



21世纪

高等学校精品规划教材

# 水利工程专业英语

张永玲 李刚 主编



中国水利水电出版社  
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## 内 容 提 要

本书紧扣水利工程相关专业进行选材,具有较强的专业性和实用性。全书由28篇课文、28篇阅读材料和科技英语阅读与写作组成。课文由正文、生词(音标、词性、中文释义)和词组或短语(中文释义)组成,其内容包括水资源及其可持续发展、水文循环、水污染、地下水、水法、水需求、灌溉排水、工程材料、衬砌工程、水力发电、水工建筑物、水轮机、水泵、工程施工、工程经济及招投标、科技英语阅读与写作等方面。

本书可作为高校水利类专业本科生和研究生的专业英语教材或课外阅读材料,也可供从事相关专业的科技人员、工程技术人员、管理人员和教师查阅、使用。

### 图书在版编目(CIP)数据

水利工程专业英语 / 张永玲, 李刚主编. — 北京 :  
中国水利水电出版社, 2010.4  
21世纪高等学校精品规划教材  
ISBN 978-7-5084-7426-7

I. ①水… II. ①张… ②李… III. ①水利工程—英  
语—高等学校—教材 IV. ①H31

中国版本图书馆CIP数据核字(2010)第071246号

书 名	21世纪高等学校精品规划教材 <b>水利工程专业英语</b>
作 者	张永玲 李刚 主编
出版发行	中国水利水电出版社 (北京市海淀区玉渊潭南路1号D座 100038) 网址: www.waterpub.com.cn E-mail: sales@waterpub.com.cn 电话: (010) 68367658 (营销中心)
经 售	北京科水图书销售中心(零售) 电话: (010) 88383994、63202643 全国各地新华书店和相关出版物销售网点
排 版	中国水利水电出版社微机排版中心
印 刷	北京瑞斯通印务发展有限公司
规 格	184mm×260mm 16开本 13印张 378千字
版 次	2010年4月第1版 2010年4月第1次印刷
印 数	0001—3000册
定 价	<b>24.00元</b>

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# 前言

随着国内外经济技术交流与合作的不断加强，为更好地了解本专业的最新发展动态，学习和借鉴国外先进的科学技术和经验，需要大量阅读和翻译英文科技文献及资料，从而扩大知识面，加强专业知识储备。另外，要将国内水利工程建设和管理的成功经验向国外推广，也需要具备熟练的专业英语知识。

目前，我国水利类科技人员、管理工作、高校教师等，已具备了一定的基础英语知识，然而如何将基础英语、专业知识与专业英语很好地相结合，仍旧存在一定的困难。为此，本书就如何提高水利类专业英语的阅读和翻译能力，借鉴了大量中英文著作及资料，精心编排，以期通过本书的学习，帮助广大学生和相关人员提高阅读和翻译专业科技英语文献及资料的能力。要切实提高专业英语的阅读和翻译能力，除需掌握基础英语语法的基本知识、基本词汇和具有相当广泛的专业知识之外，还需熟悉专业词汇、短语及科技英语中常见的句型、文体，掌握科技英语写作及翻译的基本技巧。

本书由 28 篇课文、28 篇阅读材料和科技英语阅读与写作组成。课文由正文、生词（音标、词性、中文释义）和词组或短语（中文释义）组成，其内容涉及水资源及其可持续发展、水文循环、水污染、地下水、水法、水需求、灌溉排水、工程材料、衬砌工程、水力发电、水工建筑物、水轮机、水泵、工程施工、工程经济及招投标、科技英语阅读与写作等方面。本书取材广泛，专业词汇丰富，适应性和针对性强，能够满足高等院校水利水电工程、农业水土工程、水文与水资源以及其他相关专业的专业英语教学需要和相关专业的科技人员、工程技术人员和管理人员学习专业英语的要求。

本书由刘坤（塔里木大学）编写第 1、第 2、第 5、第 28 课，张永玲（塔里木大学）编写第 3、第 15、第 18、第 27 课及科技英语阅读与写作部分，宗全利（石河子大学）编写第 4、第 6、第 10、第 11 课，侯晓华（塔里木大学）

