,729**
TOTAL LOW POWER	**590**	**2**	**13**	**575**
High Head/Low Power	**204**	**0**	**7**	**197**
Low Head/Low Power	**386**	**2**	**6**	**378**
Conventional Turbine	138	2	2	134
Unconventional Systems	51	0	2	49
Microhydro	197	0	2	195

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

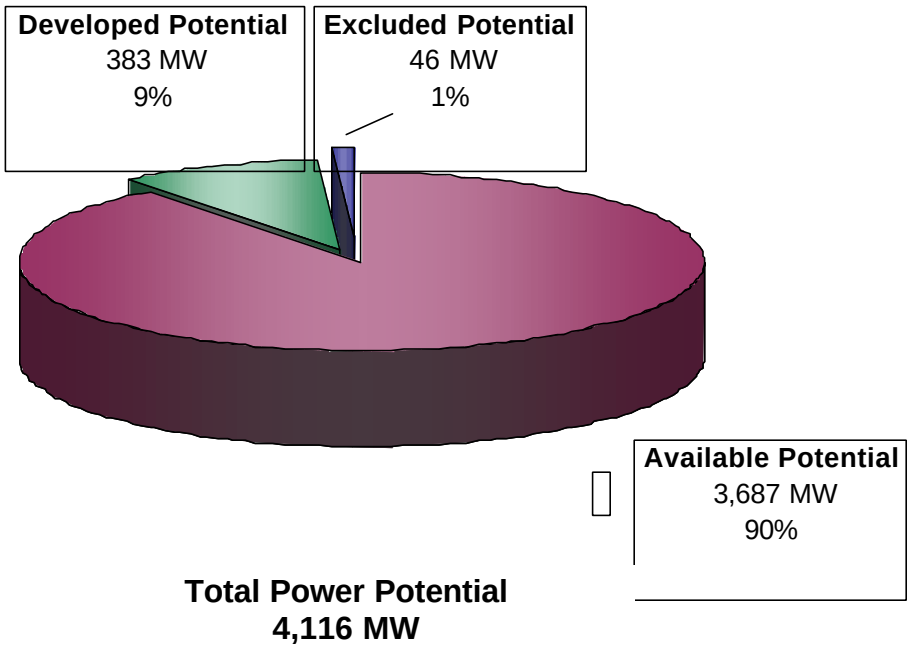


Figure B-82. Power category distribution of the total power potential (annual mean power) of water energy resources in Kentucky.

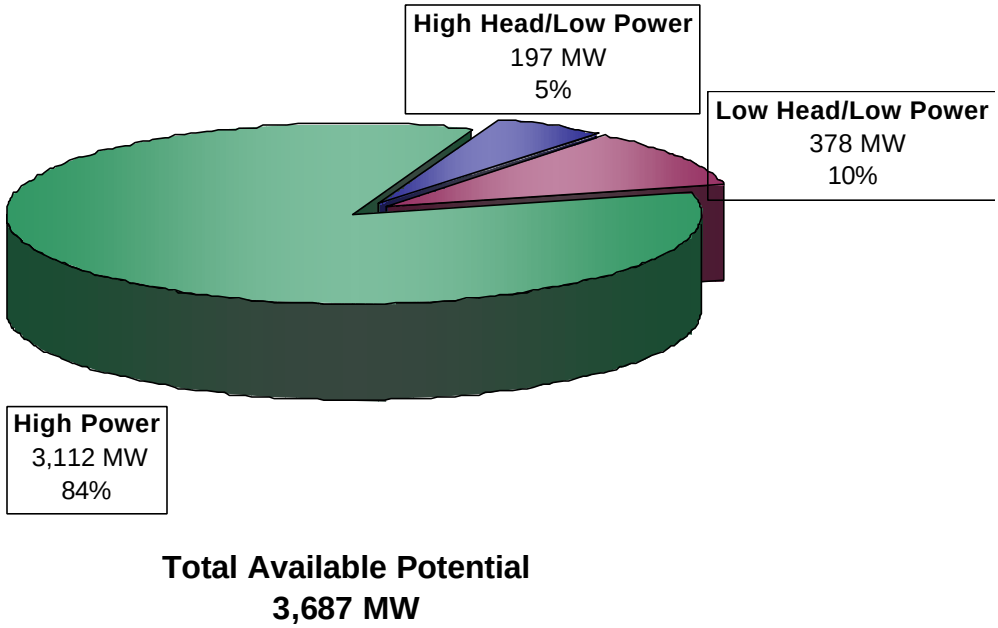


Figure B-83. Power class distribution of the available power potential (annual mean power) of water energy resources in Kentucky.

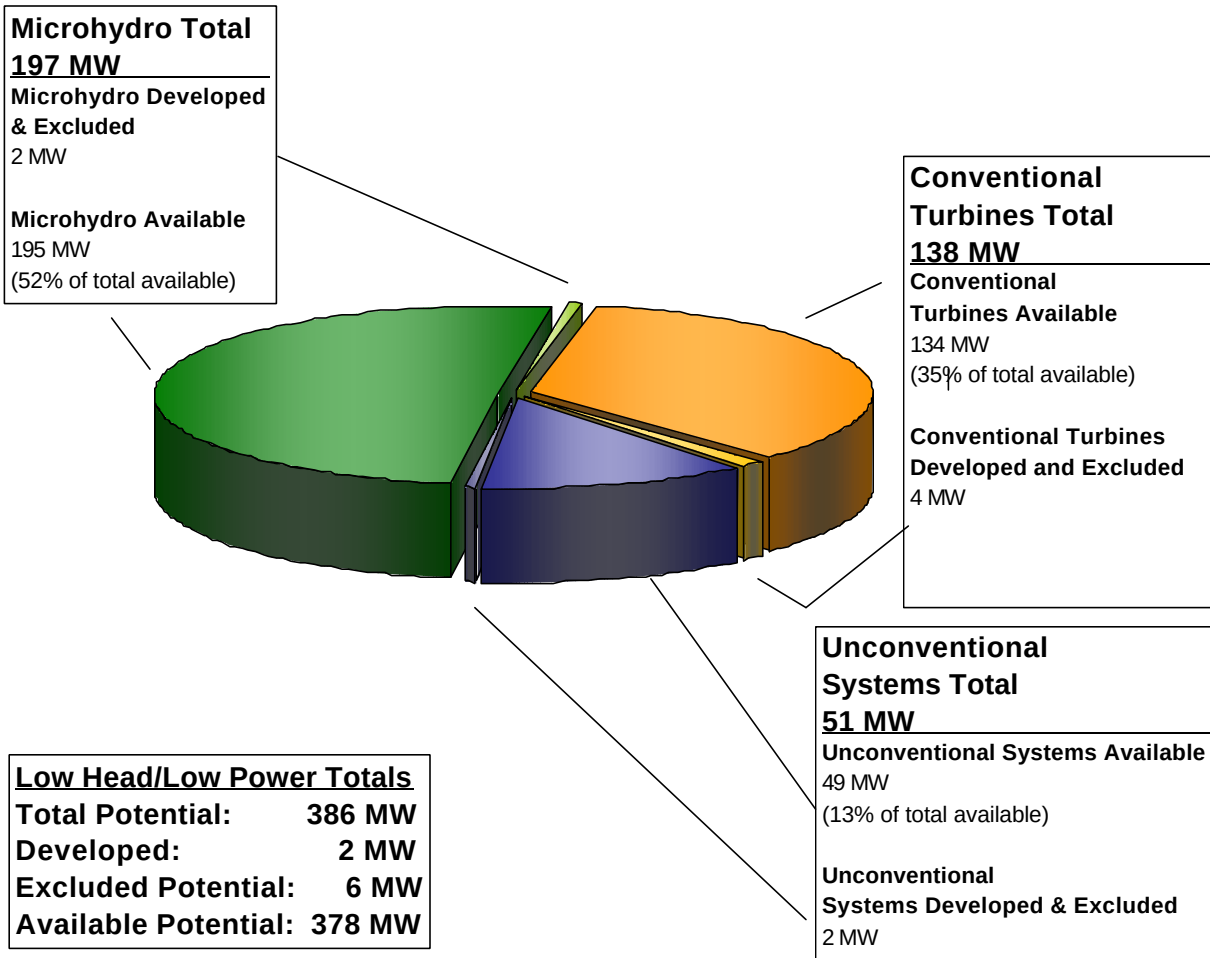


Figure B-84. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Kentucky among three low head/low power hydropower technology classes.

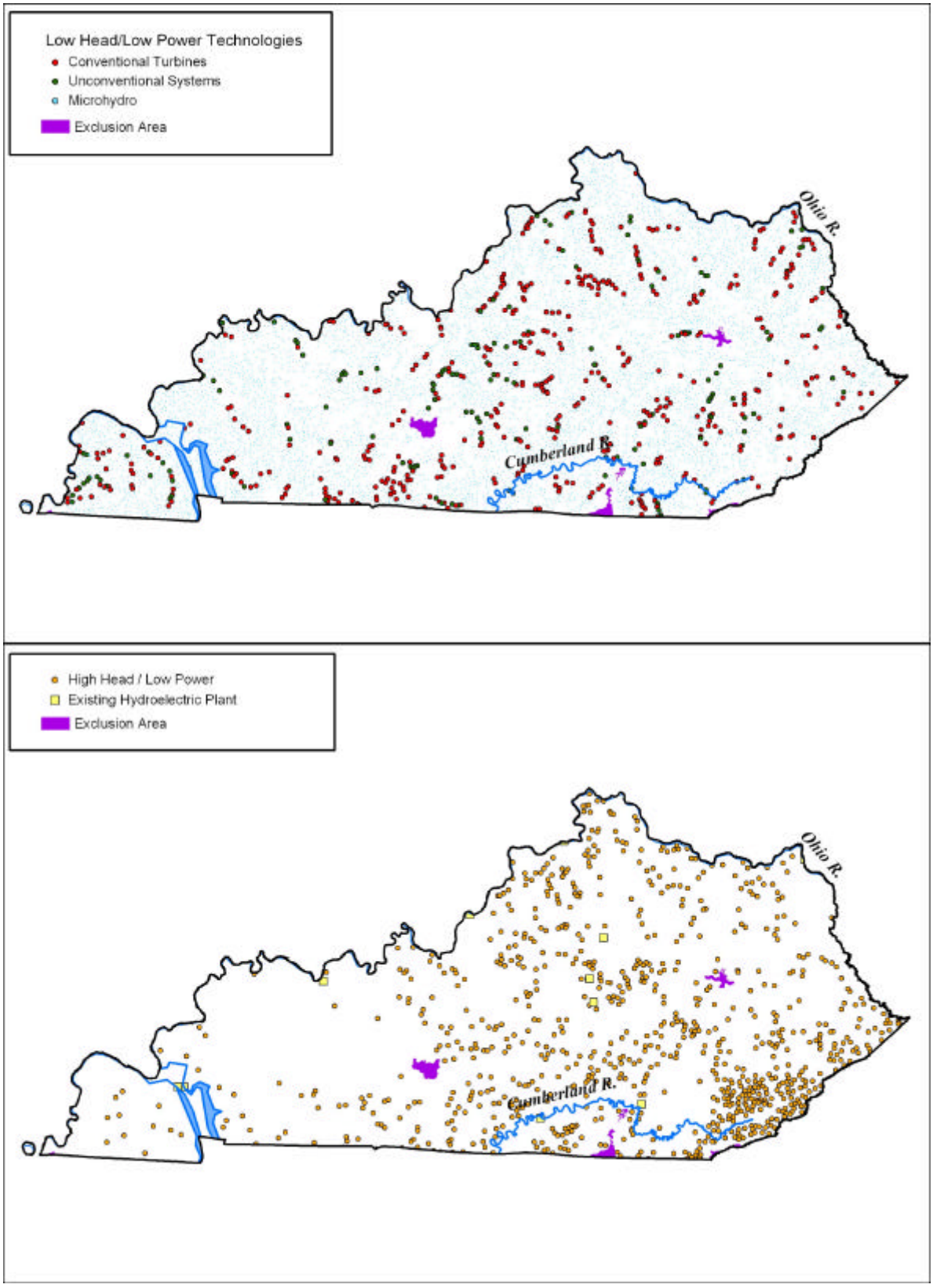


Figure B-85. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Kentucky.

B.18 Louisiana

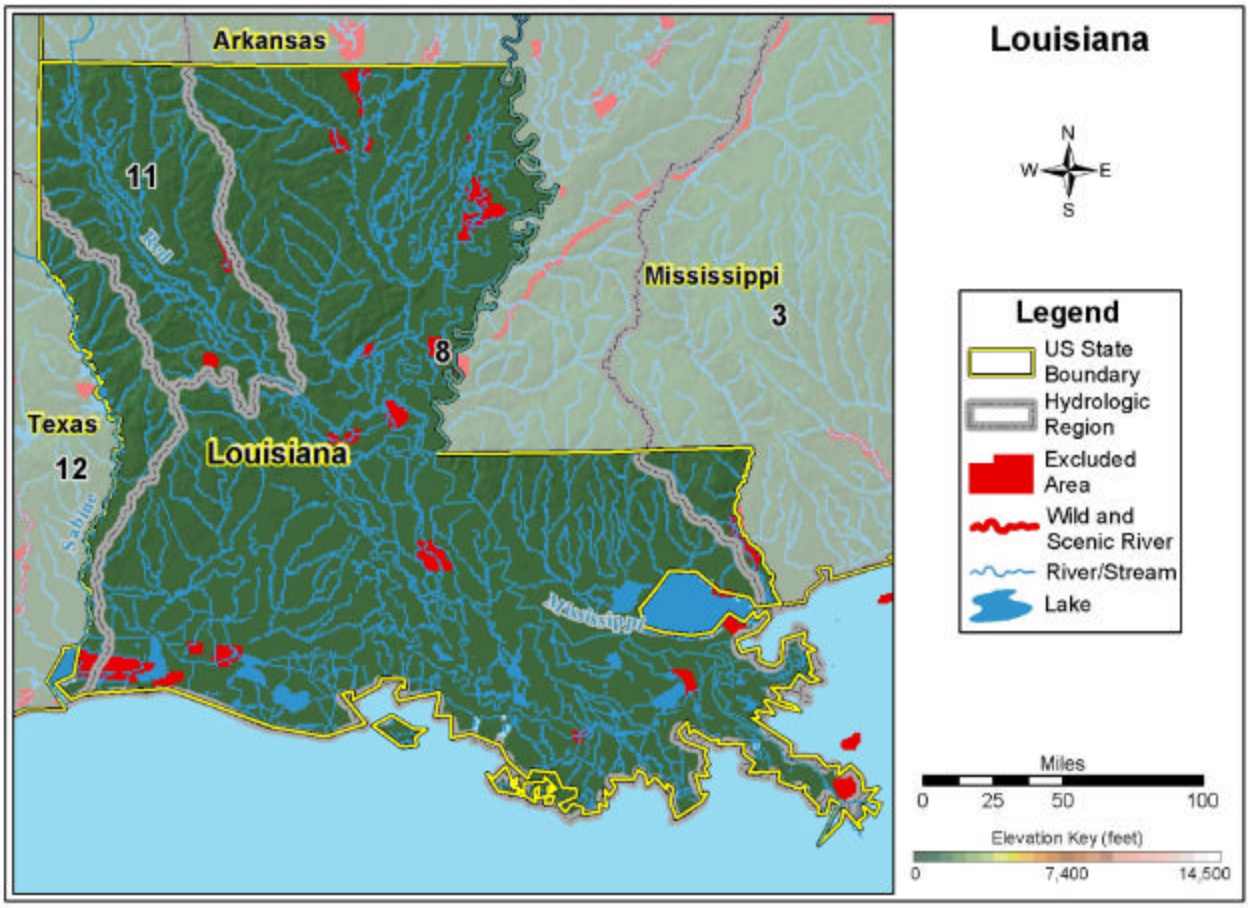


Figure B-86. Louisiana.

