

# 走进 淠史杭

Approaching  
Pi-Shi-Hang  
Irrigation District

安徽省淠史杭灌区管理总局 编著

General Administrative Office of Anhui Pi-Shi-Hang Irrigation District



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## 内 容 提 要

本书较为全面地介绍了新中国成立后兴建的全国最大灌区——湃史杭灌区的工程体系、建设历史、管理创新和人文风貌，向人们展示了湃史杭灌区与时俱进的建设与管理历程和服务经济社会发展的巨大成就，是了解湃史杭、研究中国灌区的一本重要参考书籍。



## Synopsis

This book introduces and shows in all its aspects Pi-Shi-Hang Irrigation District (PSH)—the largest constructed after the foundation of new China, the content including engineering makeup, construction, management and effectiveness, as well as its history and cultural features. It is an important and useful reference book in getting to know PSH and in learning about China's irrigation districts.





## 序 Preface

二十世纪五十年代后期，一个规模宏大的水利工程在江淮大地蓬勃兴起，这就是被郭沫若先生誉为“沟通三河、横贯皖中”的淠史杭灌区。这是安徽人民创造的人间奇迹。

的确，在当年经济极端困难，技术条件十分简陋，物资极端匮乏的状况下，安徽人民以顽强不屈的斗志，艰苦奋斗的精神，尊重科学的态度，不仅用铁锹、钢钎、独轮车等简单劳动工具，而且用生命和热血建成了灌溉1000多万亩的大灌区，创造了新中国水利建设史上的一座丰碑。其创业之艰辛，规划之科学，进度之快速，工程之宏伟，效益之巨大，当为中国水利史上的新篇章，更是安徽人民的骄傲。

在新的历史条件下，淠史杭灌区坚持贯彻中央治水方针，实践水利部党组治水新思路，按照省委、省政府奋力崛起的战略部署，在省水利厅党组的领导下，着力推进体制、机制创新，并与市场经济接轨，加快续建配套与节水改造的步伐，灌区在改革中前进，在创新中发展，焕发了淠史杭工程青春的活力。

淠史杭工程的建设与管理历程，是安徽水利在一穷二白基础上发展前进的一个缩影，是安徽水利服务社会经济发展的一个成功典范，也将为安徽水利的改革与发展提供十分宝贵的经验。我们相信，秉承淠史杭精神，在科学发展观的指引下，淠史杭灌区一定会在实践可持续发展水利，促进人水和谐，建设现代化大灌区的征程中，创造出新的辉煌成就。

省淠史杭灌区管理总局组织编印了《走进淠史杭》一书，内容丰富，图文并茂，比较详实地记录了淠史杭工程的建设历史、工程体系、管理历程和人文风貌，很有意义。透过这本书，抚今追昔，我们深切缅怀老一辈水利人可歌可泣的治水伟业，他们满怀激情，冒酷暑，斗冰霜，长年鏖战穷山恶水，修建了这一水利工程的旷世杰作，创造了光彩照人的人文精神，也成为生生不息的宝贵精神财富，必将激励每一位水利工作者，发扬“献身、负责、求实”的行业精神，勇于创新，开拓进取，创造安徽水利新业绩。该书的出版发行，对于广泛宣传淠史杭，让世人了解淠史杭，具有十分重要的意义。我也期望通过这本书的出版发行，使更多的人关注淠史杭的发展，关心淠史杭的建设，支持淠史杭的改革，让新中国水利史上这一明珠发出更加璀璨的光芒！

是为序，亦为祝贺。

安徽省水利厅党组书记、厅长

2006年9月



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概 述 篇

General





截断大别山云雨  
dam holding up the  
water flow in Dabieshan  
mountain area

Pi-Shi-Hang Irrigation District (PSH in short hereinafter), lying in the midwest of Anhui province and southeast of Henan province and stretching across Yangtze river and Huaihe river drainage basins, is the general term for three adjoining irrigation districts- Pihe, Shihe and Hangbuhe irrigation areas.

PSH is an oversized comprehensive water conservancy project mainly for irrigation and flood control, accompanied with waterpower, municipal water supply, shipping and aquaculture etc.

Its beneficial area involves 4 cities and 17 counties of Anhui and Henan Provinces, with the design irrigation area being 11.98 million *mu* (1*mu*=0.0667 hectare) and effective irrigation area 10 million *mu*, and regional population 12.33 million.