编写第 7、第 12、第 16、第 17 课，肖让（塔里木大学）编写第 8、第 9、第 13、第 14、第 19 课，李刚（塔里木大学）编写第 20~26 课，全书由张永玲、李刚任主编，张永玲负责统稿。

由于编者水平有限，缺点和错误之处在所难免，敬请广大读者不吝赐教。

编者

2010 年 1 月

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## Lesson 1 Water Resources of the World

It is hardly necessary to state that water is one of the most important minerals and vital for all life. It has played an important role in the past and in the future it will play the central role in the well-being and development of our society. This most precious resource is sometimes scarce, sometimes plentiful and always very unevenly distributed, both in space and time.

Towards the end of the last glacial period, about 18000 years ago, the ocean level has been estimated to have been some 105~120 m lower than at present. The difference is equivalent to  $40 \times 10^5 \text{ km}^3$  of water. If this water was stored in the form of ice then the total water equivalent of the polar caps and glaciers must have been about three times that at present. During the last century there appears to have been a puzzling increase in the total water in oceans and as ice. Measurements indicate an average rise of ocean level of 1.2 mm per annum or about  $430 \text{ km}^3$  per year; some estimates of this increase are even as high as  $1750 \text{ km}^3$  per year. An explanation is that this water comes from exploitation of groundwater in excess of recharging, but  $430 \text{ km}^3$  per year averaged over the total land area of  $134 \times 10^6 \text{ km}^2$ , not covered by water, means a lowering of the groundwater table by 3.2 mm per year, or a third of a metre in the century and there is little evidence to support this on world wide scale. Indeed, changes in the sea level could more readily be ascribed to changes in the volume of the oceans, caused by continental drifts and warping of land masses. According to Fairbrige (1961), variations of  $\pm 100 \text{ m}$  with respect to present level have occurred in the last 300000 years.

**Table 1 - 1                      Quantity and distribution of water**

	Area covered ( $10^6 \text{ km}^2$ )	Volume ( $10^3 \text{ km}^3$ )	Percent of total volume (%)
Oceans	360	1370323	93.93
Total groundwater, incl. Zones of active water exchange		64000 (4000 f)	4.39 (0.27)
Polar ice and glaciers	16	24000	1.65
Lakes		230	0.016
Soil moisture		75	0.005
Atmosphere water	510	14	0.001
River		1.2	0.0001
Total		1458643	100

The total fresh water amounts to  $88.32 \times 10^3 \text{ m}^3$  or less than 6% and only 0.5% is readily available in lakes and rivers. The atmospheric water content is equivalent to less



than 3 cm of water and the total amount of water in growing matter (the biomass) is less than  $10^3 \text{ km}^3$ . A more illuminating picture is obtained when the water masses involved in the processes of the hydrosphere—as the global circulation is referred to—are associated with their turnover times.

The fresh water resources of continents are shown in Table 1 - 2 and the per capita volume of runoff in streams and rivers is shown in Table 1 - 3. It is useful to reflect that Europe and Asia together accommodate about 76% of the world population but have only 27% of the total fresh water runoff. About two - third of the earth's surface is arid or semi - arid where the extent of agricultural and industrial development depends primarily on the availability of water.

**Table 1 - 2 Fresh water resources of continents, after Lvovich (1973)**

	Area ( $10^6 \text{ km}^2$ )	Precipitation		Runoff				Evaporation	
				Total		Subsurface			
		mm	$\text{km}^3$	mm	$\text{km}^3$	mm	$\text{km}^3$	mm	$\text{km}^3$
Europe <sup>①</sup>	9.8	734	7165	319	3110	109	1065	415	4055
Asia	45.0	726	32690	293	13190	76	3410	433	19500
Africa	30.3	686	20780	139	4225	48	1465	547	16555
Nth America <sup>②</sup>	20.7	670	13910	287	5960	84	1740	383	7950
Sth America	17.8	1648	29355	583	10380	210	3740	1065	18975
Australia <sup>③</sup>	8.7	736	6405	226	1965	54	465	510	4440
USSR	22.4	500	10960	198	4350	46	1020	300	6610
Total land <sup>④</sup>	132.3	834	110305	294	38830	90	11885	540	71468
Australia	7.7	440	3390	47	362	7	54	393	3028
New Zealand	0.265	2059	546	1481	387			599	159

① Incl. Iceland.