Table B-18. Summary of results of water energy resource assessment of Louisiana.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**2,236**	**89**	**129**	**2,018**
TOTAL HIGH POWER	**1,974**	**89**	**121**	**1,764**
High Head/High Power	**10**	**0**	**0**	**10**
Low Head/High Power	**1,964**	**89**	**121**	**1,754**
TOTAL LOW POWER	**262**	**0**	**8**	**254**
High Head/Low Power	**11**	**0**	**0**	**11**
Low Head/Low Power	**251**	**0**	**8**	**243**
Conventional Turbine	69	0	1	68
Unconventional Systems	77	0	5	72
Microhydro	105	0	2	103

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

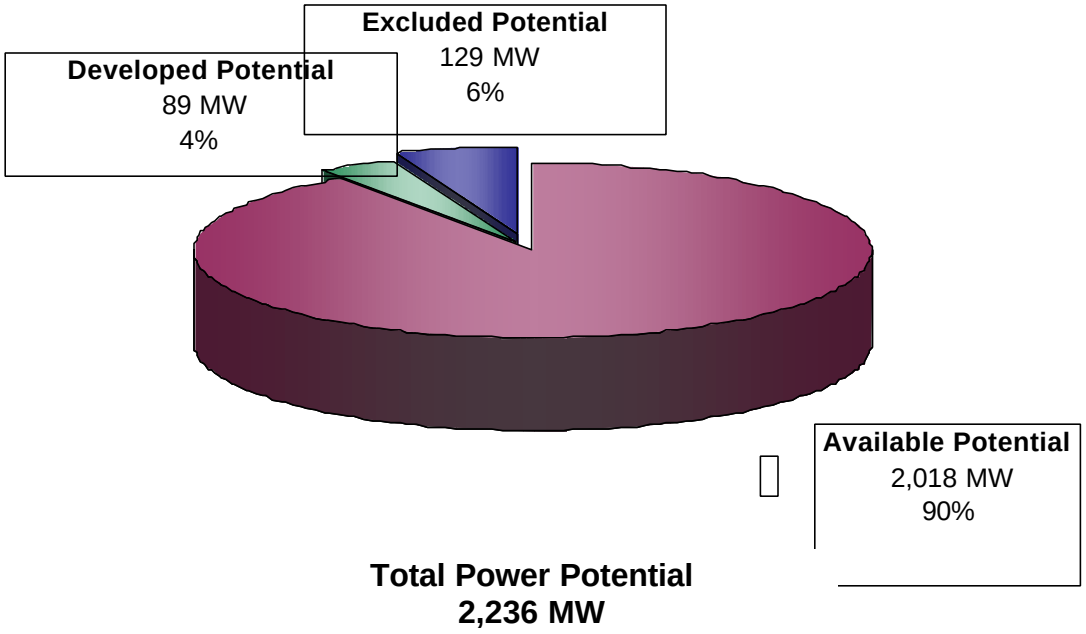


Figure B-87. Power category distribution of the total power potential (annual mean power) of water energy resources in Louisiana.

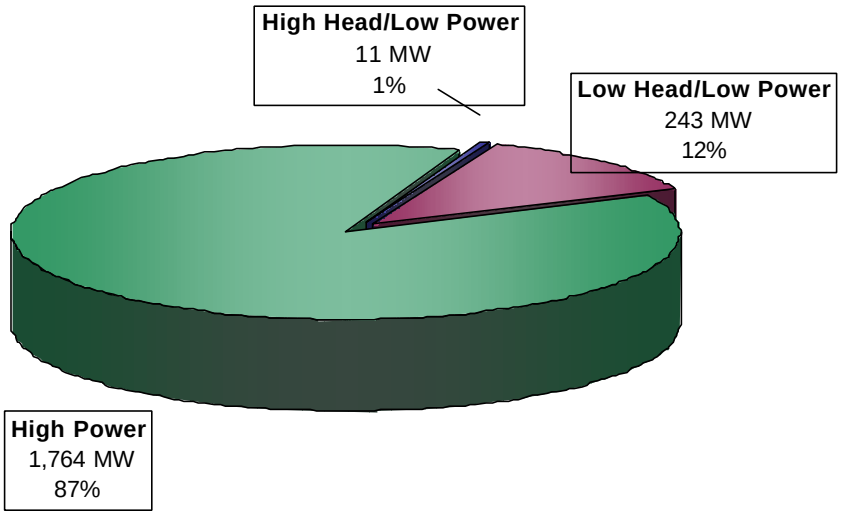


Figure B-88. Power class distribution of the available power potential (annual mean power) of water energy resources in Louisiana.

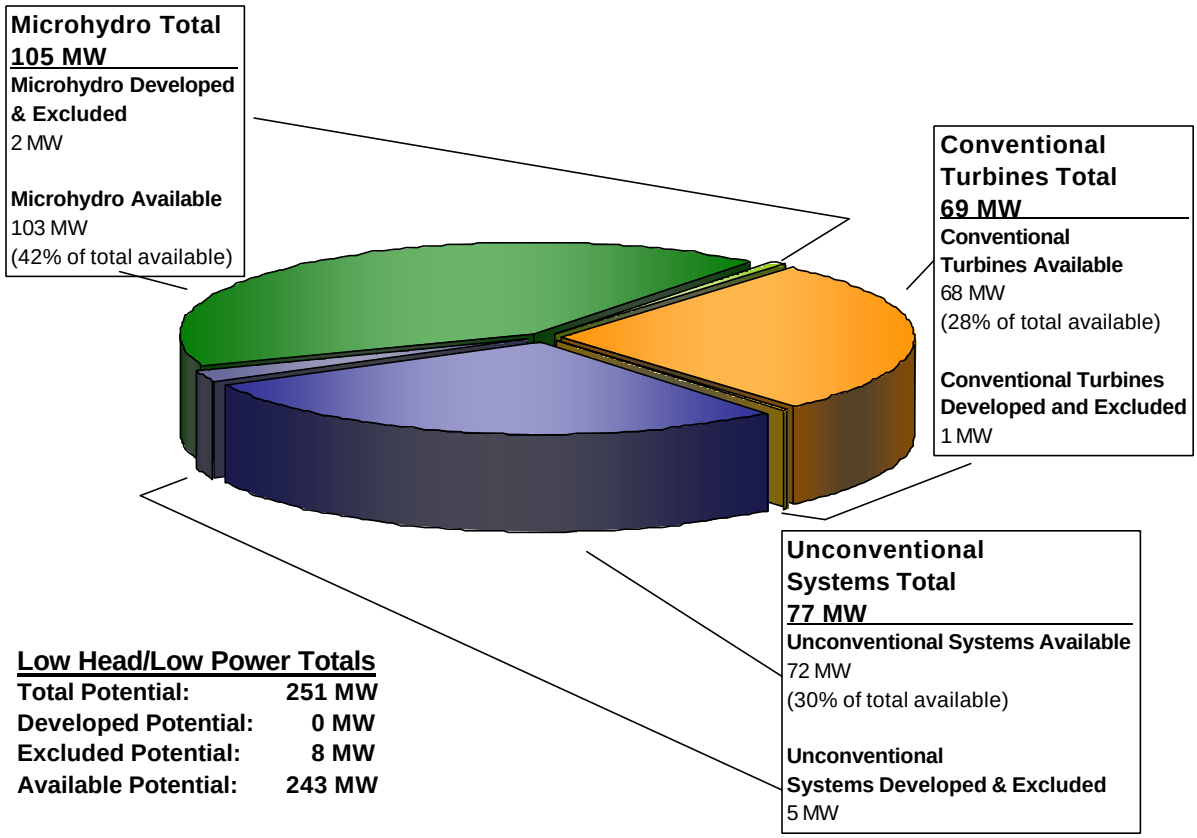


Figure B-89. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Louisiana among three low head/low power hydropower technology classes.

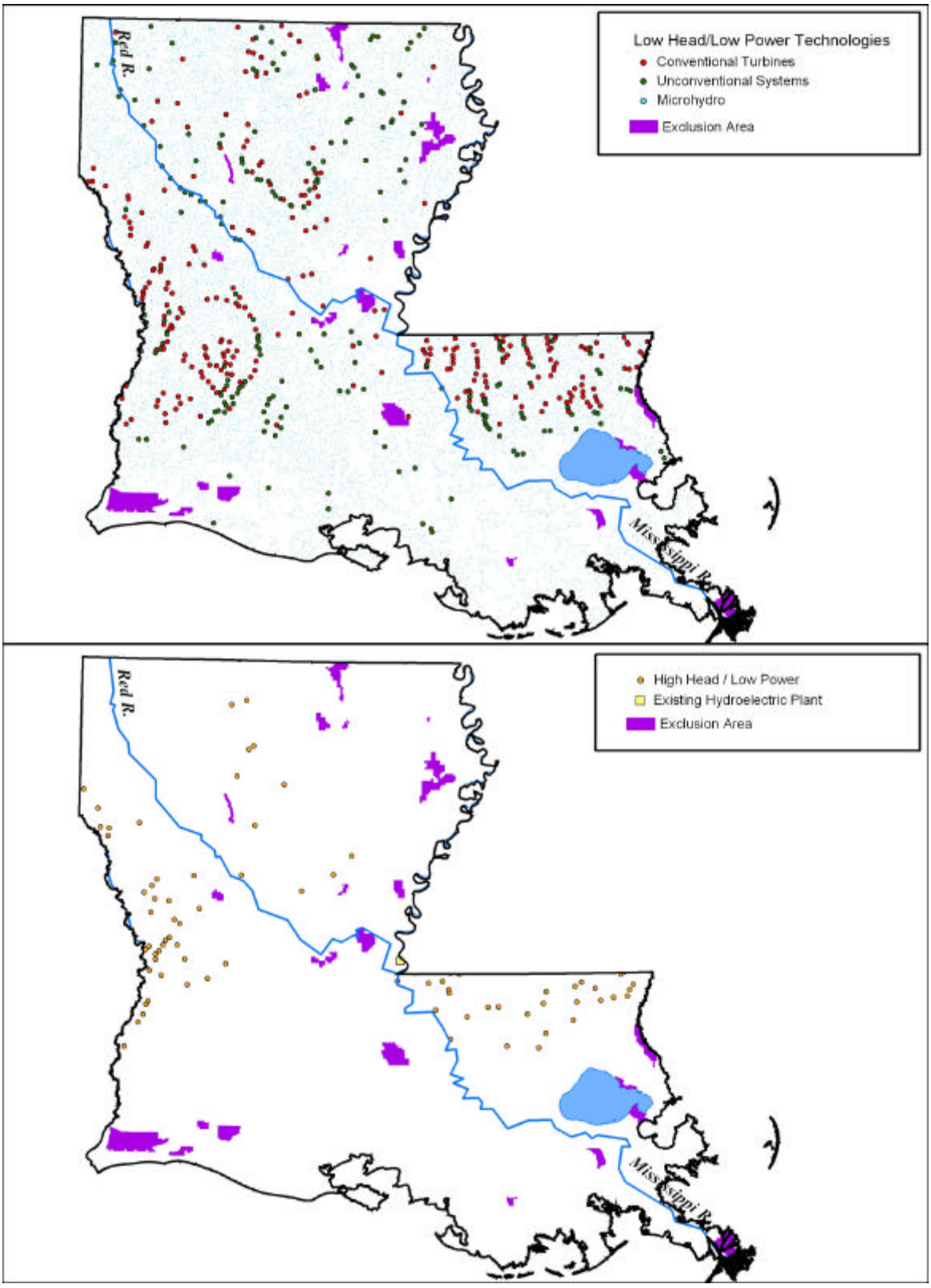


Figure B-90. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Louisiana.

B.19 Maine

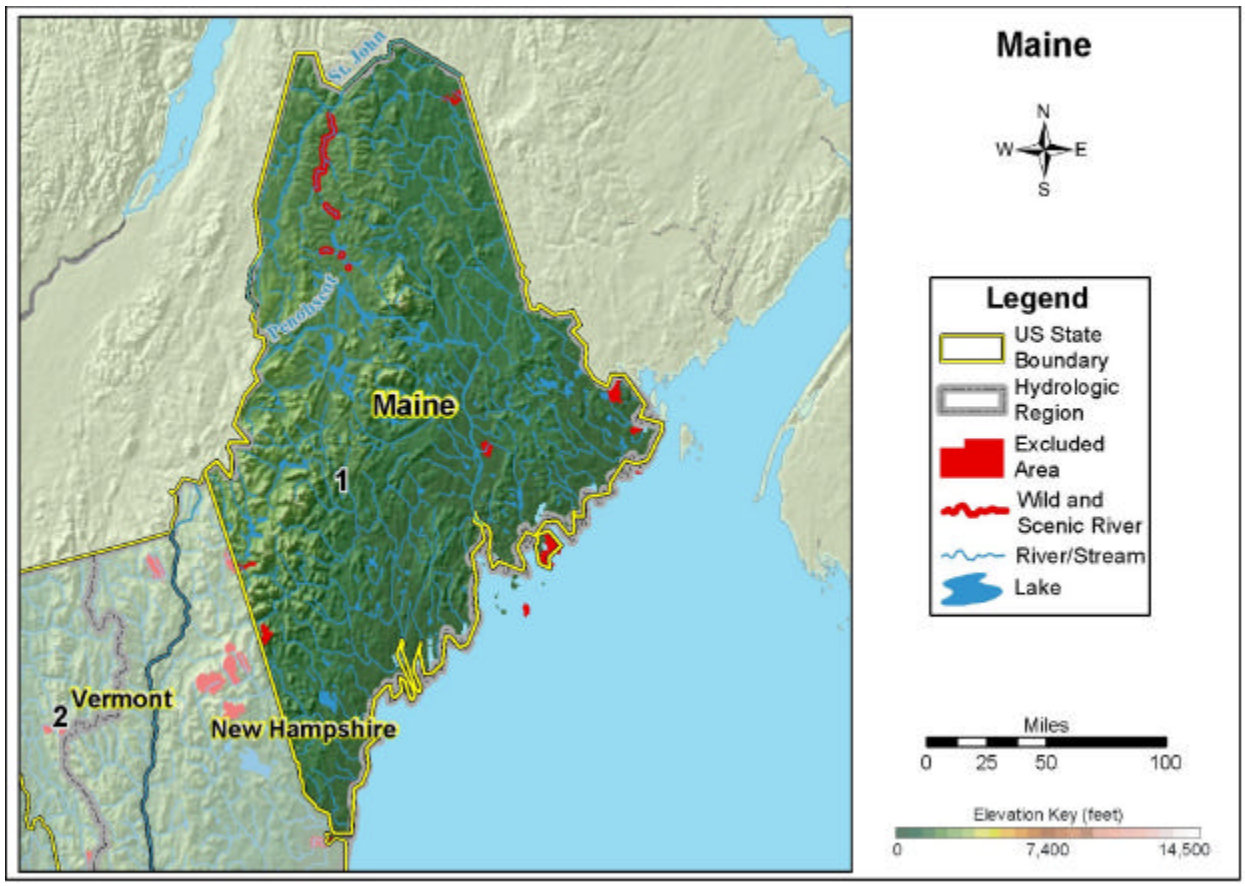


Figure B-91. Maine.

Table B-19. Summary of results of water energy resource assessment of Maine.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**2,766**	**432**	**71**	**2,263**
TOTAL HIGH POWER	**1,968**	**414**	**43**	**1,511**
High Head/High Power	**1,353**	**301**	**26**	**1,026**
Low Head/High Power	**615**	**113**	**17**	**485**
TOTAL LOW POWER	**798**	**18**	**28**	**752**
High Head/Low Power	**488**	**5**	**16**	**467**
Low Head/Low Power	**310**	**13**	**12**	**285**
Conventional Turbine	119	12	3	104
Unconventional Systems	44	0	5	39
Microhydro	147	1	4	142

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

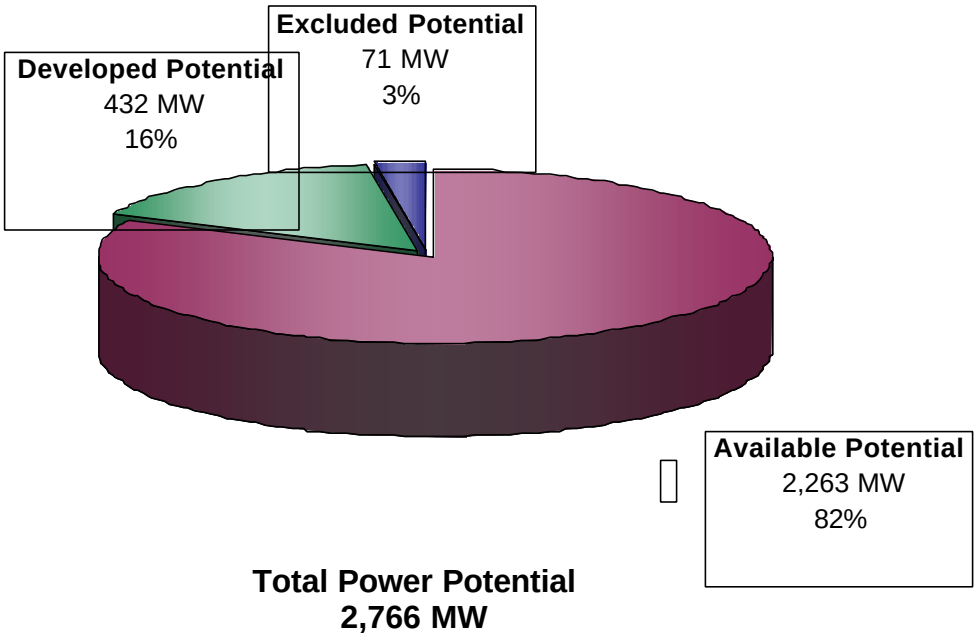


Figure B-92. Power category distribution of the total power potential (annual mean power) of water energy resources in Maine.