## 概述篇 General

淠史杭灌区位于安徽省中西部和河南省东南部，横跨江淮两大流域，是淠河、史河、杭埠河三个毗邻灌区的总称，是以防洪、灌溉为主，兼有水力发电、城市供水、航运和水产养殖等综合功能的特大型水利工程，受益范围涉及安徽、河南2省4市17个县（区），设计灌溉面积1198万亩，实灌面积1000万亩，区域人口1233万人，是中华人民共和国成立后兴建的全国最大灌区，也是全国3个特大型灌区之一。

淠史杭工程以自力更生创业历史享誉中外。位于江淮分水岭两侧的特殊地形和地处南北气候过渡带的气象条件，使



灌区之源  
the water source of PSH

历史上皖西皖中地区旱涝灾害频发。在这片饱受水患的土地上，古代先哲们虽然创造了中国最古老的蓄水灌溉工程——芍陂（今安丰塘）等水利工程，但并没有改变江淮分水岭地区十年九灾的历史。新中国成立后，在中国共产党的领导下，安徽人民积极响应“一定要把淮河修好”的伟大号召，自力更生、艰苦奋斗，陆续兴建了拦蓄大别山区洪水的佛子岭、梅山、磨子潭、响洪甸、龙河口五大水库。以此为主水源，建成了灌溉1000多万亩的特大型淠史杭灌区。从1958年开工



PSH is the largest irrigation district constructed since 1949 (the foundation of P. R. China), also one of the three oversized irrigation districts throughout the country.

PSH is famous home and abroad for its miraculous construction history. Shortly after P. R. China's foundation and under the leadership of CPC (Communist Party of China), people living in the central and western Anhui province began the construction of PSH. With very simple tools (cross pickaxe, wheelbarrow, etc.), behindhand techniques and equipment, and bearing economic hardship, the constructors completed the construction of PSH with the construction cost in construction period being some over RMB 40 yuan per *mu* in state investment.

National and Party leaders, Mao Zedong, Chou Enlai, Zhu De, Deng Xiaoping, Liu Bocheng, Li Peng, Qiao Shi, Wen Jiabao and Zeng Qinghong, etc. have been here to review PSH, and foreign visitors from America, France etc. have also been here to view for reference.

PSH also enjoys the fame of magnificent irrigation and drainage channel network. It includes five large-scale reservoirs, three major channel head works, fixed channels of seven grades with a total length of 25,000 km, over 60,000 channel structures of various kinds, more than 1,200 middle- and small-scale reservoirs and 210,000 small weirs in hilly areas, all of which together constitute a "melons born on long vines" (series-wound) irrigation network with combined functions of water storage, diversion and pumping. This irrigation network links up Pihe, Shihe and Hangbuhe river systems, and stretches across Yangtze river and Huaihe river drainage basins, accomplishes a scientific use of rain



兴建至1972年基本建成通水的14年里，在经济极端困难、物资十分匮乏、技术设备比较落后的条件下，安徽人民用十字镐、独轮车等简单工具，肩挑手抬，以最高日上工人数80万人、累计4亿工日的“人民战争”和建设时期每亩不足40元的国家投资，开挖了6亿立方米的土方量，建起了纵横皖西、横贯皖中的庞大灌溉系统，创造了新中国水利建设史上的奇迹。党和国家领导人毛泽东、周恩来、朱德、邓小平、刘伯承、李鹏、乔石、温家宝、曾庆红等先后来到灌区视察，美国、法国等30多个国家的友人先后来到灌区观摩。

淠史杭工程以宏伟的灌溉体系著称于世。灌区以五大水库、三大渠首、2.5万公里七级固定渠道、6万多座各类渠系建筑物，以及1200多座中小型水库、21万座塘堰组成的蓄、引、提相结合的“长藤结瓜式”灌溉系统，纵横交错地分布在岗峦起伏的江淮大地上，沟通淠河、史河、杭埠河三大水系，横跨江淮两大流域，实现了雨洪资源的科学利用和水资源的合理配置，使昔日赤地千里的贫瘠之地变成了今天的鱼米之乡，被誉为新中国治水历史上的一颗璀璨明珠。

淠史杭工程以强大的服务功能支持安徽奋力崛起。淠史杭灌区控制面积1.4万平方公里，其中安徽省内面积1.3万平方公里，占全省国土面积的1/10；耕地面积1160万亩，占全省的1/6；有效灌溉面积1000万亩，占全省的1/5；2005年粮食产量占全省的1/5；水稻产量占全省的1/3，奠定了安徽粮食主产省的重要地位，促进了全省

人工天河  
manmade river



纵横交流  
interconnecting irrigation channels



and flood, and optimizes water resources allocation, turning once deserted and lean soil into fertile farmland. Thus PSH is reputed as “A Bright Pearl” in China’s history of water conservancy.

Thanks to PSH’s powerful service, Anhui province develops rapidly and its economy speeds up vigorously. Of the 14,000 km<sup>2</sup> of PSH control area, 13,000 km<sup>2</sup> belongs to Anhui province, 1/10 of the land resources of the whole province; of the 13,000 km<sup>2</sup> PSH control area in Anhui province, 11.6 million *mu* is farmland, 1/6 of the farmland of the province; and the effective irrigation area is 10 million *mu*, 1/5 of that of the province. The grain output of the farmland in PSH control area in Anhui province takes up 20% of that of the whole province and paddy rice output takes up about 33% of that of the whole province, thereby establishing the important position of Anhui province as a national key grain producing province and securing the steady grain output. In addition, the high quality water of PSH is the source of 12.33 million people’s lives, the water supply for 1/3 of the provincial economy development, and the source, too, to keep a favorable ecological environment in PSH. Thus PSH plays an important and non-replaceable role in both economic and social development of Anhui province.