② Excl. Canadian Archipelago and including Central America.

③ Incl. Tasmania, New Guinea and New Zealand. For New Guinea et al. (1972) estimate precipitation at 3150 mm and total runoff at 2110 mm.

④ Excl. Antarctica, Greenland and Canadian Archipelago.

**Table 1 - 3 Fresh water runoff per capita, after Lvovich (1973)**

	Population (1969 in $10^6$ )	Ann. runoff ( $\text{km}^3$ )		$\text{m}^3/\text{Head}$	Stable portion ( $\text{m}^3$ )
		Total	Stable portion		
Europe	642	3100	1325	4850	2100
Asia, incl. Japan & Philippines	2040	13190	4005	6465	1960
Africa incl. Madagascar	345	4225	1905	12250	5500
North & Central America	334	5960	2380	17844	7125
South America	188	10380	3900	55213	20745
Australia, New Guinea, New Zealand	18	1965	495	109000	27500
Australia	12.45	362		2980	
New Zealand	3	387	150	129000	56000
All land areas	3567	38830	14010	10886	3928

Of the total land surface of  $140 \times 10^6 \text{ km}^2$ , only about 10% is arable and of this about  $10^6 \text{ km}^2$  is at present irrigated. Few people realize that  $1 \text{ m}^3$  of water is required to grow 1 to 3.5 kg of dry matter by agricultural cropping, or to make about 14 kg of paper, 36 kg of steel, etc. If we allow for a total consumptive use of water for all purposes of  $1000 \text{ m}^3$  per head per year then Table 1 - 1 shows that Europe and Asia are close to the population limit set by availability of fresh water. In order, however, to make use of all the available water it must be stored and distributed. For example, the Indian subcontinent is at present not short of water, which is if the water was distributed evenly throughout the year over the entire continent. But to achieve this redistribution we should require storage and distribution systems on a scale not yet known to man. Another example is the basin of the river Rhine. The annual runoff is about  $69 \text{ km}^3$  per year and the population is about 50 million, which is  $1400 \text{ m}^3$  per year per capita. The total use of water is approaching  $25 \text{ km}^3$  per year or about 30% of the total runoff and this is about the fraction of the runoff that can be controlled at reasonable cost.

However, it is not only the quantity but also the quality of water that is important. The quality aspect in a narrow sense refers to the pollution of fresh water by domestic, industrial and agricultural wastes. Not only may water returned to a river be unfit for use but a much greater volume of the river flow is made unfit for other uses. Mineral oils, for example, make water unfit for drinking in a ratio of  $1 : 10^6$ , one gram of radioactive strontium - 90 spoils a reservoir, i. e.  $1 : 10^{15}$ . The sewage discharge annually is of the order of  $430 \text{ km}^3$  and it spoils about  $5500 \text{ km}^3$ . This is more than 30% of the total runoff of rivers. But water quality is also important for recreational use, for maintenance of the ecological balance, etc. Indeed, water quality today is a subject of its own right and for this reason will not be further discussed here.