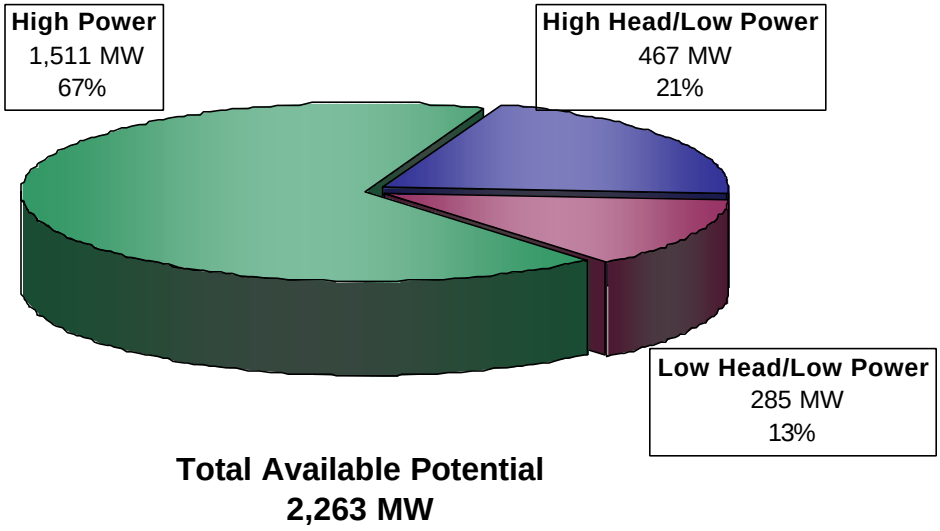


Figure B-93. Power class distribution of the available power potential (annual mean power) of water energy resources in Maine.

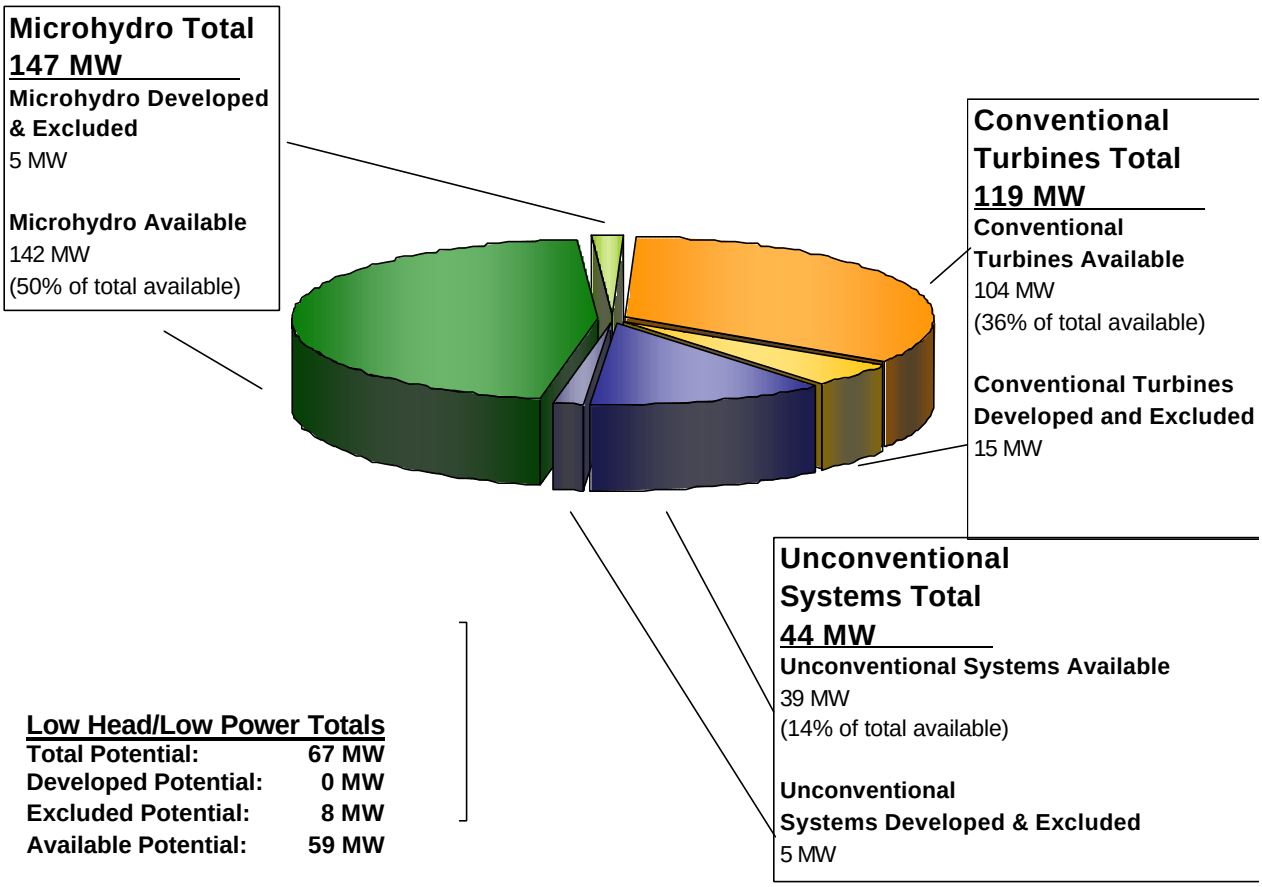


Figure B-94. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Maine among three low head/low power hydropower technology classes.

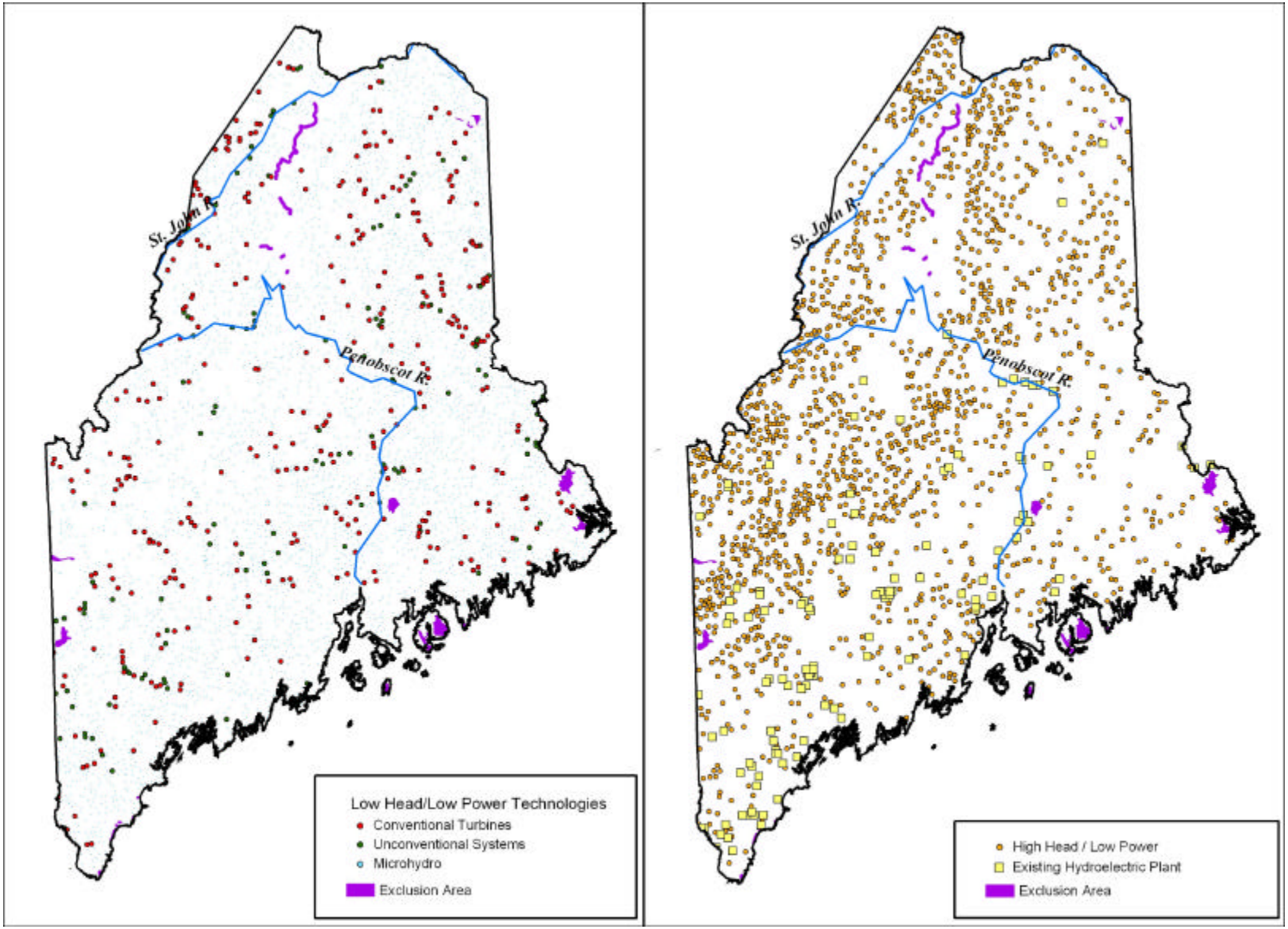


Figure B-95. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Maine.

B.20 Maryland

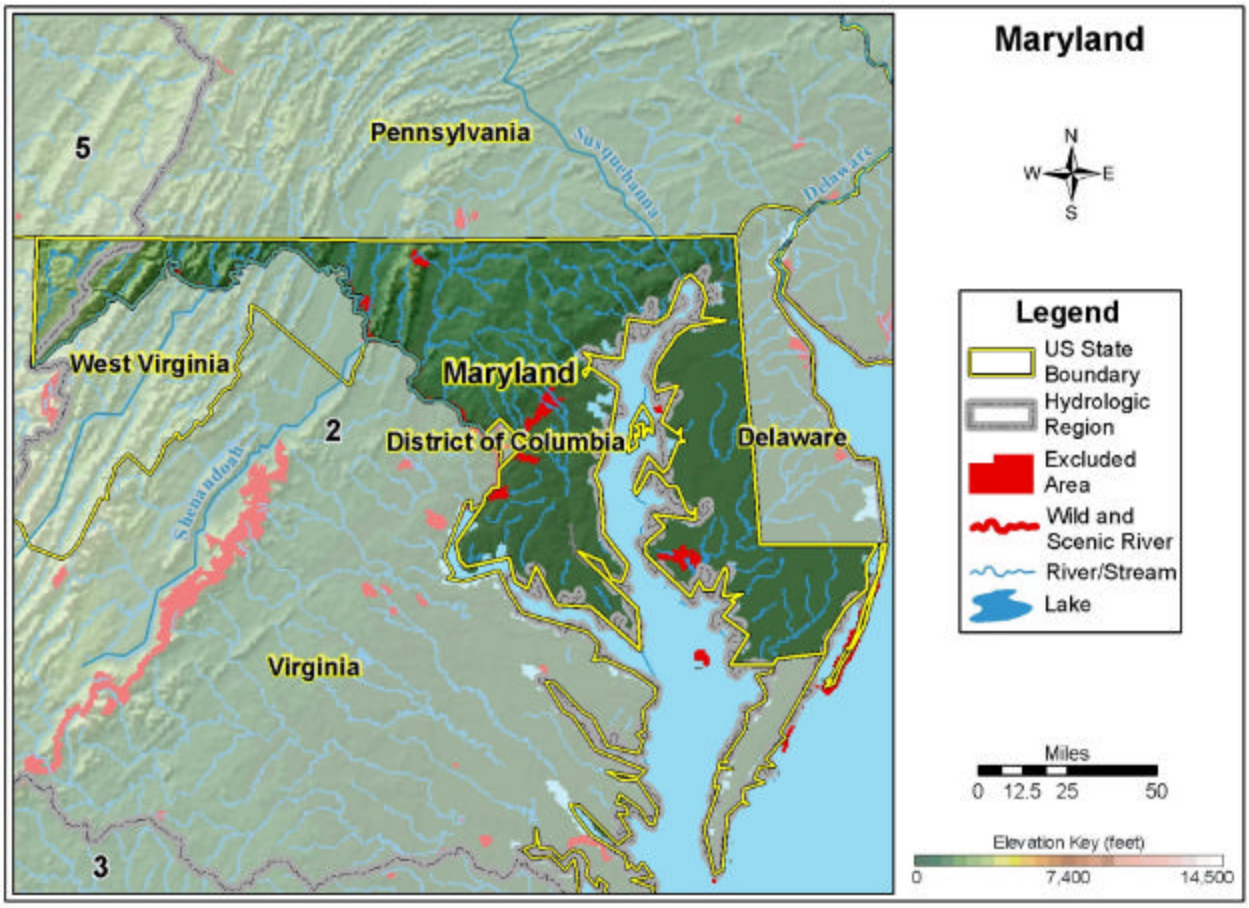


Figure B-96. Maryland.

Table B-20. Summary of results of water energy resource assessment of Maryland.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**845**	**203**	**298**	**344**
TOTAL HIGH POWER	**695**	**202**	**282**	**211**
High Head/High Power	**521**	**202**	**145**	**174**
Low Head/High Power	**174**	**0**	**137**	**37**
TOTAL LOW POWER	**150**	**1**	**16**	**133**
High Head/Low Power	**83**	**1**	**8**	**74**
Low Head/Low Power	**67**	**0**	**8**	**59**
Conventional Turbine	26	0	5	21
Unconventional Systems	4	0	1	3
Microhydro	37	0	2	35

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

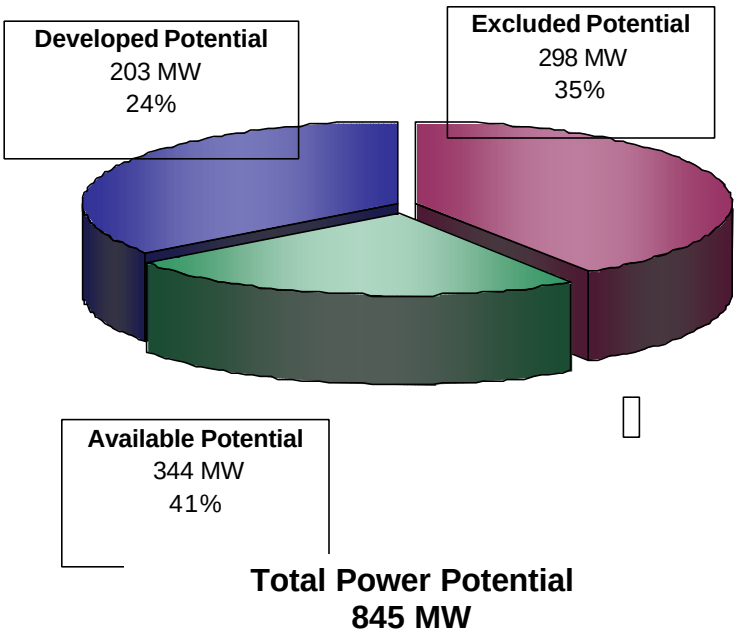


Figure B-97. Power category distribution of the total power potential (annual mean power) of water energy resources in Maryland.

