

water



/'wɔ:tər/

n. 水, 水域

water pump	水泵
water quality	水质
water resources	水资源
water right	水权
water supply	给水, 供水

This district faces a serious **water** quality challenge.

这个地区面临着严重的水质挑战。

Management of **water** resources is a complex decision-making process.

水资源管理是一个复杂的决策过程。

Clean **water** is critical to plants and animals that live in it.

洁净的水对于水生动植物至关重要。



Day
1

hydraulic



/haɪ'drɔ:ɪlɪk/

adj. 水力学的, 液压的, 水下硬化的

hydraulic cement	水硬水泥
hydraulic engineering	水利工程
hydraulic jump	水跃
hydraulic structure	水工建筑物
hydraulic system	液压系统

Hydraulic engineering often plays a key role in designing and building tunnels, bridges and highways.

设计和建造隧道、桥梁以及高速公路时, 水利工程往往起着关键作用。

Hydraulic systems are used in all kinds of large and small industrial settings.

液压系统在各种大大小小的工业场景中都有应用。



Day
2

soil



/soil/

n. 土壤

soil and water conservation

水土保持

soil erosion

土壤侵蚀

soil moisture

土壤湿度

soil surface

土表

Soil is an important type of natural resources, just as the air and water that surround us are.

土壤是一种重要的自然资源，正如我们周围的空气和水一样。

A system of **soil** sensors allows farmers to monitor **soil** conditions on a daily basis.

土壤传感器系统让农民可以每天监测土壤状况。



Day
3

flow



/fləʊ/

n. 水流, 流量

base flow	基流
groundwater flow	地下水流
peak flow	洪峰流量
river flow	河川径流
water flow	水流

In most streams, base **flow** comes largely from groundwater.

大多数河流的基流主要来源于地下水。

The water **flow** is blocked by a dam, allowing an artificial lake to be formed.

水流被大坝阻断, 形成一个人工湖。

Typical **flow** rate units are liters per second or cubic meters per second.

流量的单位通常是升每秒或立方米每秒。

Day
4

turbine



/ˈtɜːrbən/

n. 水轮机, 涡轮机

turbine blade	涡轮叶片
turbine shaft	涡轮轴
impulse hydraulic turbine	冲击式水轮机
reaction hydraulic turbine	反击式水轮机

British-American engineer James Francis created the first modern hydraulic **turbine**.

英裔美国工程师詹姆斯·弗朗西斯发明了第一台现代水轮机。

There are mainly two types of hydraulic **turbines**: impulse and reaction.

水轮机主要有两种类型：冲击式和反击式。

Note

常见的水轮机有：

Francis turbine 弗朗西斯式水轮机（混流式水轮机）

Kaplan turbine 卡普兰式水轮机（转桨式水轮机）

Pelton turbine 皮尔顿水轮机（水斗式水轮机）

Day
5

structure



/'strʌktʃər/

n. 结构, 建筑物

structure drawing	结构图, 构造图
concrete structure	混凝土结构
drop structure	落差建筑物
intake structure	进水建筑物
steel structure	钢结构

A hydraulic **structure** can be built in a river, a sea, or any body of water.

水工建筑物可建于河流、海洋或其他任何水体中。

The water control **structures** should be built before letting any water flow through the canal.

在让水流入运河之前, 应该建造控水结构。

A dam is a large, man-made **structure** built to contain some water bodies.

大坝是大型的人造建筑物, 用来拦截某些水体。

Day
6

dam



/dæm/

n. 坝, 水坝

dam site	坝址
arch dam	拱坝
concrete dam	混凝土坝
embankment dam	土石坝, 填筑坝

A **dam** is built on a soil or rock foundation.

大坝修建在土地基或岩石地基上。

A **dam** with a large drop is constructed to raise the potential energy of water.

修建落差较大的大坝是为了增加水的势能。

Dams are generally constructed to serve purposes such as the generation of hydroelectric power, to control flooding, to reduce the imminence of drought and to develop tourism.

建水坝通常是为了水力发电、控制洪水、缓解干旱和发展旅游业等。



Day
7

equipment



/ɪ'kwɪpmənt/

n. 设备

equipment selection	设备选型
drip irrigation equipment	滴灌设备
electromechanical equipment	机电设备
heavy equipment	重型设备
mechanical equipment	机械设备

This type of heavy **equipment** is used for underwater excavations.