### New Words

- |  |                  |
|--|------------------|
| 1. mineral ['minərəl] <i>n.</i>        | 矿物; 无机物          |
| 2. vital ['vaitl] <i>adj.</i>          | 必需的, 不可缺少的       |
| 3. well-being ['welbiɪŋ] <i>n.</i>     | 繁荣, 福利           |
| 4. precious ['preʃəs] <i>adj.</i>      | 宝贵的, 重要的         |
| 5. scarce [skæəs] <i>adj.</i>          | 缺乏的, 不足的, 稀少的    |
| 6. plentiful ['plentiful] <i>adj.</i>  | 大量的, 丰富的         |
| 7. unevenly [ˈʌn'i:vənli] <i>adv.</i>  | 不均匀的, 不平的        |
| 8. distribute [dis'tribjut] <i>vt.</i> | 分布, 配给           |
| 9. glacial ['gleisjəl] <i>adj.</i>     | 冰河(川)时代的, 冰河(川)的 |
| 10. polar ['pəulə] <i>adj.</i>         | (南北)极的, (近)极地的   |
| <i>n.</i>                              | 极线, 极面, 极性       |
| 11. glacier ['glæsjə] <i>n.</i>        | 冰川(河)            |

12. puzzling [ˈpʌzliŋ] *adj.* 费解的, 弄不懂的
13. equivalent [iˈkwɪvələnt] *n.* 相等, 等效  
*adj.* 相等的, 等效的
14. average [ˈævərɪdʒ] *n.* 平均数  
*vt.* 平均是, 均分
15. exploitation [ˌɛksplɔɪˈteɪʃən] *n.* 开发, 发掘; 利用
16. excess [ɪkˈses] *n.* 过分; 超过; 剩余 (物)  
*adj.* 过分的
17. recharge [ˌrɪːtʃɑːdʒ] *vt.* 补充, 再装, 回灌
18. evidence [ˈeɪdɪəns] *n.* 证据, 资料, 数据
19. ascribe [əˈskraɪb] *vt.* 把……归于, 认为……, 属于……
20. continental [ˌkɒntɪˈnɛntl] *adj.* 大陆 (性) 的
21. drift [drɪft] *n.* 漂移, 漂 (流) 物
22. warp [wɔːp] *vt.* 翘, 曲, 曲折, 变形
23. variation [ˌvæəriˈeɪʃən] *n.* 变化, 改变
24. respect [rɪˈspekt] *n.* 关系, 方面
25. biomass [ˈbaɪəʊməs] *n.* 生物量, 生物总量
26. illuminate [ɪˈluːmineɪt] *vt.* 阐明, 启发
27. hydrosphere [ˌhaɪdrəʊˈsfɪə] *n.* 水界, 水圈, 地球水面
28. global [ˈɡləʊbəl] *adj.* 全球的, 全世界的
29. turnover [ˈtɜːnəʊvə] *n.* 回转, 循环, 倒置
30. arid [ˈæɪrɪd] *adj.* 干旱的, 干燥的
31. semi - arid *adj.* 半干旱的
32. availability [əˈveɪləbɪləti] *n.* 可得到的东西; 可用性
33. arable [ˈærəbl] *adj.* 适于耕 (的)  
*n.* 耕地, 可开垦地
34. cropping [ˈkrɒpɪŋ] *n.* 种植, 收获量
35. consumptive [kənˈsʌmptɪv] *adj.* 消费的, 消耗 (性) 的
36. subcontinent [sʌbˈkɒntɪnənt] *n.* 次大陆, 次洲
37. evenly [ˈiːvənli] *adv.* 平坦地, 均匀地
38. redistribution [ˌrɪːdɪstriˈbjʊːʃən] *n.* 再分配, 分布
39. annual [ˈænjʊəl] *adj.* 每年的
40. approach [əˈprəʊtʃ] *vt.* 接近; 处理  
*n.* 方法
41. reasonable [ˈrɪːznəbl] *adj.* 合理的, 适当的
42. unfit [ʌnˈfɪt] *adj.* 不适当的, 不宜的
43. radioactive [ˌreɪdɪəʊˈæktɪv] *adj.* 放射性的
44. strontium [ˈstrɒŋʃiəm] *n.* 锶

45. spoil [spɔɪl] *vt.*  
 46. sewage ['sjuɪdʒ] *n.*  
 47. maintenance [ˈmeɪntɪnəns] *n.*  
 48. ecological [ˌɛkəˈlɒdʒɪkəl] *adj.*