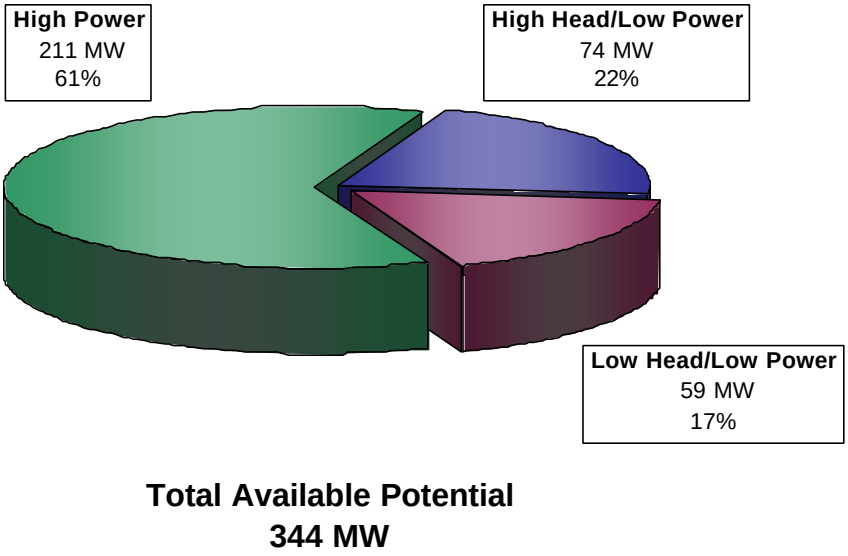


Figure B-98. Power class distribution of the available power potential (annual mean power) of water energy resources in Maryland.

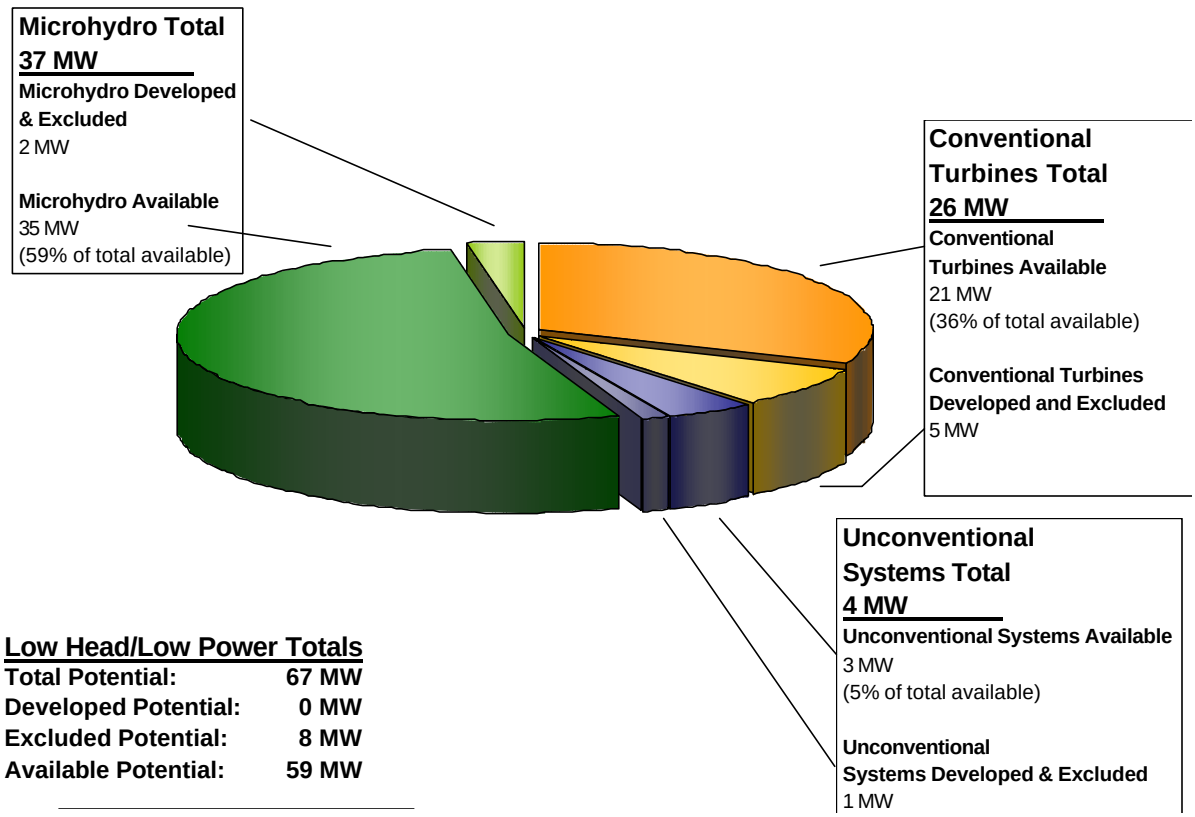


Figure B-99. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Maryland among three low head/low power hydropower technology classes.

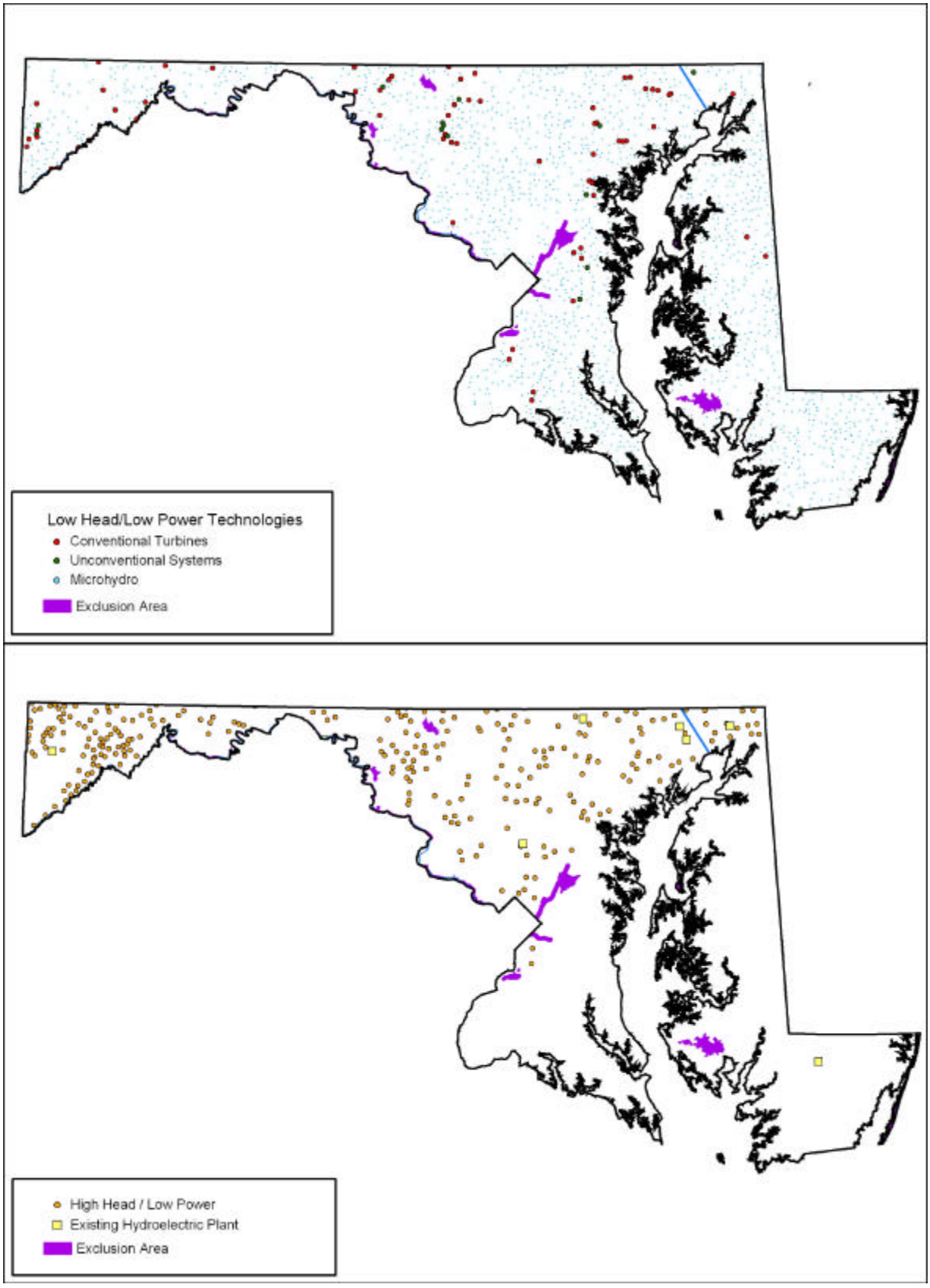


Figure B-100. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Maryland.

B.21 Massachusetts

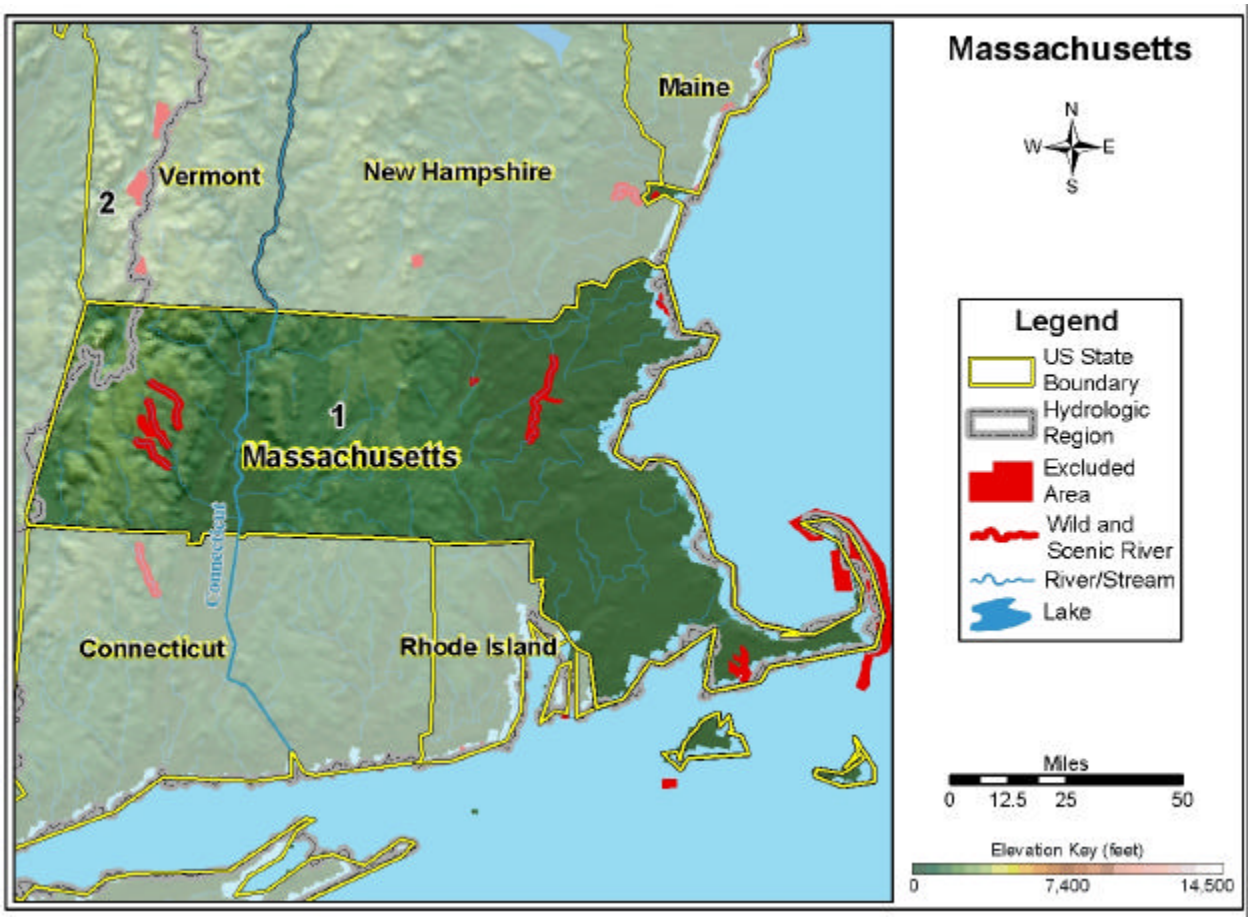


Figure B-101. Massachusetts.

Table B-21. Summary of results of water energy resource assessment of Massachusetts.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**675**	**126**	**29**	**520**
TOTAL HIGH POWER	**478**	**109**	**11**	**358**
High Head/High Power	**377**	**106**	**11**	**260**
Low Head/High Power	**101**	**3**	**0**	**98**
TOTAL LOW POWER	**197**	**17**	**18**	**162**
High Head/Low Power	**127**	**10**	**15**	**102**
Low Head/Low Power	**70**	**7**	**3**	**60**
Conventional Turbine	28	6	2	20
Unconventional Systems	6	0	0	6
Microhydro	36	1	1	34

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

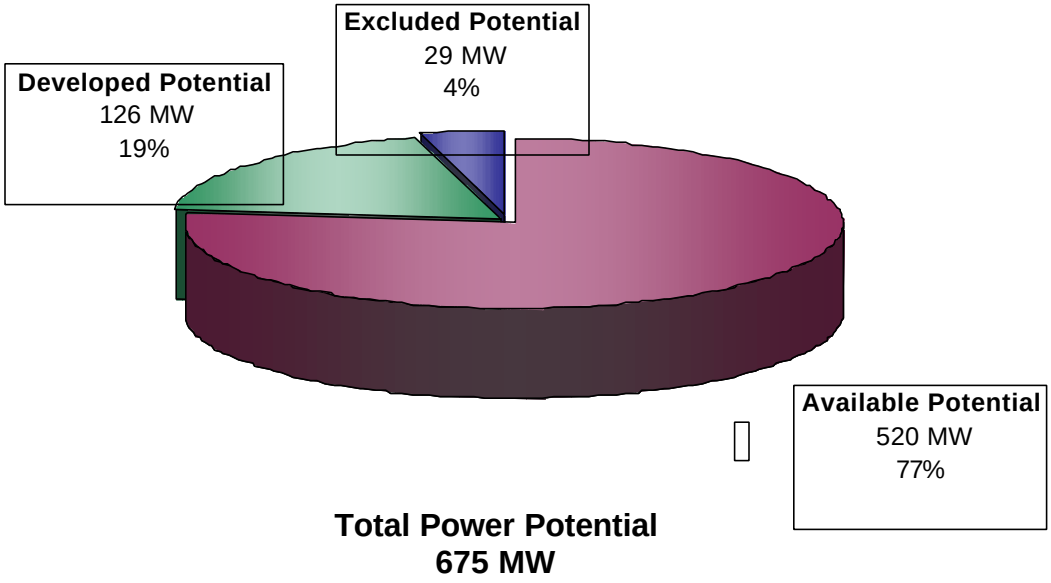


Figure B-102. Power category distribution of the total power potential (annual mean power) of water energy resources in Massachusetts.

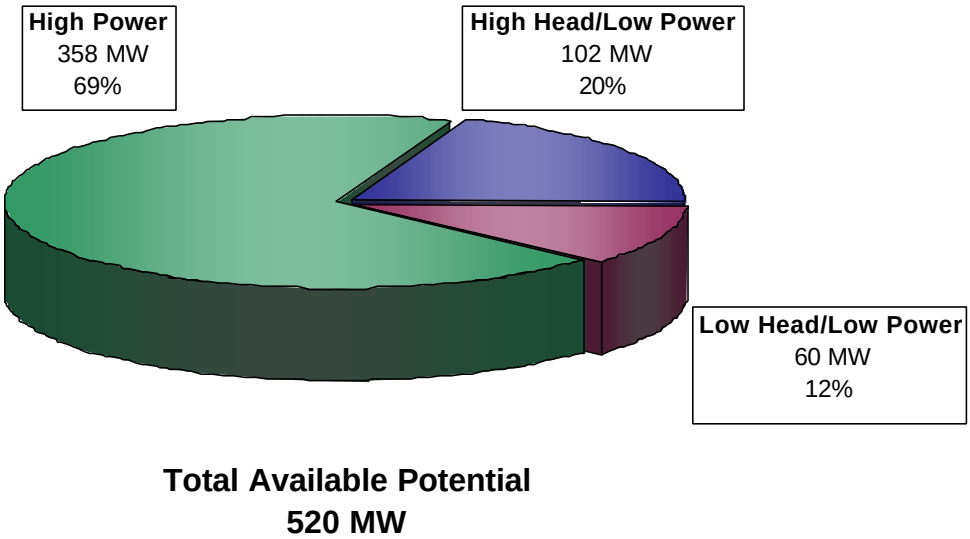


Figure B-103. Power class distribution of the available power potential (annual mean power) of water energy resources in Massachusetts.

