

Environment and Social Compliance Audit Report

Project Number: 52090-001
Final Report – Chizhou Sponge City
June 2021

People's Republic of China: Climate-Resilient and Smart Urban Water Infrastructure Project

Prepared by Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") for the Shenzhen Water (Group) Co., Ltd. and Shenzhen Water and Environment Investment Group Co., Ltd. (the "Client") and the Asian Development Bank.

This environment and social compliance audit report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

This document entitled Environmental & Social Compliance Audit report – Chizhou Sponge City Tail Water Treatment and Black & Odorous Water Treatment Project was prepared by Stantec Environmental Engineering (Shanghai) Co., Ltd. (“Stantec”) for the account of Shenzhen Water Group Co., Ltd. (the “Client”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

CURRENCY EQUIVALENTS

(as of 11 June 2021)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1564
\$1.00	=	CNY6.3945

ABBREVIATIONS

ACMs	Asbestos Containing Materials
ADB	Asian Development Bank
ADB SPS	ADB Safeguard Policy Statement
AESR	Applicable E&S Requirements
AO	Anoxic Oxic
BOT	Build-Operate-Transfer
CAI	Completion Acceptance Inspection
CAP	Corrective Action Plan
COVID-19	Coronavirus disease
ECAI	Environment Completion Acceptance Inspection
E&S	Environmental and Social
EEB	Ecology and Environment Bureau
EIA	Environmental Impact Assessment
EIF	Environmental Impact Form
EIR	Environmental Impact Registration
ERP	Emergency Response Plan
ESMS	Environmental and Social Management System
EHS	Environmental, Health and Safety
EHSS	Environmental, Health, Safety and Social
FCAI	Fire-fighting Completion Acceptance Inspection
FSR	Feasibility Study Report
GRM	Grievance Redress Mechanism
HR	Human Resource
HW	Hazardous wastes
IFC	International Finance Corporation
IH	Industrial Hygiene
MEE	Ministry of Ecology and Environment
MEP	Ministry of Environmental Protection
NOV	Notices of Violation
ODHs	Occupational Disease Hazards
ODSs	Ozone Depleting Substances
PAHs	Project Affected Households
PCB	Polychlorinated Biphenyls
PIAL	Prohibited Investment Activities List
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PRC	People's Republic of China

**ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL
WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT**

SEP	Stakeholder Engagement Plan
SS	Suspended Solids
TSP	Total Suspended Particulate
WWTP	Wastewater Treatment Plant

WEIGHTS AND MEASURES

m	meter	mg/m ³	milligram per cubic meter
km	kilometre	ha	hectare
km ²	square kilometre	t/a	tons per annum
m ²	square meter	h	hour
m ³	cubic meter	t	metric ton
mg/kg	milligram per kilogram	°C	degree centigrade
µg/m ³	microgram per cubic meter	dB	decibel

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
1. INTRODUCTION.....	1.1
1.1 PROJECT BACKGROUND	1.1
1.2 OBJECTIVE OF THE ES AUDIT	1.2
1.3 REPORT STURCTURE	1.2
1.4 LIMITATIONS.....	1.2
2. APPLICATION STANDARDS AND METHODOLOGY	2.4
2.1 APPLICABLE STANDARDS.....	2.4
2.2 E&S PERMITTING REQUIREMENTS.....	2.8
2.3 METHODOLOGY	2.9
2.3.1 Approach.....	2.9
2.3.2 Risk Categorization	2.10
3. PROJECT ASSESSMENT	3.11
3.1 PROJECT DESCRIPTION	3.11
3.1.1 Tail Water Treatment Project.....	3.11
3.1.2 Nan Lake of Black & Odorous Water Treatment Project.....	3.12
3.2 PROJECT DESCRIPTION	3.13
3.2.1 Tail Water Treatment Project.....	3.13
3.2.2 Nan Lake of Black & Odorous Water Treatment Project.....	3.14
3.3 E&S ASSESSMENT	3.15
3.3.1 ESAP Update	3.15
3.3.2 E&S Management Overview	3.20
3.3.3 E&S Permit	3.21
3.3.4 EHS Performance During Operation Period	3.21
3.3.5 Social Assessment During Operation Period.....	3.24
4. CORRECTIVE ACTION PLAN.....	4.28
5. ANNEXURES.....	5.29
ANNEX A: LIST OF DOCUMENT REVIEWED.....	5.30
ANNEX B: STAKEHOLDERS ENGAGED DURING THE ES AUDIT.....	5.31
ANNEX C: PHOTO LOG	5.32
ANNEX D: ENVIRONMENTAL MONITORING PLAN	5.34