损坏；分解；变坏  
 污水；下水道（系统）  
 维持，保养，运转  
 生态（学）的

### Phrases and Expressions

- |  |               |
|--|---------------|
| 1. km <sup>3</sup> = cubic kilometer           | 立方千米          |
| 2. mm = millimeter                             | 毫米            |
| 3. km <sup>2</sup> = square kilometer          | 平方千米          |
| 4. polar cap                                   | 极冠，极地         |
| 5. in excess of...                             | 超过……          |
| 6. averaged over...                            | 平均分摊在……       |
| 7. continental drifts                          | 大陆漂移          |
| 8. with respect to...                          | 关于……，对于……     |
| 9. water content                               | 含水量           |
| 10. cm = centimeter                            | 厘米            |
| 11. water mass                                 | 水体            |
| 12. per capita                                 | 每人            |
| 13. allow for...                               | 考虑（到），估计（到）…… |
| 14. per head                                   | 每人            |
| 15. distribution system                        | 配水系统          |
| 16. refer to...                                | 涉及……，关于……     |
| 17. be of the order of...                      | 约为……          |
| 18. terrestrial water                          | 陆地上的水         |
| 19. Faribridge                                 | 费尔布里奇         |
| 20. Lvovich                                    | 里沃维奇          |
| 21. Rhine                                      | 莱茵河           |
| 22. Europe                                     | 欧洲            |
| 23. Indian                                     | 印度（的），印度人（的）  |
| 24. Africa                                     | 非洲            |
| 25. Nth America                                | 北美洲           |
| 26. Sth America                                | 南美洲           |
| 27. USSR = Union of Soviet Socialist Republics | 苏联            |
| 28. New Zealand                                | 新西兰           |
| 29. Iceland                                    | 冰岛            |
| 30. Canadian Archipelago                       | 加拿大列岛         |
| 31. Central America                            | 中美洲           |
| 32. Tasmania                                   | 塔斯马尼亚         |

33. New Guinea	新几内亚
34. Aitken	艾肯
35. Greenland	格陵兰
36. Japan	日本
37. Philippines	菲律宾
38. Madagascar	马达加斯加

## **Reading Material Basic Characteristics of China's Water Resources**

### **1 Small per - capita volume of water resources**

The total volume of China's water resources takes the 6th place in the world only after Brazil, Russia, Canada, USA and Indonesia. Though the total volume of China's water resources is not small, because of its huge population, China's per - capita volume of water resources is quite small. According to statistics based on the population in 1997, China's per - capita volume of water resources is 2200 m<sup>3</sup>, only accounting for about one third of the world's average. According to the statistics carried out by the UN Sustainable Development Committee and other six organizations to 153 countries and regions in 1997, China's per - capita volume of water resources takes the 121st place in the world. As defined in the report titled the Prospect of Sustainable Water - Population and Renewable Water Supply put forth by the International Population Action in 1993, the countries each with a per - capita volume of water resources less than 1700 m<sup>3</sup> are countries with water stress; those each with a per - capita volume of water resources less than 1000 m<sup>3</sup> are countries with water scarcity; and those each with a per - capita volume of water resources less than 500 m<sup>3</sup> are countries with absolute water scarcity. By the middle part of the 21st century, China's per - capita volume of water resources will approach 1700 m<sup>3</sup> and China will become one of the countries with water stress.

### **2 Extremely uneven regional distribution of water resources**

The regional distribution of China's precipitation and annual runoff is extremely uneven for the great influence of such factors as the distribution of seas and lands, the sources of water vapor, terrains and landforms. The general trend is progressive decrease from the coastal areas in southeast China to the inland areas in northwest China. According to the orders of annual runoff and annual runoff depth, China can be divided into five kinds of areas; rainy - water rich areas, moist - water abundant areas, semi - moist - transitional areas, semi - dryness - water shortage areas and dryness - drought areas.