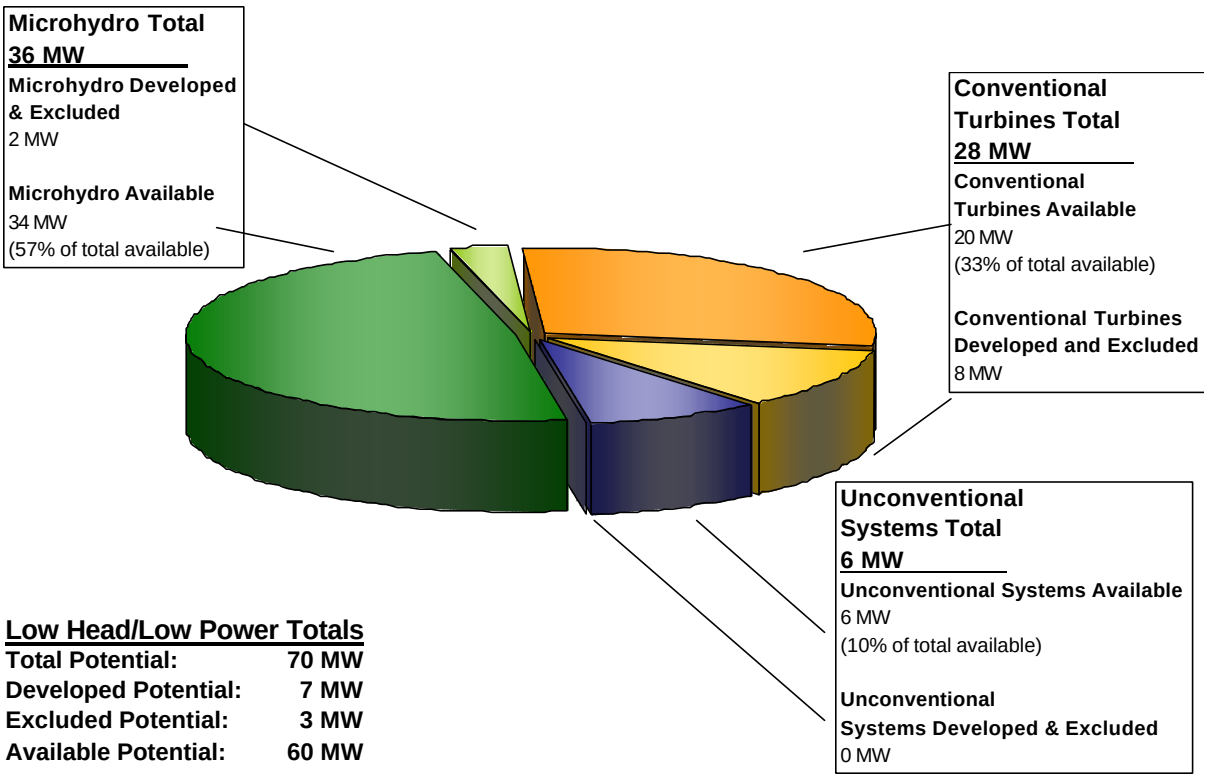


Figure B-104. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Massachusetts among three low head/low power hydropower technology classes.

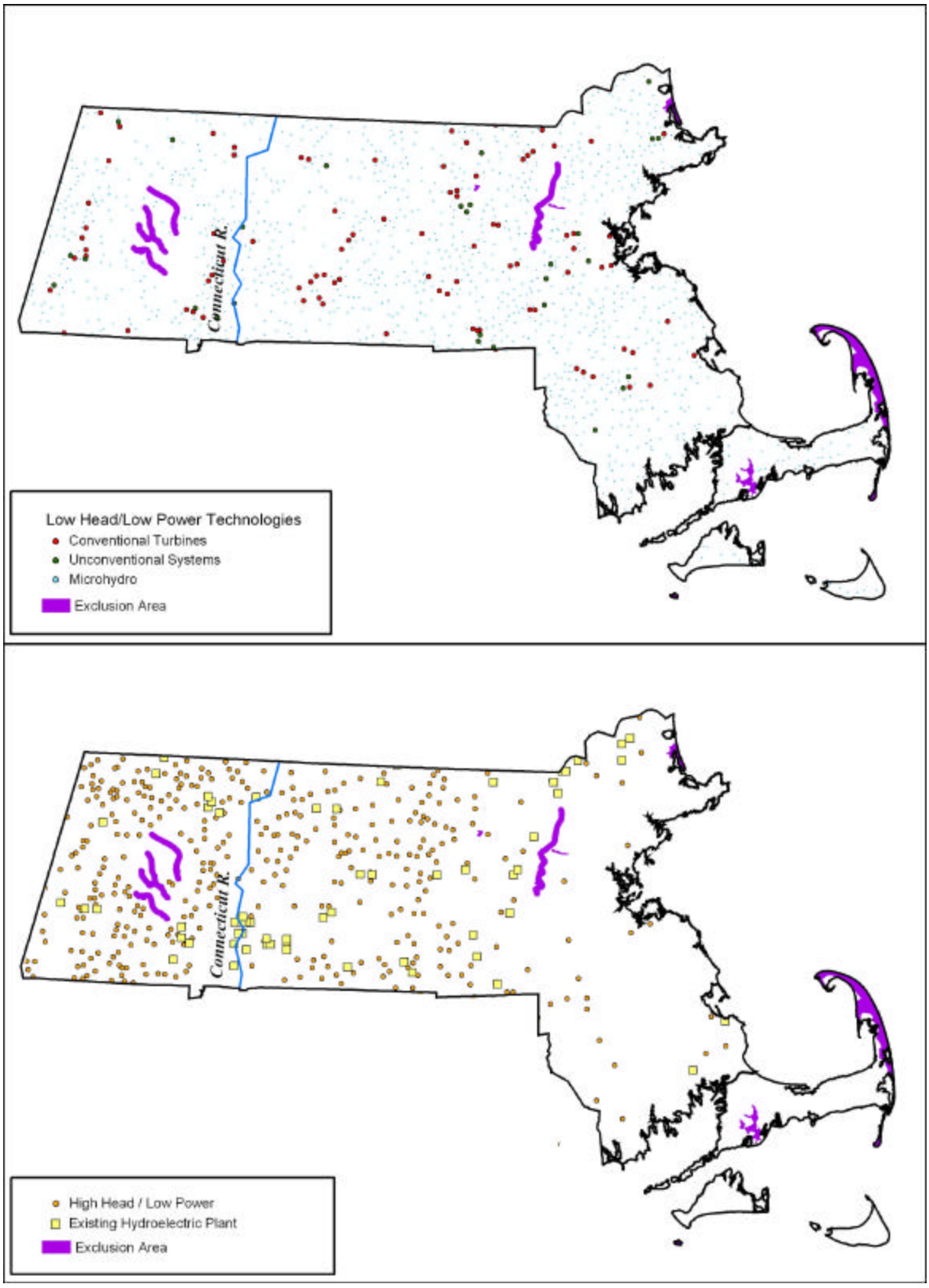


Figure B-105. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Massachusetts.

B.22 Michigan

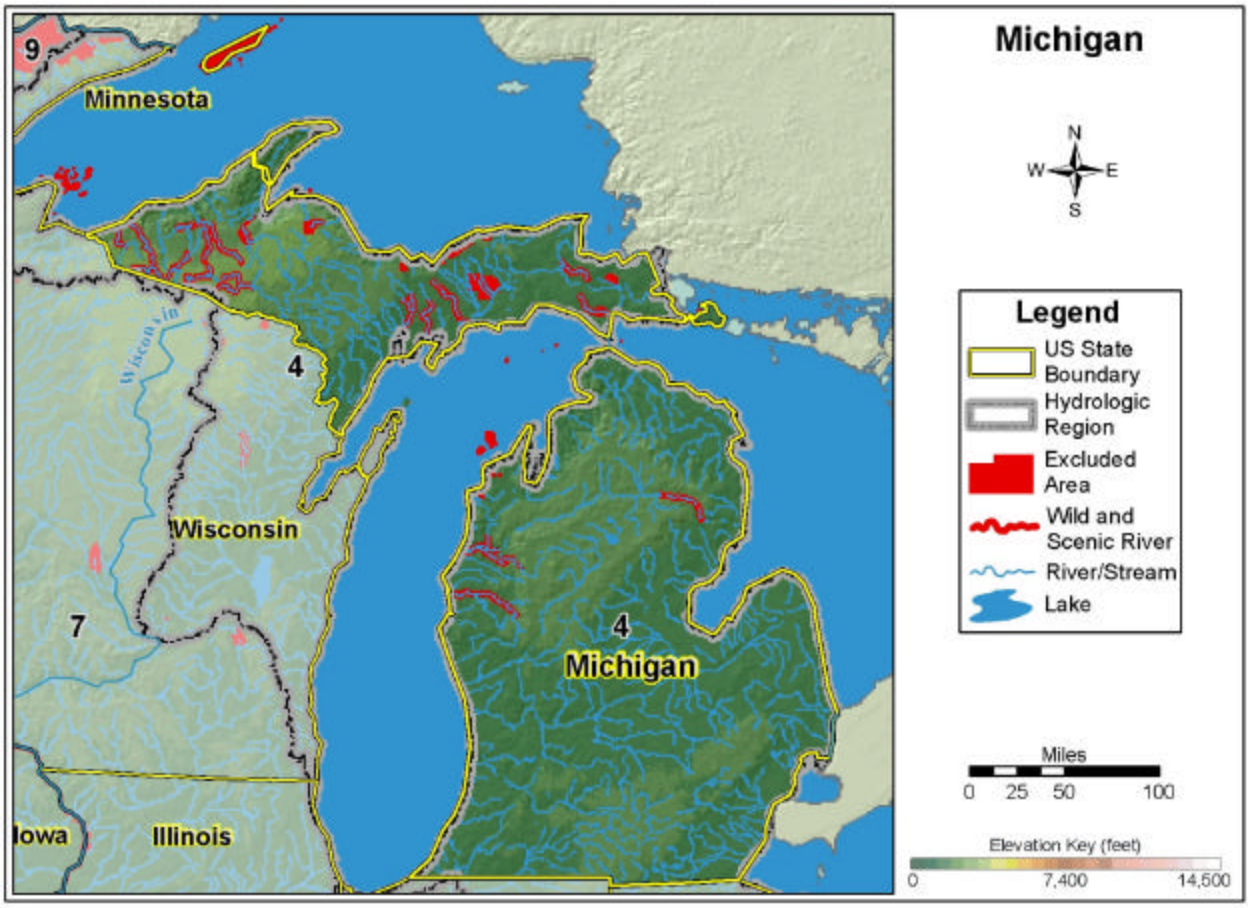


Figure B-106. Michigan.

Table B-22. Summary of results of water energy resource assessment of Michigan.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**1,220**	**209**	**224**	**787**
TOTAL HIGH POWER	**520**	**185**	**141**	**194**
High Head/High Power	**360**	**100**	**123**	**137**
Low Head/High Power	**160**	**85**	**18**	**57**
TOTAL LOW POWER	**700**	**24**	**83**	**593**
High Head/Low Power	**223**	**10**	**33**	**180**
Low Head/Low Power	**477**	**14**	**50**	**413**
Conventional Turbine	193	14	27	152
Unconventional Systems	60	0	9	51
Microhydro	224	0	14	210

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

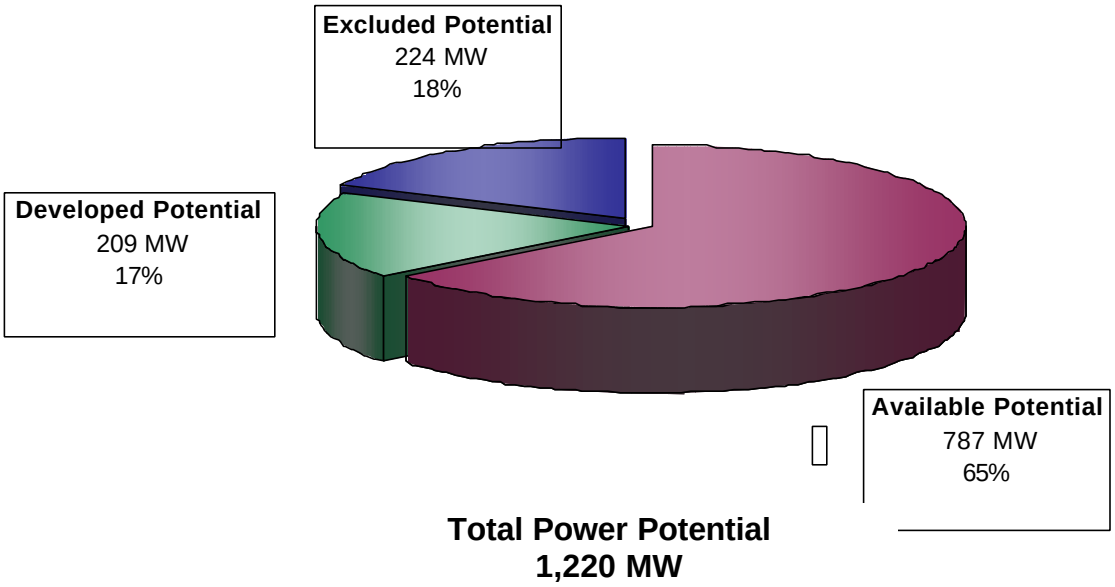


Figure B-107. Power category distribution of the total power potential (annual mean power) of water energy resources in Michigan.

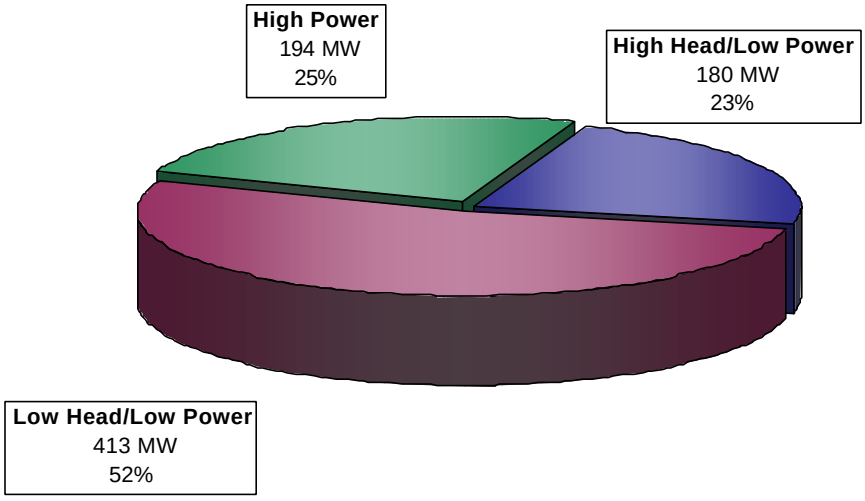


Figure B-108. Power class distribution of the available power potential (annual mean power) of water energy resources in Michigan.

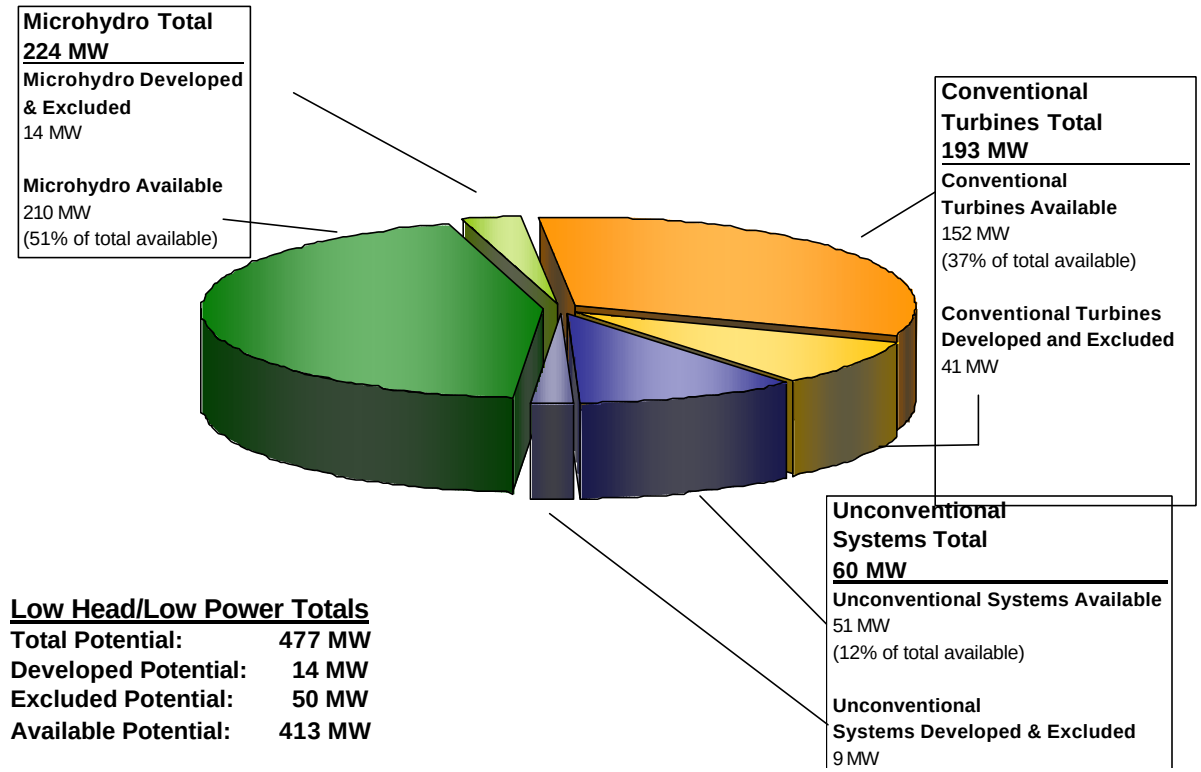


Figure B-109. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Michigan among three low head/low power hydropower technology classes.