As regard to the reconstruction and administration of PSH, the administrators carry out the administrative operation with earnest hearts and innovative spirit. In light of the Chinese central government’s water control policies in new period and MWR (Ministry of Water Resources) Party Committee’s water control conceptual, the administrative operation of PSH mainly concentrates on institutional innovation and engineering



江淮龙脉  
wandering Yangtze  
river and Huaihe river

的粮食安全。灌区优质的水源是1233万人的生命之源，是全省近1/3国民经济发展的用水保障，是维持灌区良好生态的源头活水，在全省经济社会发展中发挥着不可替代的巨大作用。

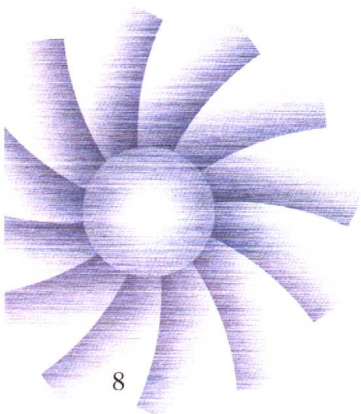
淠史杭灌区以改革创新的精神抒写着灌区建设管理的新篇章。1963年，淠史杭灌区在全国灌区中较早地实施了“基本水费+计量水费”的水费计收办法；1984年，淠史杭灌区在全国大型灌区中第一个引进世界银行贷款进行灌区续建配套与节水改造；20世纪90年代以来，淠史杭灌区按照中央新时期治水方针和水利部党组的治水思路，紧紧围绕灌区体制、机制创新与灌区工程改造两项任务，改善工程老损面貌，改革体制机制，加快灌区管理工作与市场经济的接轨。工程自1959年开始发挥效益，累计引水1413亿立方米，累计灌溉3.48亿亩，灌区农业生产抗旱减灾效益590.52亿元人民币；城市供水25.66亿立方米，发电量120亿千瓦时。以水资源的可持续利用支持了经济社会的可持续发展。

今天，在科学发展观的引领下，淠史杭灌区以服务灌区经济社会发展为己任，力争建设一个功能完备、效益显著、管理先进的现代化大灌区。



reconstruction, i.e., refurbishing and rebuilding the old and malfunctioning works, thereby accelerating the connecting progress of PSH administration system with market economic structure. Since its completion and engineering effectiveness being exerted in 1959, PSH has accumulatively diverted 141.3 billion  $\text{m}^3$  of water, irrigated 348 million *mu* of farmland, supplied municipal water of 2,566 million  $\text{m}^3$  and generated electric power of 12 billion  $\text{kW} \cdot \text{h}$ , effectively supporting the sustainable social and economic development with continuable use of water resources.

Nowadays, under the guidance of Scientific Development Concept, PSH has endeavored to serve the economic and social development of irrigation districts and to become a modernized irrigation district with self-contained functions, outstanding benefits and advanced administration system.





工 程 篇

Description

With a total of 25,000 km fixed channels of seven grades as the “vines” and more than 1,200 middle-and small-scale reservoirs and 210,000 small weirs in hilly areas as the “melons”, PSH has a “melons born on long vines” (series-wound) irrigation network.

## Water Source Works

PSH has a total amount of water resources of 10 billion m<sup>3</sup>; five large-scale reservoirs in upstream Dabieshan Mountain area with the total storage capacity of 6.635 billion m<sup>3</sup> are the major water sources, there are also 38 pump stations pumping from Chengxi, Chengdong and Chaohu Lakes in peripheral area of PSH, and the middle-and small-scale reservoirs and weirs with a total storage capacity of 2.1 billion m<sup>3</sup>, holding up and storing surface runoff and serving as regulating water sources.

Three kinds of water sources-stored, diverted and pumped, combine in water dispatching and function as regulating source for one another.

## Five Large-scale Reservoirs in Dabieshan Mountain Area

**Foziling reservoir** Initially built in July of 1952, Foziling reservoir lies on the upstream of the east headwater of Pihe river in Huoshan county with the storage capacity of 491 million m<sup>3</sup>, the drainage area of 1,840 km<sup>2</sup> and installed capacity of 31 mega Watts; design flood frequency is centennial, and check flood frequency is millennial. The multi-arch dam of Foziling reservoir is the first one in China designed and built all by Chinese on our own, also the first multi-arch dam in Asia. The Dam is 510 m long with 21 arch rings and 20 buttresses, like a rainbow, lying on