### **3 Big variation of intra - year and inter - year water resource supplement**

For the influence of monsoon climate, the intra - year distribution of precipitation in China is extremely uneven. In most areas the precipitation in four consecutive months in a year accounts

for 60%–80% of the annual total. It means that about two thirds of China's water resources belong to the runoff volume of floods. The inter – year variation of precipitation in China is very big. The maximum annual precipitation is generally 2 – 4 times of the minimum in the southern areas and 3 – 8 times in the northern areas. There have also appeared consecutive wet years or consecutive dry years. The drastic inter – year variation and the great intra – year concentration of precipitation and runoff are the major reasons of frequent floods and draughts, unstable agricultural production and imbalanced water supply and demand. Consequently, China's management of waters and rivers and development and utilization of water resources need long – term efforts and are arduous and complicated.

#### **4 Poor matches between the regional distribution of water and soil resources and the distribution of productive forces**

In China there are rich water resources in the south but few in the north and the gap is huge. The regional distribution of water resources is inconsistent with the distribution of population, cultivated land and productive forces. According to the statistics in 1997, China's ten drainage areas are combined into three obviously different regions including the southern region, the northern region and the northwestern inland region.

## Lesson 2 The Hydrologic Cycle

In nature, water is constantly changing from one state to another. The heat of the sun evaporates water from land and water surfaces. This water vapor (a gas), being lighter than air, rises until it reaches the cold upper air where it condenses into clouds. Clouds drift around according to the direction of the wind until they strike a colder atmosphere. At this point the water further condenses and falls to the earth as rain, sleet, or snow, thus completing the hydrologic cycle.

The complete hydrologic cycle, however, is much more complex. The atmosphere gains water vapor by evaporation not only from the oceans but also from lakes, rivers, and other water bodies, and from moist ground surfaces. Water vapor is also gained by sublimation from snowfields and by transpiration from vegetation and trees.

Water precipitation may follow various routes. Much of the precipitation from the atmosphere falls directly on the oceans. Of the water that does fall over land areas, some is caught by vegetation or evaporates before reaching the ground, some is locked up in snowfields or ice - fields for periods ranging from a season to many thousands of years, and some is retarded by storage in reservoirs, in the ground, in chemical compounds and in vegetation and animal life.

The water that falls on land areas may return immediately to the sea as runoff in streams and rivers or when snow melts in warmer seasons. When the water does not run off immediately it percolates into the soil. Some of this groundwater is taken up by the roots of vegetation and some of it flows through the subsoil into rivers, lakes and oceans.

Because water is absolutely necessary for sustaining life and is of great importance in industry, men have tried in many ways to control the hydrologic cycle to their own advantage. An obvious example is the storage of water behind dams in reservoirs, in climates where there are excesses and deficits of precipitation (with respect to water needs) at different times in the year. Another method is the attempt to increase or decrease natural precipitation by injecting particles of dry ice or silver iodide into clouds. This kind of weather modification has had limited success thus far, but many meteorologists believe that a significant control of precipitation can be achieved in the future.

Other attempts to influence the hydrologic cycle include the contour plowing of sloping farmlands to slow down runoff and permit more water to percolate into the ground, the construction of dikes to prevent floods and so on. The reuse of water before it returns to the sea is another common practice. Various water supply systems that obtain their water from rivers may recycle it several times (with purification) before it finally reaches the

rivers mouth.

Men also attempt to predict the effects of events in the course of the hydrologic cycle. Thus, the meteorologist forecasts the amount and intensity of precipitation in a watershed, and the hydrologist forecasts the volume of runoff.