这类重型设备用于水下挖掘。

Abnormal conditions of this **equipment** need to be alarmed.

此设备如出现异常，需有报警提示。

The **equipment** is portable, simple to operate, and includes rechargeable battery.

这个设备便于携带，操作简单，还配有充电电池。

Day
8

river



/ˈrɪvər/

n. 河流

river bed	河床
river flow	河流径流
river regulation	河道整治
river valley	河谷
canalized river	渠化河道
natural river	天然河流

The impact that power plants and reservoirs have on **river** basins is undeniable.

发电厂和水库对河流流域的影响是毋庸置疑的。

Rivers are a natural waterway which can be used as a means of transport.

河流是一种天然航道，可作为一种交通方式。



Day
9

design



/dɪˈzaɪn/

n. 设计

design flood	设计洪水
design phase	设计阶段
computer aided design	计算机辅助设计
engineering design	工程设计
system design	系统设计

The source of water has a major effect on water distribution system **design**.

水源对配水系统的设计有着重要影响。

The initial phases of surveys and **design** may extend over months.

调查和设计的初始阶段可能会持续几个月。



Day
10

drainage



/'dreɪnɪdʒ/

n. 排水

drainage area	排水区域
drainage ditch	排水沟
drainage system	排水系统
subsurface drainage	地下排水
surface drainage	地面排水

Such **drainage** systems not only help in preventing floods, but also improve water quality.

这种排水系统不仅有助于防洪，还能改善水质。

The removal of free water by **drainage** allows soil to warm up quickly.

通过排水去除自由水可以使土壤迅速升温。

Day
11

plant



/plɑːnt/

n. 工厂

hydropower plant	水电厂，水电站
pumping plant	泵站
water treatment plant	净水厂，给水处理厂

At hydropower **plants**, water flows through a pipe or penstock, then pushes against and turns blades in a turbine to spin a generator to produce electricity.

在水电厂，水流经管道或压力管道，推动涡轮机叶片旋转，从而使发电机发电。

A coal-fired power **plant** uses steam to turn the turbine blades; whereas a hydropower **plant** uses falling water to turn the turbine.

燃煤发电厂使用蒸汽来推动涡轮叶片；而水电厂则利用落下的水流来转动涡轮机。



Day
12

run-off



/'rʌn ɔ:f/

n. 径流

flood **run-off**

洪水径流

spring **run-off**

春季径流

storm **run-off**

暴雨径流

surface **run-off**

地表径流

It is difficult to predict exactly when the spring **run-off** starts and finishes.

很难准确预测春季径流何时开始、何时结束。

Surface **run-off** is the primary cause of soil erosion.

地表径流是土壤侵蚀的主要原因。

Run-off can come from both natural processes and human activity; the most familiar type of natural **run-off** is snowmelt.

径流可以来源于自然过程，也可以由人类活动产生。最常见的自然径流是雪融水。

Day
13

construction



/kən'strʌkʃən/

n. 建造, 建筑物

construction cost	工程造价
construction diversion	施工导流
construction industry	建筑行业
construction material	建筑材料
construction risk	施工风险
construction schedule	施工进度计划
construction specification	施工规范

Permits are only authorized if protection measures are involved in the **construction** works.

建筑工程必须包含安全防护措施, 才会获发许可证。

The **construction** management plan should include relevant policies that guide the work.

施工管理方案应包含指导施工的相关政策。

Day
14

irrigation



/,ɪrə'geɪʃən/

n. 灌溉

irrigation canal

灌溉渠道

irrigation system

灌溉系统

furrow irrigation

沟灌

sprinkler irrigation

喷灌

surface irrigation

地面灌溉

In certain cases, it is allowable for rainwater to flow into an **irrigation canal**.

在某些情况下，可以允许雨水进入灌溉渠道。

It's generally believed that the biggest advantage of drip **irrigation** technology is water saving.

大家普遍认为，滴灌技术最大的优点是节水。



Day
15

pump



/pʌmp/

n. 泵, 抽水机

v. 从地下抽出(水、油)等

pump station	泵站
pumped storage	抽水蓄能
centrifugal pump	离心泵
hand pump	手摇泵
hydraulic pump	液压泵, 水力泵
well pump	井泵

An old-fashioned hand **pump** requires no electricity.