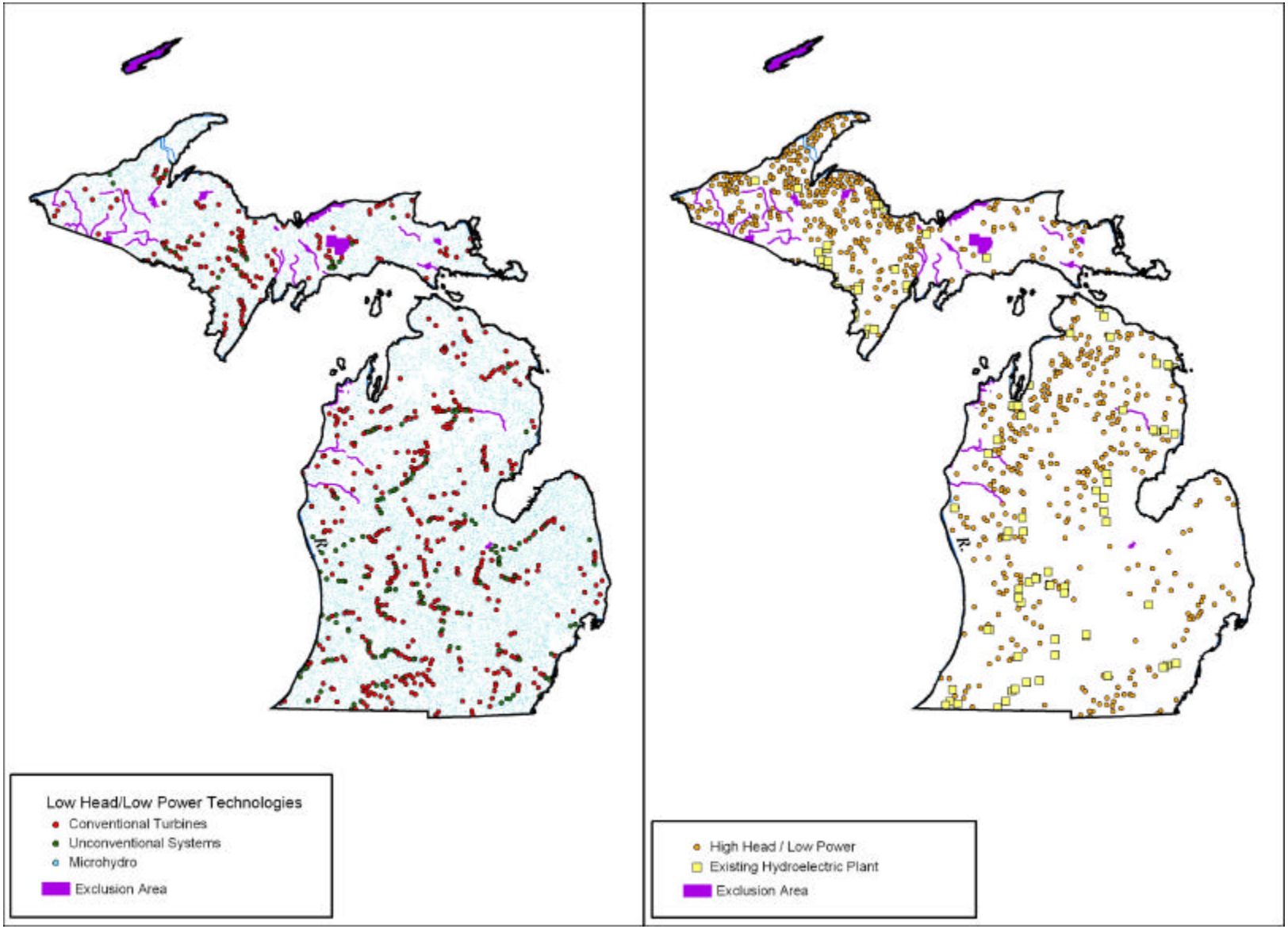


Figure B-110. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Michigan.

B.23 Minnesota

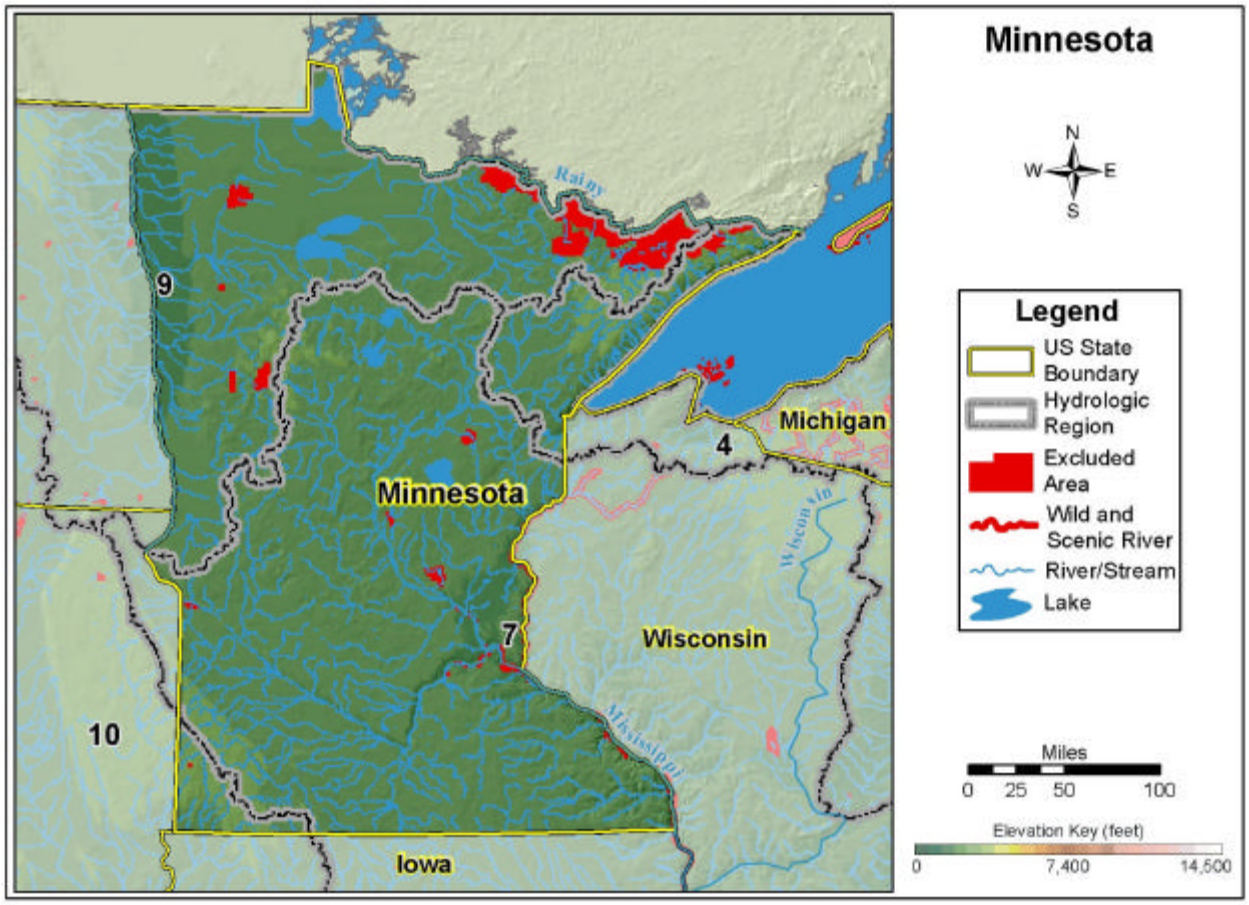


Figure B-111. Minnesota.

Table B-23. Summary of results of water energy resource assessment of Minnesota.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**1,410**	**128**	**249**	**1,033**
TOTAL HIGH POWER	**760**	**123**	**192**	**445**
High Head/High Power	**409**	**101**	**73**	**235**
Low Head/High Power	**351**	**22**	**119**	**210**
TOTAL LOW POWER	**650**	**5**	**57**	**588**
High Head/Low Power	**196**	**3**	**27**	**166**
Low Head/Low Power	**454**	**2**	**30**	**422**
Conventional Turbine	152	2	11	139
Unconventional Systems	78	0	6	72
Microhydro	224	0	13	211

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

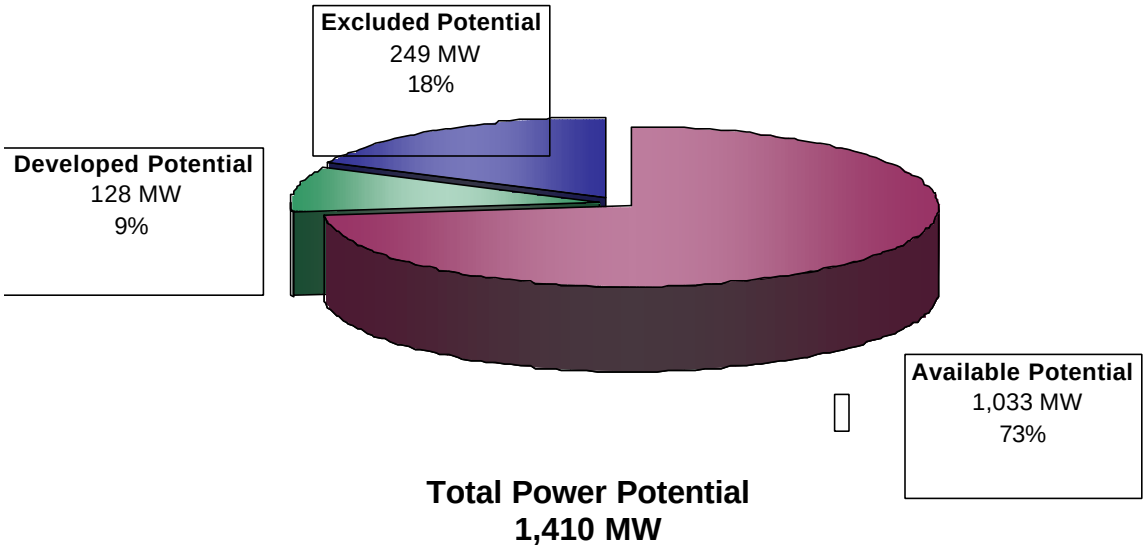


Figure B-112. Power category distribution of the total power potential (annual mean power) of water energy resources in Minnesota.

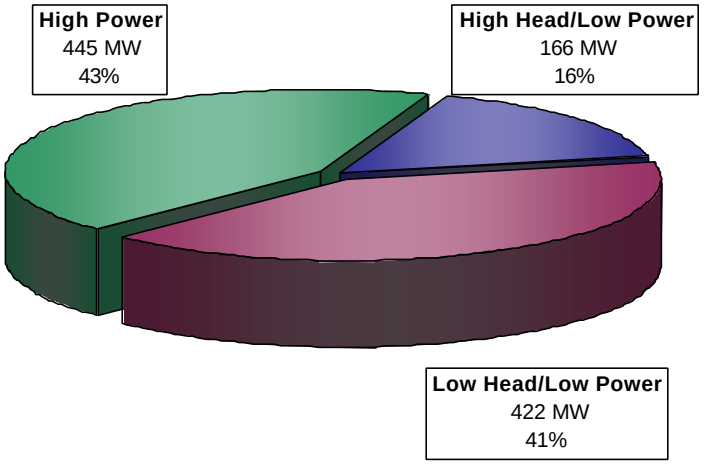


Figure B-113. Power class distribution of the available power potential (annual mean power) of water energy resources in Minnesota.

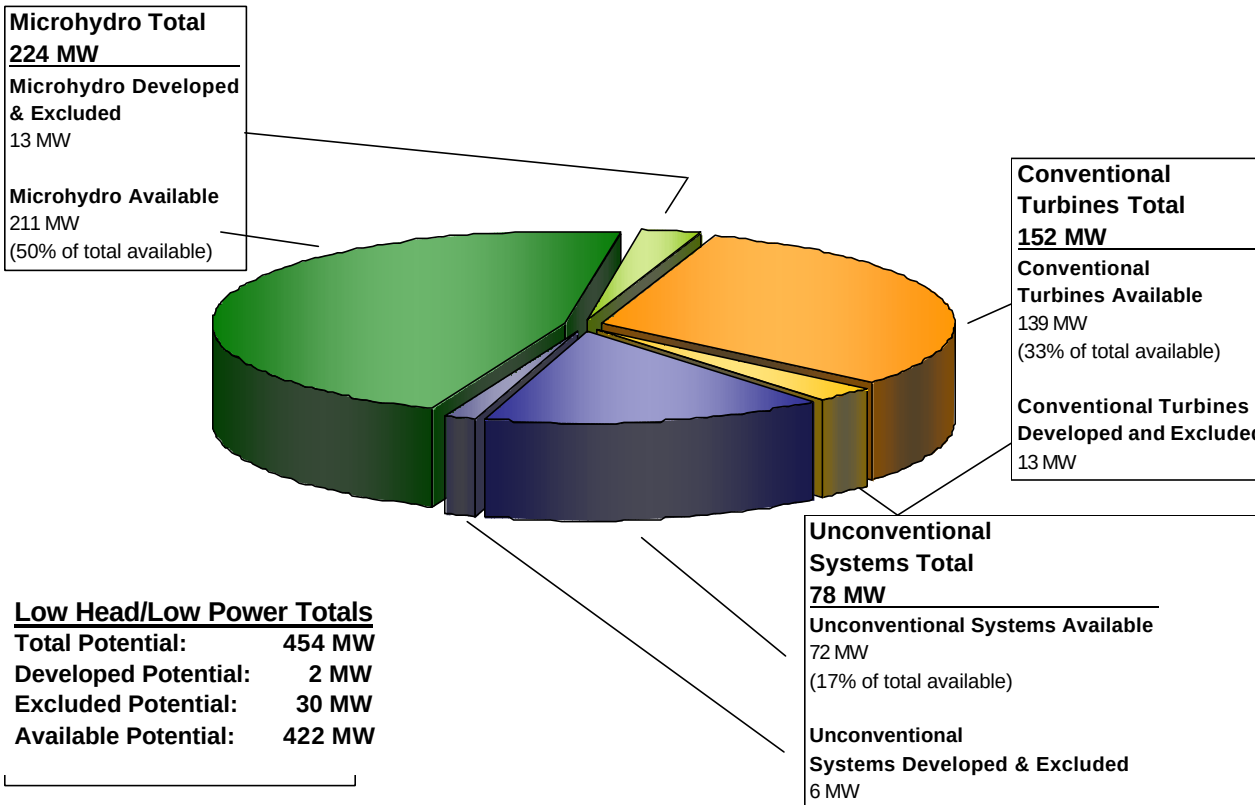


Figure B-114. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Minnesota among three low head/low power hydropower technology classes.