LIST OF TABLES

Table 2-1: Related E&S Laws and Regulations	2.4
Table 2-2: National E&S Permitting Requirements	2.8
Table 3-1: ESAP Status.....	3.16
Table 3-2: Permit Compliance Status	3.21
Table 3-3: Water Quality Test in the Wetland (23 March 2021).....	3.21
Table 3-4: Water Quality Test in the Nan Lake (23 March 2021).....	3.22
Table 4-1: Findings and Recommended CAP	4.28

LIST OF FIGURES

Figure 2-1: Indicative Project Permitting Flowchart by Project Phases	2.9
Figure 3-1: Location of the Sites.....	3.11
Figure 3-2: Layout of the Wetland.....	3.13
Figure 3-3: Layout of the Nan Lake Black & Odorous Water Treatment Project	3.14
Figure 3-4: Management Structure	3.20
Figure 3-5: Historical Satellite Imagery for Nan Lake	3.24



Executive Summary

Shenzhen Water (Group) Co., Ltd. (SZWG) is applying a drawdown from the Asian Development Bank (ADB) to support the development/operation of SZWG's subprojects. An Environmental and Social Compliance Audit (ES Audit) has been conducted at the selected components of the Chizhou Sponge City Tail Water Treatment and Black & Odorous Water Treatment Project located in Chizhou City, Anhui Province, People's Republic of China (PRC) in support of the proposed loan.

A Tier 2 subsidiary (70% owned) of SZWG, Chizhou Water Environment Investment and Construction Co., Ltd., (Chizhou Water Environment, or the Company) owns and operates the Chizhou City Sponge City Qingxi River Basin Water Improvement Public-Private Partnership (PPP) project, which comprises four project components, namely Guanghu District Sponge City Modification Project, Huijing District Sponge City Modification Project, Tail Water Treatment Project, and the Black & Odorous Water Treatment Project. As per the Build-Operate-Transfer (BOT) agreement signed between Chizhou Water Industry Investment Co., Ltd (wholly owned by Chizhou City government) and Chizhou Water Environment in September 2016, Chizhou Water Environment is responsible for the construction and operation of the four project components for 12 years (2 years for construction and 10 years for operation). The key project scope for each include: (1) reconstruction of stormwater drainage systems of the local area (residential areas, educational institutes, etc.) and improvement of stormwater storage areas; (2) construction and operation of artificial wetland systems to treat black & odorous water bodies in the local area; (3) construction and operation of artificial wetland systems to further improve the quality of pre-treated wastewater discharged from the local wastewater treatment plants (WWTP).

Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") was engaged by ADB in 2018 to conduct an Environmental and Social Due Diligence (ESDD) at the following project components (the Sites):

- Tail Water Treatment Project, which is mainly for treatment of Qingxi WWTP tail water (the Wetland). The Wetland is an artificial wetland with an area of approximately 260,000 m² and is mainly for further treatment of the pre-treated wastewater from the Qingxi WWTP and becoming part of the flood control system in Chizhou City. The designed capacity of the Wetland is 100,000 m³/d whilst the current actual treatment amount is close to 80,000 m³/d.
- Nan Lake modification project of the Black & Odorous Water Treatment Project, which is mainly for improvement of water quality in Nan Lake. The Black & Odorous Water Treatment Project is aimed to improve the water quality of ten black & odorous water bodies in Chizhou City, including the Nan Lake, which has the area of approximately 250,000 m².