### New Words

1. hydrologic [hai'drɒlədʒi] <i>adj.</i>	水文的, 水文学的
2. condense [kən'dens] <i>v.</i>	凝结
3. drift [drift] <i>v.</i>	飘动, 飘浮
4. sleet [sli:t] <i>n.</i>	雨夹雪, 冻雨
5. moist [məist] <i>adj.</i>	潮湿的
6. sublimation [ˌsʌbli'meɪʃən] <i>n.</i>	升华, 升华作用
7. transpiration [ˌtrænspi'reɪʃən] <i>n.</i>	蒸腾, 蒸腾作用
8. vegetation [ˌvedʒi'teɪʃən] <i>n.</i>	植物
9. precipitation [pri:si'pi'teɪʃən] <i>n.</i>	降水, 降雨
10. route [ru:t] <i>n.</i>	路程, 道路
11. retard [ri'ta:d] <i>vt.</i>	停滞
12. storage ['stɔ:ridʒ] <i>n.</i>	储藏
13. runoff [rʌnɔ:f] <i>n.</i>	径流
14. percolate ['pɜ:kəleit] <i>v.</i>	渗透
15. root [ru:t] <i>n.</i>	根
16. subsoil* [ˌsʌbsɔil] <i>n.</i>	下层土, 底土
17. sustain [səs'tein] <i>vt.</i>	维持, 使……生存下去
18. excess [ik'ses] <i>n.</i>	过量, 过剩
19. deficit ['defisit] <i>n.</i>	欠缺, 不足
20. inject [in'dʒekt] <i>vt.</i>	注射, 喷射
21. iodide ['aiədaɪd] <i>n.</i>	碘化物
silver ~	碘化银
22. modification [ˌmɒdifi'keɪʃən] <i>n.</i>	改善, 改变
23. meteorologist [ˌmi:tɪə'rɒlədʒɪst] <i>n.</i>	气象学家
24. contour ['kɒntʊə] <i>adj.</i>	沿等高线修筑的
25. plowing [pləʊɪŋ] <i>n.</i>	耕地
26. sloping [sləʊpɪŋ] <i>adj.</i>	倾斜的
27. dike [daɪk] <i>n.</i>	堤, 坝
28. purification [ˌpjuəri'fɪkeɪʃən] <i>n.</i>	净化, 澄清
29. predict [pri'dɪkt] <i>vt.</i>	预测
30. intensity [in'tensiti] <i>n.</i>	强度
31. watershed ['wɔ:tʃəd] <i>n.</i>	流域



32. hydrologist [hai'drɒlədʒɪst] *n.*

水文学家

### Phrases and Expressions

1. hydrologic cycle

水循环

2. lock up

封闭, 潜藏

3. take up

吸收, 溶解

4. to one's advantage (to the advantage of)

对……有利

5. with respect to

根据, 关于, 就……而论

6. thus far

迄今

## Reading Material The Water Cycle

Water on earth is always changing. Its repeating changes make a cycle. As water goes through its cycle, it can be a solid (ice), a liquid (water) or a gas (water vapor). Ice can change to water or water vapor. Water can change to ice or water vapor. Water vapor can change to ice or water.

Adding or subtracting heat makes the cycle work. If heat is added to ice, it melts. If heat is added to water, it evaporates. Evaporation turns liquid water into a gas called water vapor. If heat is taken away from water vapor, it condenses. Condensation turns water vapor into a liquid. If heat is taken away from liquid water, it freezes to ice.

The water cycle is called the hydrologic cycle. In the hydrologic cycle, water from oceans, lakes, swamps, rivers, plants, and even you, can turn into water vapor. Water vapor condenses into millions of tiny droplets that form clouds. Clouds lose their water as rain or snow, which is called precipitation. Precipitation is either absorbed into the ground or runs off into rivers. Water absorbed into the ground is taken up by plants. Plants lose water from their surfaces as vapor back into the atmosphere. Water that runs off into rivers flows into ponds, lakes, or oceans where it evaporates back into the atmosphere. The cycle continues.

There are six important processes that make up the water cycle.

### 1 Evaporation

Evaporation is the process where a liquid, in this case water, changes from its liquid state to a gaseous state. Liquid water becomes water vapor. Although lower air pressure helps promote evaporation, temperature is the primary factor. For example, all of the water in a pot left on a table will eventually evaporate. It may take several weeks. But, if that same pot of water is put on a stove and brought to a boiling temperature, the water will evaporate more quickly.

During the water cycle some of the water in the oceans and freshwater bodies, such as lakes and rivers, is warmed by the sun and evaporates. During the process of evaporation,