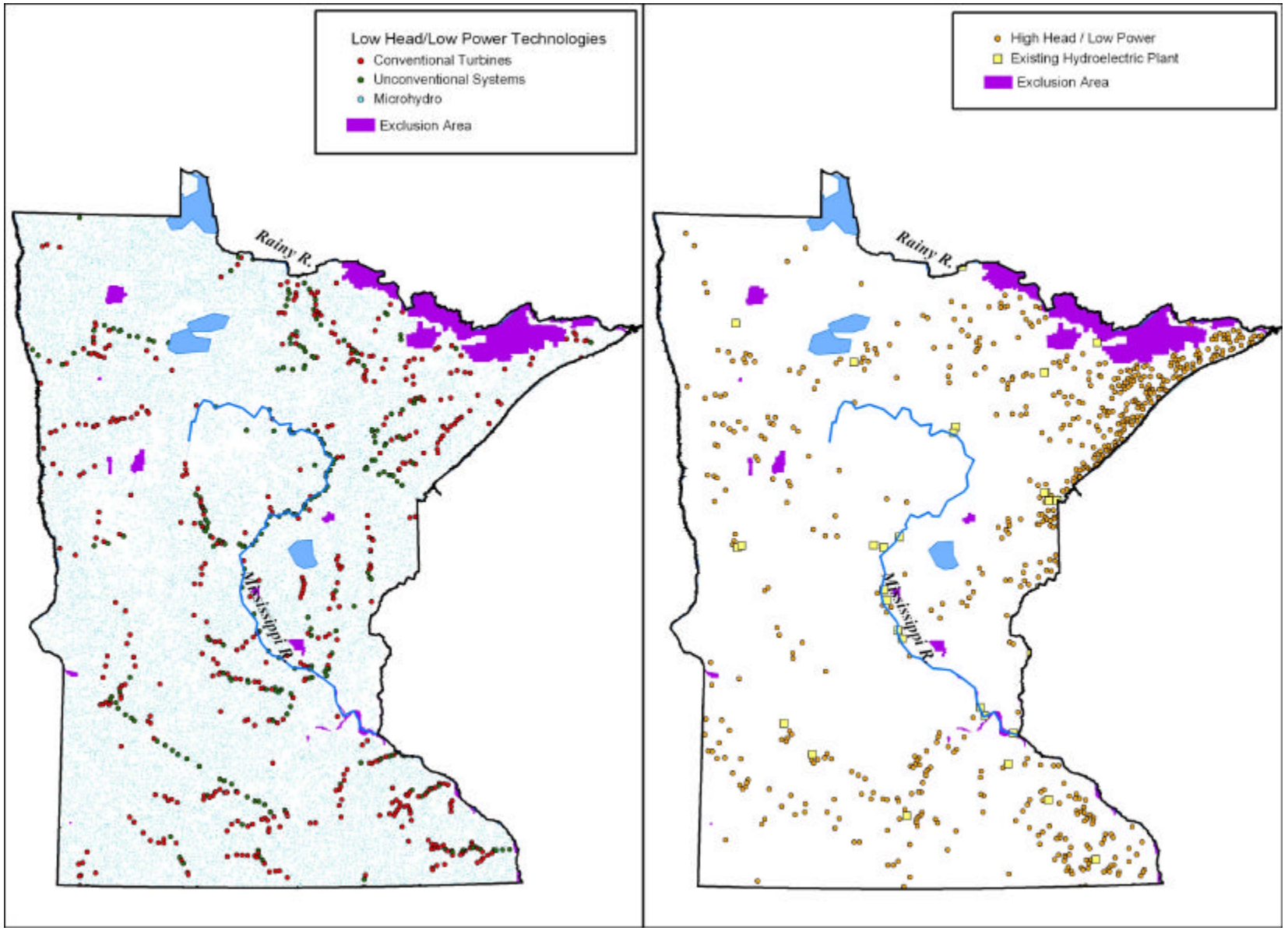


Figure B-115. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Minnesota.

B.24 Mississippi

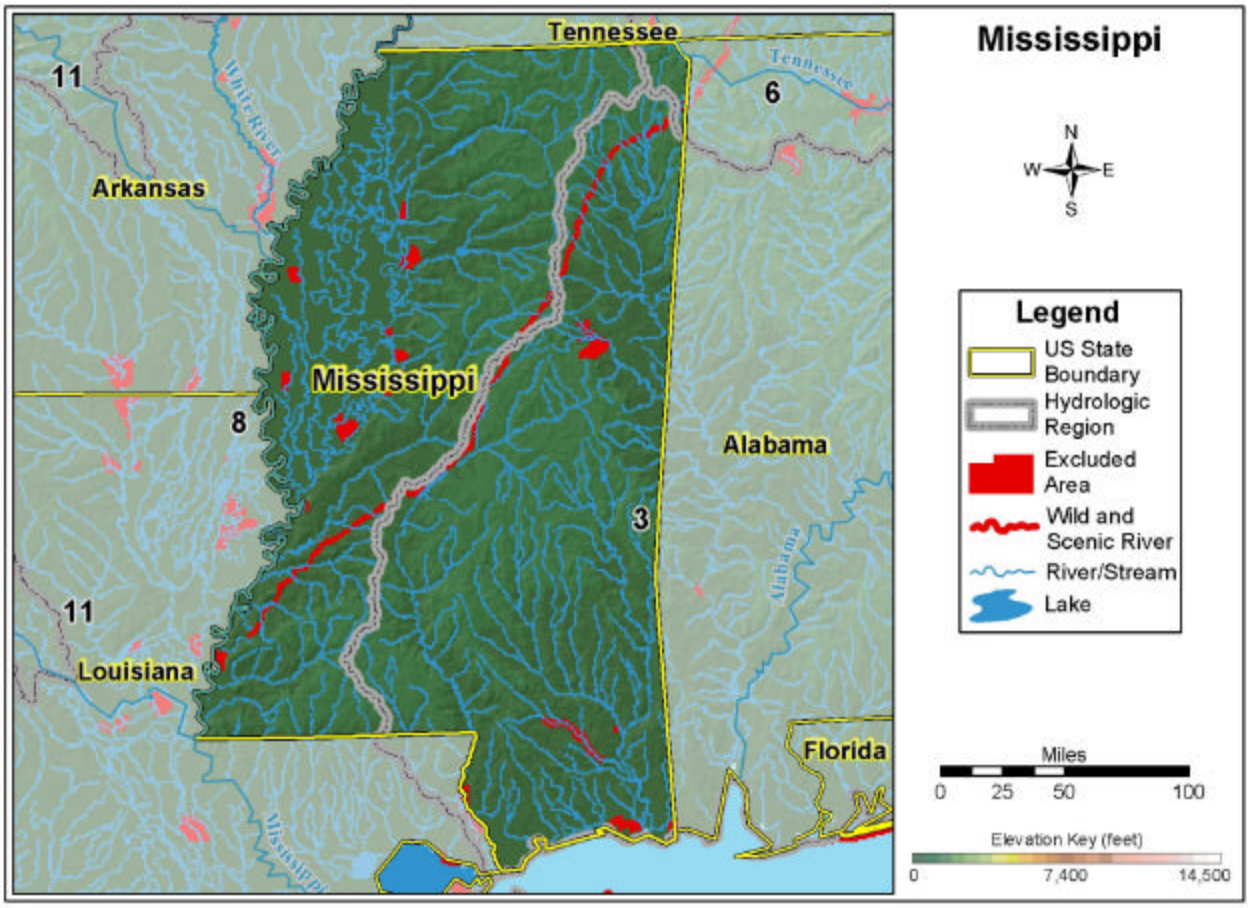


Figure B-116. Mississippi.

Table B-24. Summary of results of water energy resource assessment of Mississippi.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**4,496**	**0**	**450**	**4,046**
TOTAL HIGH POWER	**3,899**	**0**	**422**	**3,477**
High Head/High Power	**62**	**0**	**2**	**60**
Low Head/High Power	**3,837**	**0**	**420**	**3,417**
TOTAL LOW POWER	**597**	**0**	**28**	**569**
High Head/Low Power	**63**	**0**	**2**	**61**
Low Head/Low Power	**534**	**0**	**26**	**508**
Conventional Turbine	184	0	12	172
Unconventional Systems	133	0	6	127
Microhydro	217	0	8	209

a. No feasibility or availability assessments have been performed. "Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

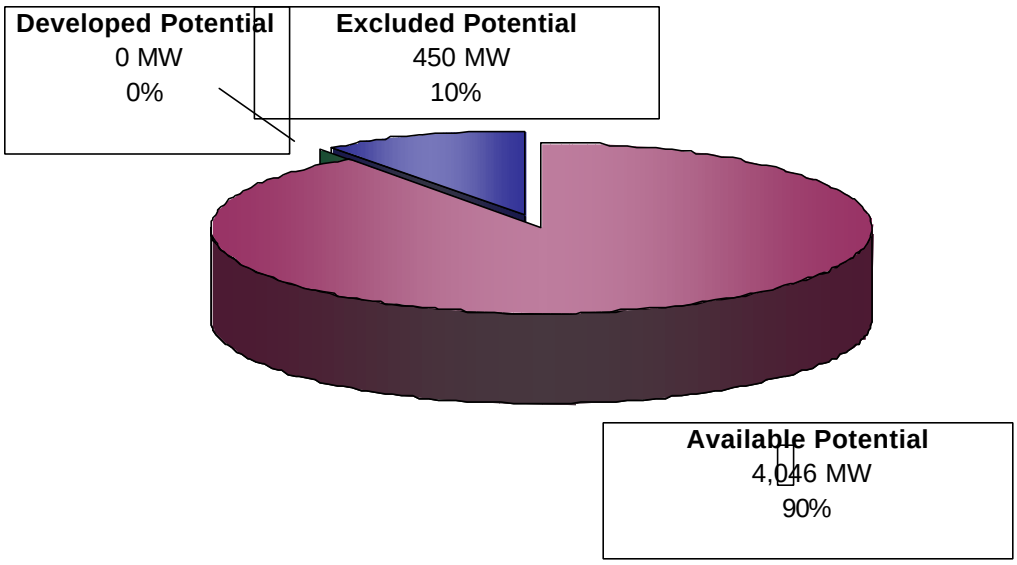


Figure B-117. Power category distribution of the total power potential (annual mean power) of water energy resources in Mississippi.

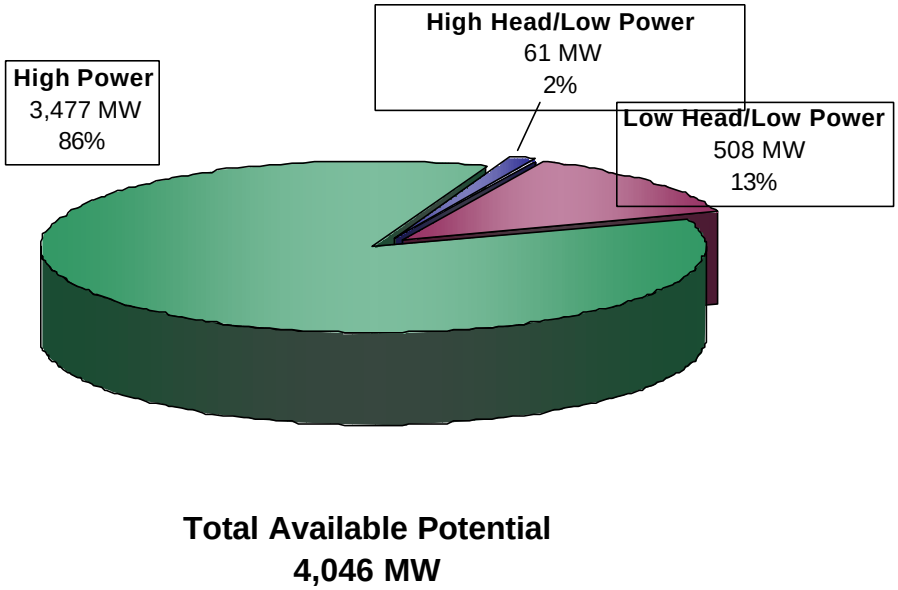


Figure B-118. Power class distribution of the available power potential (annual mean power) of water energy resources in Mississippi.

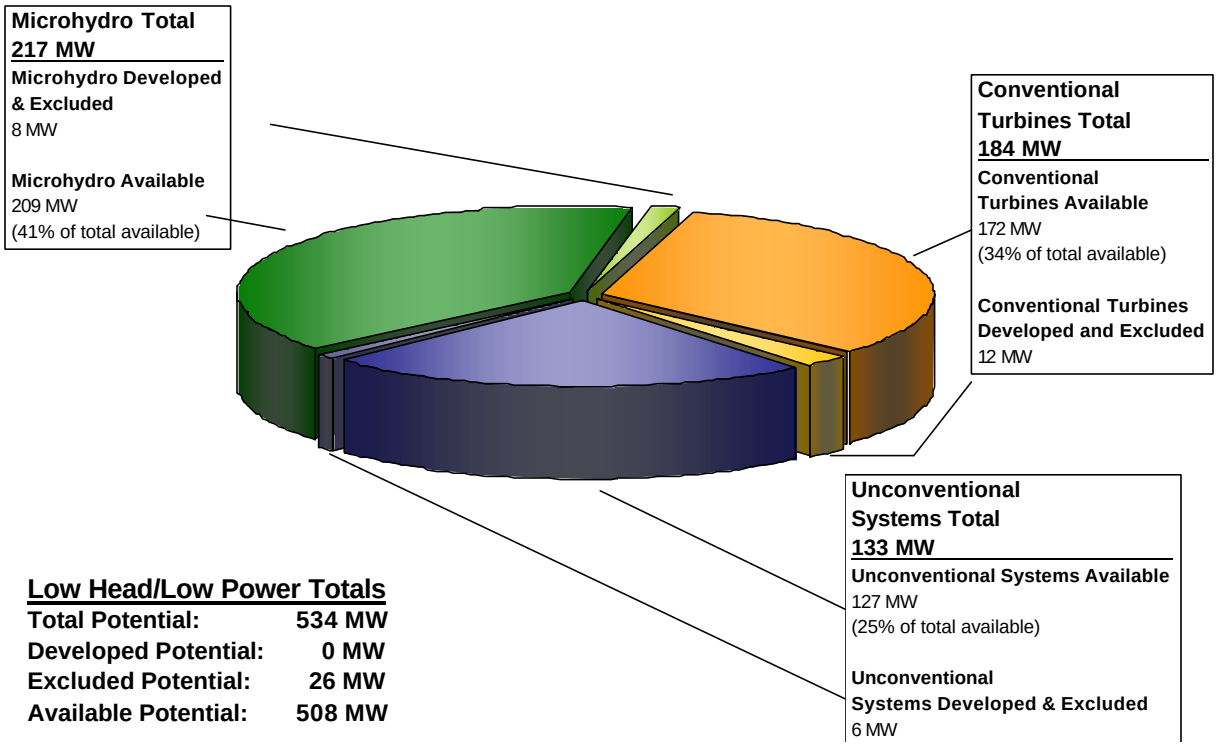


Figure B-119. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Mississippi among three low head/low power hydropower technology classes.

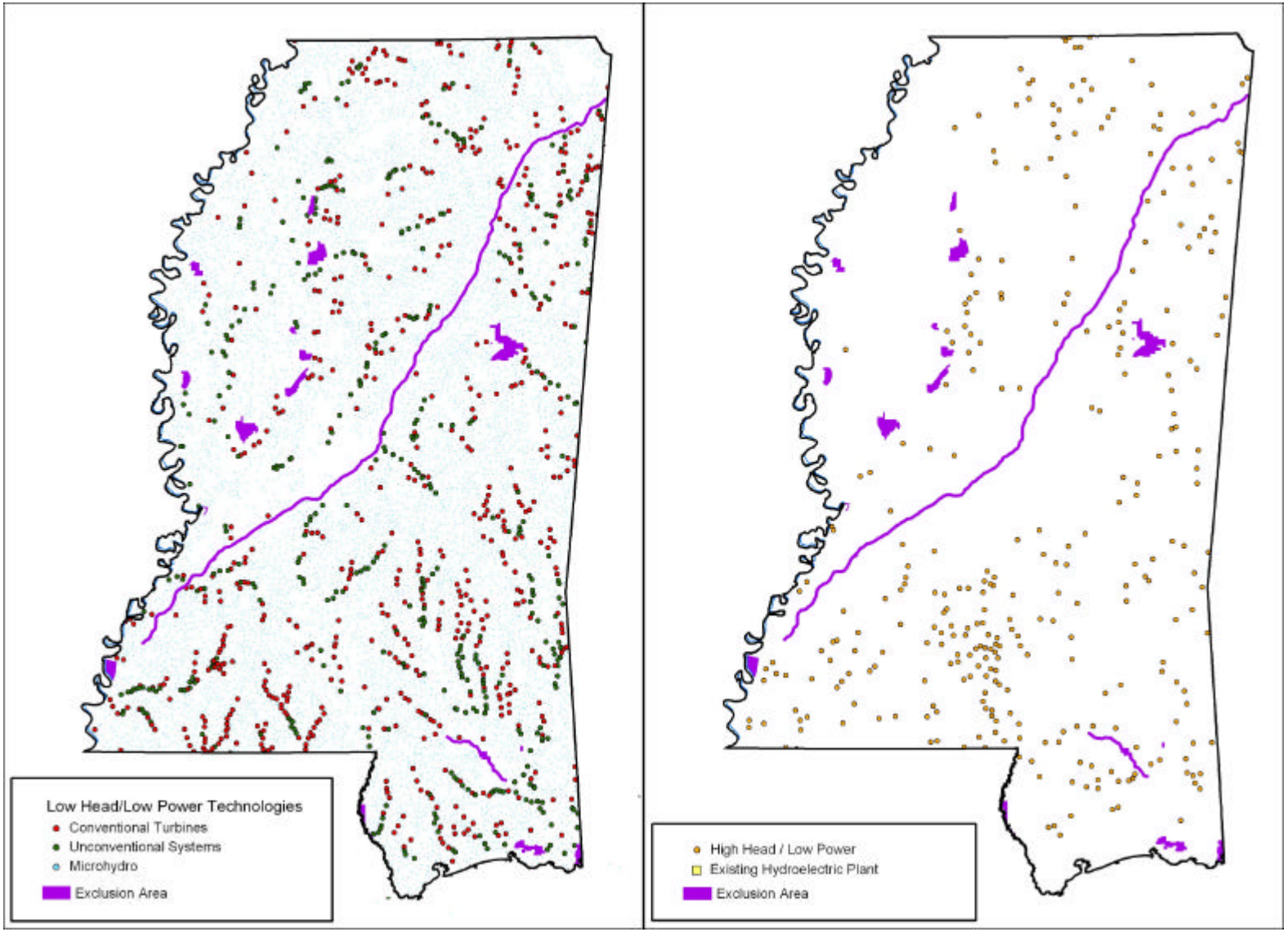


Figure B-120. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Mississippi.