In April 2021, SZWG engaged Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") to conduct the ES Audit of the Company and the Sites. During 26 and 27 April 2021, Stantec conducted the site visit at the Company and the Sites. The main objectives of the ES Audit were to determine the Sites' E&S performance, and to verify the status of the issues identified in the previous ESDD and provide an update.

During the ES Audit, no Red Flag or High-Risk (as defined in **Table 2-3**) issues were identified at the Sites. Overall, the Company has inherited the corporate Environmental and Social Management System (ESMS) and developed its own procedures covering emergency response procedure, water quality monitoring, etc.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

The construction and operation of the Sites do not fall into the ADB Prohibited Investment Activities List (PIAL). Based on the ES Audit, the Sites are classified as:

- Category B for environment;
- Category C for involuntary resettlement; and
- Category C for indigenous people.

Environmental: The potential environmental impacts for the construction and operation of the Sites would be reversible. Environmental impacts of the Sites (mainly wastewater, solid wastes and ecosystem) were identified and assessed and pertinent mitigation measures were developed. No restricted substances or highly toxic materials, including materials containing asbestos, polychlorinated biphenyls, pesticide was observed or reported to have been used at the Sites. Therefore, the categorization of the Sites for Environmental aspects is recognized as **Category B**.

Involuntary Resettlement: The Nan Lake has been a park for years, hence, no land acquisition was required. For the Wetland, the land has been state-owned land for a prolonged period before the establishment of the Wetland and it is still state-owned land for the Wetland serving as a park. No land use right permit or other land use permit/approval will be needed for the Wetland. In addition, no further land acquisition is expected for the Sites. Therefore, the categorization of the Sites for Involuntary Resettlement is recognized as **Category C**.

Indigenous People: The potential impact on ethnic minorities from the Sites' activities is considered negligible as Chizhou City is a traditional Chinese Han dominated area. Ethnic minorities are limited in Chizhou and there is no distinct and vulnerable ethnic minority community in the project areas. Therefore, overall categorization of the Sites for ethnic minorities is recognized as **Category C**.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

INTRODUCTION

1. INTRODUCTION

1.1 PROJECT BACKGROUND

Shenzhen Water (Group) Co., Ltd. (SZWG) is applying a drawdown from the Asian Development Bank (ADB) to support the development/operation of SZWG's subprojects. An Environmental and Social Compliance Audit (ES Audit) has been conducted at the selected components of the Chizhou Sponge City Tail Water Treatment and Black & Odorous Water Treatment Project located in Chizhou City, Anhui Province, People's Republic of China (PRC) in support of the proposed loan.

In 2015, the Chizhou City government launched the first batch of sponge city program to promote sustainable urban water management (climate-resilient), reduce the urban water and carbon footprints (green) and improve access to basic urban services. The sponge city program envisions an overall water system operating like a sponge to absorb, store, infiltrate and purify rainwater and release sustainable environmental flows or for reuse when required. A Tier 2 subsidiary (70% owned) of SZWG, Chizhou Water Environment Investment and Construction Co., Ltd., (Chizhou Water Environment, or the Company) owns and operates the Chizhou City Sponge City Qingxi River Basin Water Improvement Public-Private Partnership (PPP) project, which comprises of four project components, namely Guanghu District Sponge City Modification Project, Huijing District Sponge City Modification Project, Tail Water Treatment Project, and the Black & Odorous Water Treatment Project. As per the Build-Operate-Transfer (BOT) agreement signed between Chizhou Water Industry Investment Co., Ltd (wholly owned by Chizhou City government) and Chizhou Water Environment in September 2016, Chizhou Water Environment is responsible for the construction and operation of the four project components for 12 years (2 years for construction and 10 years for operation). The key project scope for each include: (1) reconstruction of stormwater drainage systems of the local area (residential areas, educational institutes, etc.) and improvement of stormwater storage areas; (2) construction and operation of artificial wetland systems to treat black & odorous water bodies in the local area; (3) construction and operation of artificial wetland systems to further improve the quality of pre-treated wastewater discharged from the local wastewater treatment plants (WWTP).

Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") was engaged by ADB in 2018 to conduct an Environmental and Social Due Diligence (ESDD) at the following project components (the Sites):

- Tail Water Treatment Project, which is mainly for treatment of Qingxi WWTP tail water.
- Nan Lake modification project of the Black & Odorous Water Treatment Project, which is mainly for improvement of water quality in Nan Lake.

In April 2021, SZWG engaged Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") to conduct the ES Audit of the Company and the Sites. During 26 and 27 April 2021, Stantec conducted the site visit at the Company and the Sites.

This report presents the findings of the ES Audit and provides a gap analysis of the Company and the Site's current E&S management performance against the Applicable E&S Requirements (AESRs) detailed as Section 2.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

INTRODUCTION

1.2 OBJECTIVE OF THE ES Audit

The objective of the ES Audit was to (1) determine the Sites's E&S performance; (2) identify potential E&S risks of the Sites, and (3) verify the compliance status of the Sites with the following AESRs:

- ADB Safeguard Policy Statement (SPS) (including SPS SR1, SR2, SR3 & SR4), June 2009;
- ADB's Social Protection Strategy, 2001;
- ADB Gender and Development Policy, May 1998;
- ADB Access to Information Policy, 2018;
- World Bank Group's General Environmental, Health and Safety (EHS) Guidelines, 2007;
- World Bank Group's EHS Guidelines for Water and Sanitation (2007);
- Applicable national, provincial and local laws and regulations pertaining to E&S (including land acquisition and resettlement), health and safety and labour in the RPC.

In addition, upon completion of the ESDD in 2018, an Environmental and Social Action Plan (ESAP) was prepared for the E&S issues identified. This ES Audit was also aimed to verify the status of the items in the ESAP and provide an update.

1.3 REPORT STRUCTURE

The remainder sections of this report are structured as follows:

- Section 2: Application Standards and Methodology;
- Section 3: Project Assessment;
- Section 4: Corrective Action Plan.
- Section 5: Annexures

This report is supported by the following annexures:

Annex A: List of Documents Reviewed

Annex B: Stakeholders Engaged during the ES Audit

Annex C: Photo Log

Annex D: Environmental Monitoring Plan

1.4 LIMITATIONS

The report was prepared in accordance with a scope of work agreed by ADB and SZWG. The results of the ES Audit are based on conditions at the time of site visit and documents provided by the Company. A change in any of these conditions may alter the findings, observations and report content presented herein by Stantec. A site walkthrough, by nature, is limited in its ability to fully assess potential Environmental, Health, Safety and Social (EHSS) liabilities or concerns associated with a property or operation. Further investigations would be required to identify the presence or absence of potential EHSS liabilities but are beyond detection by performance of the scope of this project. Laws and regulations, if referenced in this report, are provided for information purposes only and should not be construed as legal opinion or recommendation.

The limitations encountered during the Project visit include the following:



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT - CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

INTRODUCTION

- 1) Due to time constraints, the document review (e.g. labour contracts, inspection records) was conducted by random sampling. The sampling process was not designed to be a comprehensive document review, but rather to verify the current status by sampling for risk screening purpose.
- 2) At the time of the 2018 ESDD there was a household situated in the site area of the Wetland. As per interview with the local authority, the construction plan of the Wetland was adjusted hence there is no need for relocation of that household, and the site area has been identified as the state-owned land for a prolonged period (previously occupied by a government-sponsored institution as farmlands and fishponds). No interview was conducted with representatives from the institution due to lack of accessibility.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

2. APPLICATION STANDARDS AND METHODOLOGY

2.1 APPLICABLE STANDARDS

This E&S audit was undertaken in accordance with the following AESRs:

- ADB Safeguard Policy Statement (SPS) (including SPS SR1, SR2, SR3 & SR4), June 2009;
- ADB's Social Protection Strategy, 2001;
- ADB Gender and Development Policy, May 1998;
- ADB Access to Information Policy, 2018;
- World Bank Group's General Environmental, Health and Safety Guidelines, 2007;
- World Bank Group's EHS Guidelines for Water and Sanitation (2007);
- Applicable national, provincial and local laws and regulations pertaining to E&S (including land acquisition and resettlement), health and safety and labour in the RPC.

In the PRC, sponge city projects are governed by the following key applicable Chinese E&S regulations listed in **Table 2-1**.

Table 2-1: Related E&S Laws and Regulations

Title	General Description
Environment	
<i>Law on Environment Protection (2015)</i>	The law is an umbrella under which relevant laws on air, noise and wastewater emissions, as well as waste management and disposal are integrated. The Law authorizes environmental authorities to establish two types of standards: environmental quality (ambient) standards and discharge/emission standards. Ambient standards are the maximum allowable concentrations of pollutants in water, air or soil. Discharge / emission standards are the maximum allowable concentrations of pollutants' emissions or discharges. The standards provide a basis for the inspection activities of the environmental authorities. The Law on Environmental Protection allocates responsibility for the implementation of environmental protection policies and environmental monitoring to relevant government organizations. Specific details, permits and procedures are stipulated under the relevant State laws for air, water, noise, waste management etc.
<i>Law on Environmental Impact Assessment (2018)</i>	All construction projects are required to comply with a series of environmental protection procedures and policies, principally the following: <ul style="list-style-type: none"> • Environmental Impact Assessment (EIA) Policy; • "Three Synchronies" Policy; and • Pollutant Discharge Permitting.
<i>Management Regulations for Environmental Protection for Construction Projects (2017)</i>	There are three categories of EIA in the PRC, including (a) Full EIA report for projects with significant environmental impacts, (b) Environmental Impact Form (EIF) for project with moderate environmental impacts, and (c) Environmental Impact Registration (EIR) for projects with limited environmental impacts.
<i>Catalogue for Management of</i>	Under this catalogue, projects with various scales are subject to the requirements of a full EIA report, EIR report or EIR.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

Title	General Description
<i>Environmental Impact Assessment of Construction Projects (2021)</i>	
<i>Law on the Prevention and Control of Atmospheric Pollution (2018)</i>	The Law on the Prevention and Control of Atmospheric Pollution (2018) provides the basis for air quality protection in China. The Integrated Emission Standard of Air Pollutants (1996) specifies the discharge standards for air emissions.
<i>Integrated Emission Standard of Air Pollutants (1996)</i>	
<i>Law on the Prevention and Control of Water (2017)</i>	
<i>Discharge Standard of Pollutants for Municipal Wastewater Plant (2002)</i>	The Law on the Prevention and Control of Water (2017) is the key law for water pollution control. It applies to the pollution prevention and control of groundwater and all surface water bodies excluding the sea. It contains water pollution prevention and control standards; monitoring requirements and the management guidelines for water pollution prevention and control; measures for water pollution prevention and control; the pollution prevention and control measures for special water bodies including drinking water sources; the treatment of water pollution events; and legal liabilities. For industrial projects, a Water Pollutant Discharge Permit is required from the Ecology and Environment Bureau (EEB) prior to operational discharges to surface water.
<i>Environmental Quality Standards for Surface Water (2002)</i>	
<i>Integrated Wastewater Discharge Standard (1996)</i>	
<i>Law on the Prevention and Control of Environmental Noise Pollution (2018)</i>	Noise is regulated by the Law on the Prevention and Control of Environmental Noise Pollution (2018). This Law sets out the general requirements for noise control including noise from industrial sites, construction sites and transportation.
<i>Emission Standard of Environmental Noise for Boundary of Construction Site (2011)</i>	The Emission Standard of Environmental Noise for Boundary of Construction Site (2011) and the Emission Standard for Industrial Enterprises Noise at Boundary (2008) are applicable for construction and operational activities, respectively.
<i>Emission Standard for Industrial Enterprises Noise at Boundary (2008)</i>	
<i>Law on the Prevention and Control of Solid Waste Pollution (2020)</i>	Law on the Prevention and Control of Solid Waste Pollution (2020) stipulates the requirements for general industrial waste, domestic waste, and hazardous waste management including collection, storage, transportation, treatment, recycling and disposal.
<i>Management Regulation for Hazardous Waste Transfer Manifests (1999)</i>	The on-site storage and disposal of industrial solid waste is subject to the Standard for Pollution Control on Industrial Solid Waste Storage and Landfill (2020). The Management Regulation for Hazardous Waste Transfer Manifests (1999) stipulates the documentation and tracking procedures for hazardous waste generators, transporters and disposal operators.
<i>Standard for Pollution Control on Industrial Solid Waste Storage and Landfill (2020)</i>	