老式的手摇泵不需要用电。

There are two common types of water **pumps**: vane and positive displacement.

水泵有两种常见类型: 叶片式和容积式。

The centrifugal **pump** can be defined as a hydraulic machine which converts mechanical energy into hydraulic energy by means of centrifugal force acting on the fluid.

离心泵是一种液压机, 通过作用在流体上的离心力将机械能转化为水能。

Day
16

supply



/sə'plai/

n. 供给, 补给

municipal water supply	城市供水
potable water supply	饮水供给
power supply	供电
public water supply	公共供水
water supply system	给水系统, 供水系统

The evolution of public water **supply** systems is tied directly to the growth of cities.

公共供水系统的发展与城市的发展直接相关。

Water supply to rural areas can be sourced from rainwater, groundwater and surface water.

农村地区的水供给可以来自雨水、地下水和地表水。

Among various sources of fresh water **supply**, groundwater is by far the most practicable choice.

各种淡水供给源中, 地下水是迄今为止最可行的选择。

Day
17

hydropower



/ˈhaɪdrəʊˌpaʊər/

n. 水力发电, 水电

hydropower facilities	水电设施
hydropower project	水电项目
hydropower station	水电站
small hydropower	小水电

Small and micro **hydropower** stations utilize water from rivers and avoid big environmental impacts.

小型和微型水电站利用河流水，避免对环境产生巨大影响。

Small **hydropower** potential is given in hilly or mountainous regions.

山地丘陵地区的水电蕴藏量较小。



Day
18

flood



/flʌd/

n. 洪水

flood bypass	分洪道
flood control	防洪
flood plain	洪泛平原, 河漫滩
flood routing	洪水演进
flash flood	骤发洪水, 暴洪

A dike is a structure of **flood** protection.

堤坝是一种防洪建筑物。

The risk of a major spring **flood** could increase if heavy winter precipitation occurs.

如果冬季有强降水, 发生较大春汛的风险会增加。



Day
19

project



/'prɑ:dʒekt/

n. 工程, 项目

project cost	项目成本, 工程造价
project development	项目开发
project implementation	项目实施, 项目执行
project management	项目管理
construction project	建设工程项目

A good detailed **project** report would lead to smooth implementation of a **project**.

一份优秀详细的项目报告会促使项目顺利进行。

The integrated **project** management plan should involve major **project** components.

项目综合管理计划应包含主要的项目组成部分。



Day
20

generator



/ˈdʒenəreɪtər/

n. 发电机

generator room	发电机房
generator shaft	发电机轴
generator stator	发电机定子
induction generator	感应发电机
synchronous generator	同步发电机

The hydraulic **generator** or generating unit shall be installed according to the manufacturer's instructions.

水轮发电机或发电机组应按照制造商的说明安装。

A **generator** is a piece of equipment that converts mechanical energy into electrical energy.

发电机是把机械能转换成电能的设备。

Day
21

pipe



/paɪp/

n. 管, 管道

pipe diameter

管径

pipe network

管网

drip irrigation **pipe**

滴灌管

hydraulic **pipe**

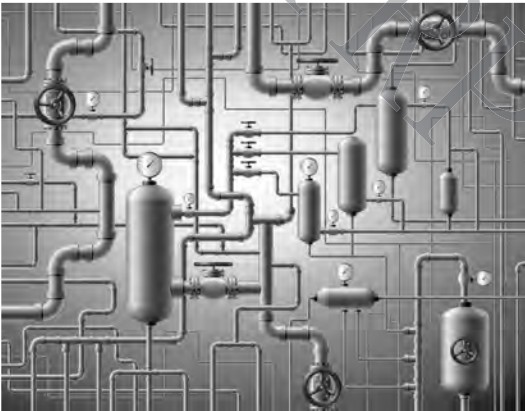
液压管道

The drip irrigation **pipe** is a low-pressure **pipe** system.

滴灌管是一种低压管道系统。

The steel **pipe** is very strong, but has a shorter service life than the concrete pipe.