B.25 Missouri

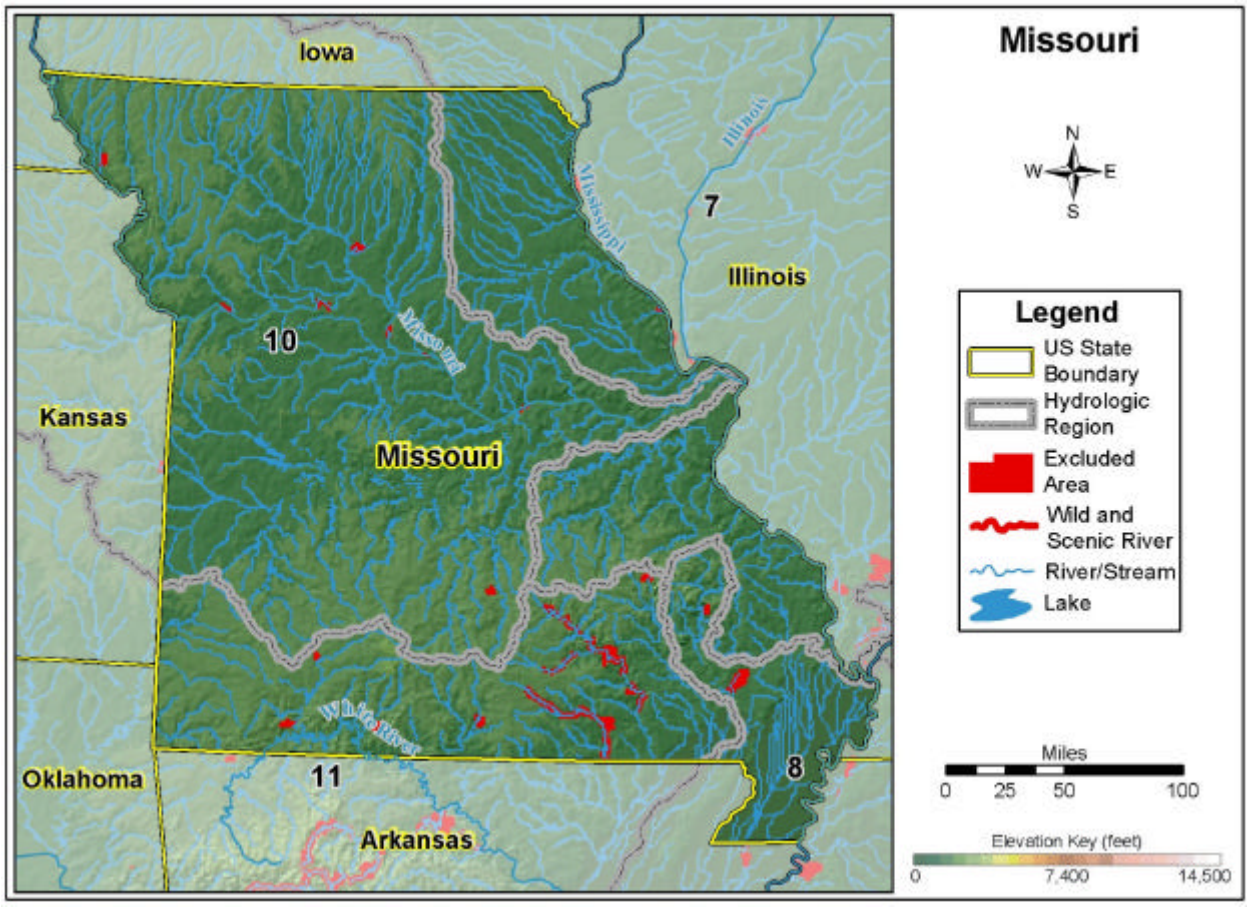


Figure B-121. Missouri.

Table B-25. Summary of results of water energy resource assessment of Missouri.

Annual Mean Power (MW)	Total	Developed	Excluded	Available[a]
TOTAL POWER	**4,549**	**129**	**117**	**4,303**
TOTAL HIGH POWER	**3,588**	**128**	**65**	**3,395**
High Head/High Power	**190**	**128**	**14**	**48**
Low Head/High Power	**3,398**	**0**	**51**	**3,347**
TOTAL LOW POWER	**961**	**1**	**52**	**908**
High Head/Low Power	**202**	**1**	**16**	**185**
Low Head/Low Power	**759**	**0**	**36**	**723**
Conventional Turbine	296	0	19	277
Unconventional Systems	108	0	10	98
Microhydro	355	0	7	348

a. No feasibility or availability assessments have been performed. “Available" only indicates net potential after subtracting developed and excluded potentials from total potential.

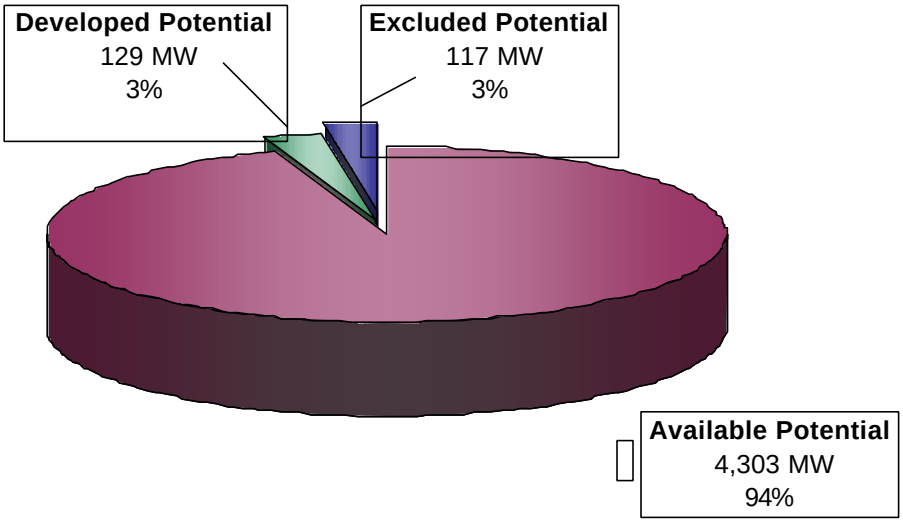


Figure B-122. Power category distribution of the total power potential (annual mean power) of water energy resources in Missouri.

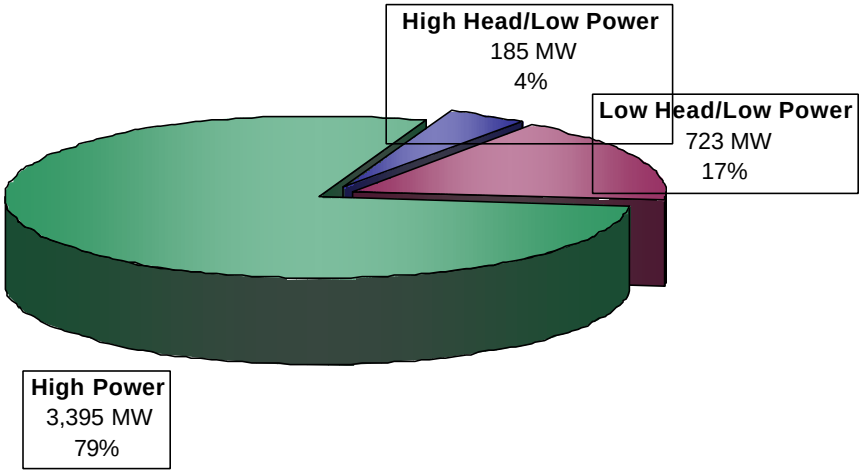


Figure B-123. Power class distribution of the available power potential (annual mean power) of water energy resources in Missouri.

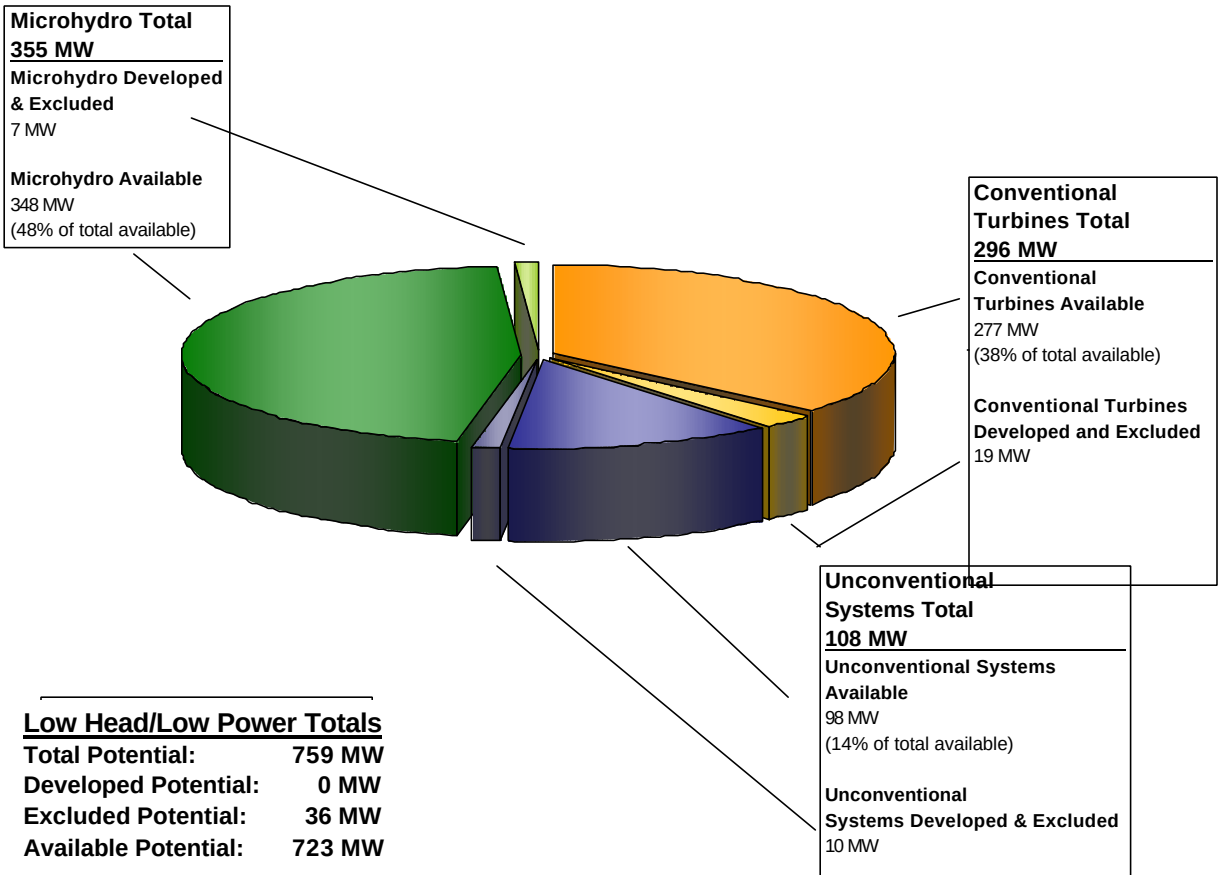


Figure B-124. Distribution of the low head/low power power potential (annual mean power) of water energy resources in Missouri among three low head/low power hydropower technology classes.

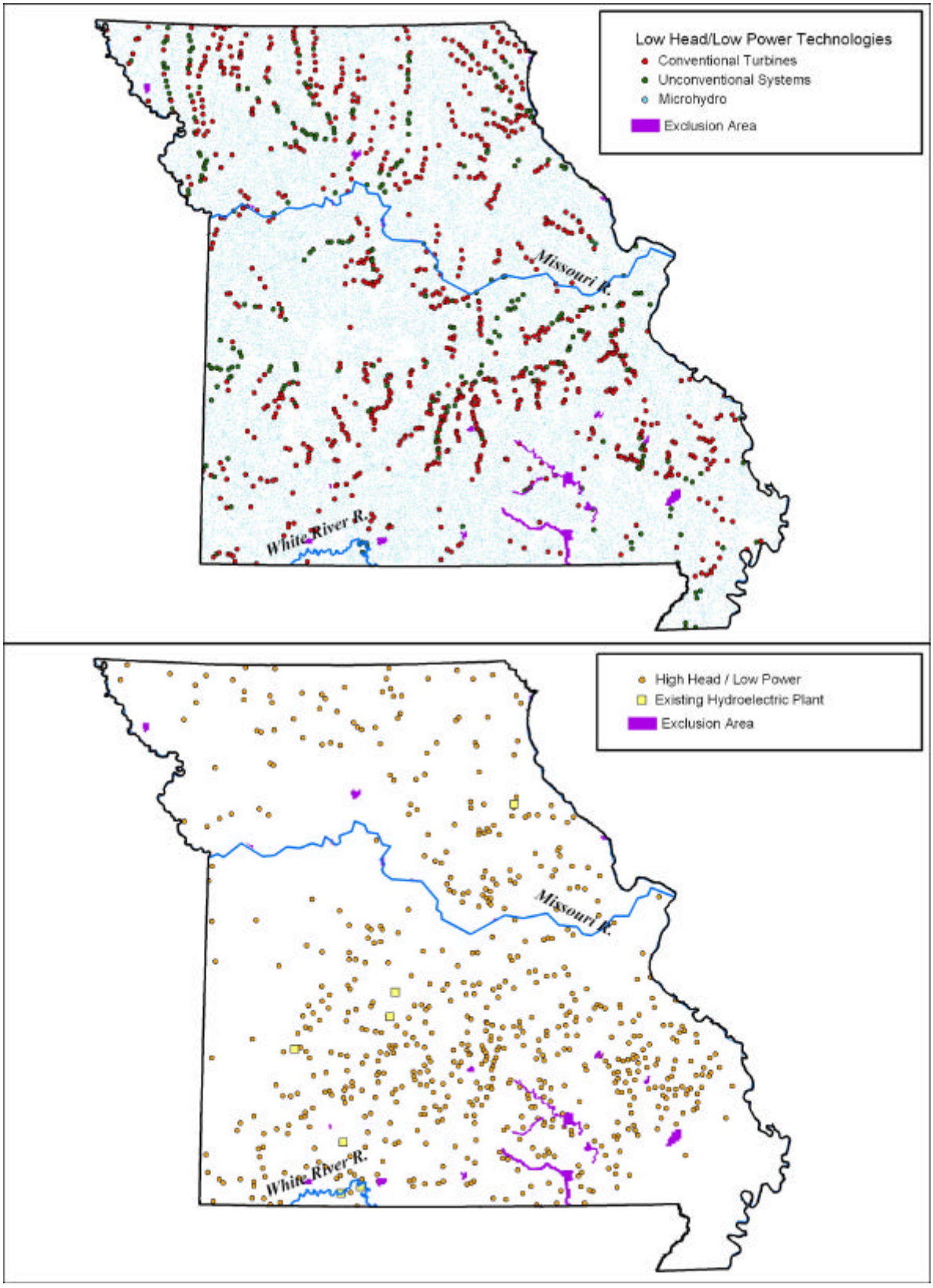


Figure B-125. Low head/low power and high head/low power water energy sites, and existing hydroelectric plants in Missouri.