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

Title	General Description
Law on Energy Conservation (2018)	The Law on Energy Conservation (2018) and Law on Cleaner Production Promotion (2012) stipulates the legal requirements on energy saving during both construction and operation of a development project.
Law on Cleaner Production Promotion (2012)	
Law on the Prevention and Control of Soil Pollution (2019)	The Environmental Quality Standards for Construction Soil Pollution Risk Control (Trial) (2018), Environmental Quality Standards for Agriculture Soil Pollution Risk Control (Trial) (2018), Law on the Prevention and Control of Soil Pollution (2019), Quality Standard for Ground Water (2017) and Law on the Water and Soil Conservation (2010) define the quality standards applicable for soil and groundwater depending on the different uses.
Environmental Quality Standards for Construction Soil Pollution Risk Control (Trial) (2018)	
Environmental Quality Standards for Agriculture Soil Pollution Risk Control (Trial) (2018)	
Environmental Quality Standard for Ground Water (2017)	
Law on the Water and Soil Conservation (2010)	
Law on the Prevention and Control of Flood (2016)	Law on the Prevention and Control of Flood (2016) stipulates the requirements for development and utilization of water resources, and flood prevention. The law requires that in the floodplain or flood storage areas, for the non-flood control construction projects, the flood prevention assessment report should be prepared, and the corresponding defensive measures should be proposed.
Methods for Public Participation in Environmental Impact Assessment (2019)	The Methods for Public Participation in Environmental Impact Assessment (2019) prescribes the requirements for public consultation during the process of EIA for a development project. And it requires that public consultation should be conducted while preparing full EIA Report, whilst there is no specific legal requirement regarding consultation with communities for EIF and EIR.
Health & Safety	
Law on Work Safety (2014)	These laws stipulate principles on work safety, occupational health and fire protection issues, including work safety and occupational hazards assessment, facility design and construction, completion acceptance inspection, training, monitoring and medical check-up, facility inspection and maintenance, etc.
Law on Occupational Diseases Prevention (2018)	
Law on Fire Protection (2019)	
Biodiversity	
Law for Wildlife Protection (2018)	Law for Wildlife Protection (2018) and Regulation on Wild Plant Protection (2017) stipulates the requirements for protecting and saving wildlife or wild