钢管很结实，但是使用寿命比混凝土管短。



Day
22

control



/kən'troʊl/

n. 控制, 管理

control board	控制板
control room	控制室
control system	控制系统
control valve	控制阀
remote control	遥控, 远程控制
supervisory control	监督控制

Control signals are signals given from the **control board** to various pieces of equipment.

控制信号是指从控制板发送到各种设备的信号。

When the **control gate** is fully opened, the maximum amount of water will be released through the penstock.

控制闸门完全打开时, 压力管道中会释放出最大水量。

Day
23

engineering



/,endʒə'nɪrɪŋ/

n. 工程 (设计)

engineering geology	工程地质学
engineering hydrology	工程水文学
engineering structure	工程结构
port engineering	港口工程

Environmental **engineering** focuses on protecting the environment by reducing waste and pollution.

环境工程重点关注如何通过减少浪费和污染来保护环境。

Environmental **engineering** utilizes engineering techniques and principles of related disciplines to improve environmental quality.

环境工程学运用工程技术和有关学科的原理来改善环境质量。

Civil engineering concerns the planning, building, and repair of roads, bridges, large buildings, etc.

土木工程关注道路、桥梁、大型建筑等的规划、建筑以及养护。

Day
24

quality



/'kwɔ:ləti/

n. 质量, 品质

quality assurance

质量保证

quality control

质量控制

air quality

空气质量

environmental quality

环境质量

The water **quality** inspector samples the water distribution system from a variety of locations throughout the city.

水质检测员在全城的不同地点对配水系统进行取样。

In areas with high **quality** water sources, water charges will be much lower.

在拥有优质水源的地区，水费会低很多。



Day
25

reservoir



/ˈrezərvwa:r/

n. 水库, 蓄水池

reservoir regulation

水库调度

reservoir seepage

水库渗漏

lower **reservoir**

下水库

upper **reservoir**

上水库

A **reservoir** is built for water storage.

水库是为蓄水而建的。

Hydrologists use topographic maps and aerial photographs to calculate **reservoir** depths and storage capacity.

水文工作者用地形图和航拍照片来计算水库深度和储水量。



Day
26

surface



/ˈsɜːrfɪs/

n. 表面, 表层

surface feature	地形, 地貌
surface tension	表面张力
surface water	地表水
ground surface	地面, 地表

A huge 70% of the Earth's **surface** is covered with water.

地球表面 70% 之多的面积被水覆盖。

The tunnel was some 91 m below the **surface**.

隧道在地表约 91 米下。

The liquid or solid water in the cloud, such as rain, falls on the Earth's **surface**, and this is called precipitation.

云里的液态水或固态水, 比如雨水, 落在地球表面, 这个过程叫作降水。

Day
27

resource



/ˈriːsɔːrs/

n. 资源

resource planning	资源规划
financial resources	财政资源
hydropower resources	水能资源
scarce resources	稀缺资源
water resources management	水资源管理

Visual interpretation has served as a major tool for assessing groundwater **resources**.

目视判读是评估地下水资源的主要方法。

Fresh water is a finite and vulnerable **resource**.

淡水是一种有限且脆弱的资源。

Freshwater lakes and shallow groundwater represent an available freshwater **resource** for humans.

淡水湖和浅层地下水是人类可用的淡水资源。

Day
28

canal



/kə'neɪl/

n. 渠道, 运河

canal barge

运河驳船

artificial canal

人工渠道

inland canal

内陆运河

Under gravity irrigation, water is distributed by means of open **canals**.

在自流灌溉下, 水通过明渠进行分配。

The Panama **Canal** was originally administered and supervised by the military.

巴拿马运河最初由军队管理监督。



Day
29

discharge



/ˈdɪstʃɑːrdʒ/ *n.* 排放, 流量
/dɪsˈtʃɑːrdʒ/ *v.* 排放

discharge capacity

泄流能力

discharge coefficient

流量系数

The peak **discharge** of a flood is influenced by many factors, including the intensity and duration of storms and snowmelt, the topography and geology of the river basin and vegetation.

洪峰流量受许多因素影响, 包括风暴和融雪的强度和持续时间、流域的地形地质以及植被。

Some jurisdictions require that storm water should be processed at certain degree before being **discharged** directly into sewers.

一些辖区规定暴雨积水在直接排入下水道之前要经过一定程度的处理。



Day
30