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

Title	General Description
<i>Regulation on Wild Plant Protection (2017)</i>	plant, defines the wildlife or wild plant habitat, and establishes disciplinary measures.
Land Acquisition and Resettlement	
<i>Law on Land Administration (2020)</i>	The Land Administration Law stipulates that where land acquisition is necessary ¹ , compensation shall be made in accordance with the original usage of the acquired land, which shall include a land compensation fee, a resettlement subsidy (if applicable) and a compensation fee for land “attachments” (e.g. various trees and houses) and standing crops. The land compensation fee for cultivated land is six to10 times the average annual output value (AAOV) of the land in the three years preceding the land acquisition. The relevant compensation standards for land “attachments” and standing crops are to be determined by the local government.
<i>Regulations on Implementation of Land Administration Law (2014)</i>	
Labour	
<i>Labour Law (2018)</i>	Labour law (2018) stipulates the rights and corresponding obligations of workers, states that “employees enjoy the rights of equal employment and choice of occupation, the right to receive labour remuneration, the right to rest and vacation, the right to obtain labour safety and health protection, the right to receive vocational skill training, the right to enjoy social insurance and welfare, the right to apply for settlement of labour disputes and other labour rights stipulated by law” and “laborers should complete their labour tasks, improve their professional skills, implement labour safety and health regulations, and abide by labour discipline and professional ethics”.
<i>Labour Contract Law (2012)</i>	
Cultural Heritage	
<i>Cultural Relics Protection Law (2017)</i>	It stipulates project proponents to undertake baseline archaeological surveys to determine the presence and condition of cultural relics where construction works have the potentiality to damage them.
<i>Implementation Regulations of the Law on Cultural Relics Protection (2017)</i>	
Public Consultation and Information Disclosure	
<i>Methods for Public Participation in Environmental Impact Assessment (2019)</i>	It stipulates that construction projects that may have significant effects on the environment should incorporate public comments into the EIA report. Either the Project proponent (or the EIA agency on behalf of the Project proponent) should provide project information to the public and to the local EEB during the process of environmental impact assessment. A summary EIA report shall be provided for public review in hard copy format at a designated location or in electronic format on a public website.
Gender	

¹ The Project Affected Households (PAHs) can reject the land acquisition as long as it is not for the public good projects. The land law applies to all land acquisition activities, as long as it is ‘land acquisition/ expropriation’.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

Title	General Description
<i>Law on the Protection of Women's Rights and Interests (2018)</i>	It stipulates women's rights in social and economic life, including political rights, cultural and educational rights and interests, labour and social security rights and interests, property rights, personal rights, marriage and family rights and interests.
Ethnic Minorities	
<i>Law on Regional National Autonomy (2001)</i>	The regulations stipulate that regional ethnic autonomy is a basic political system in China.

2.2 E&S PERMITTING REQUIREMENTS

In general, for a sponge city project, the following key topical assessments and E&S permitting are required (**Table 2-2**):

Table 2-2: National E&S Permitting Requirements

E&S Permit	Description
Site selection application	An approval issued by the local authorities on whether the project comply with local planning requirement.
Feasibility Study Report (FSR)	A comprehensive analysing report based on economic, technological, production, supply and marketing, social, environmental and legal factors, to determine the feasibility of the project.
Land Use documents	Land users are required to obtain Construction Land Use Certificate. The land certificate is issued by the local government. It is a written document certifying that the holder has the ownership or right to use a certain area of land.
Environmental Impact Assessment (EIA) documents	Based on Catalogue for Management of Environmental Impact Assessment of Construction Projects (2021), EIF reports are applicable for the sites. The EIF report is generally consisting of applicable standards, project description, pollution control analysis, ecological impacts and extreme weather analysis (including climate, flooding, earthquake, etc.).
Environmental Completion Acceptance Inspection (ECAI)	Since November 2017, China government has been implementing self-conducting ECAI procedures (meaning the corresponding monitoring and acceptance are conducted by the project owner) for environmental protection by phases. <ul style="list-style-type: none"> • In November 2017, the requirement of air emission self-conducting ECAI has become effective; • In January 2018, the requirement of wastewater discharge self-conducting ECAI has become effective; • In December 2018, the requirement of boundary noise self-conducting ECAI has become effective; • In September 2020, the requirement of solid waste self-conducting ECAI has become effective.
Emergency Response Plan (ERP)	The sudden environment ERP consists of applicable standard, environmental risk analysis (including chemical storage and spills, water pollution, soil pollution, ecological conditions, etc.), and emergency response methods.

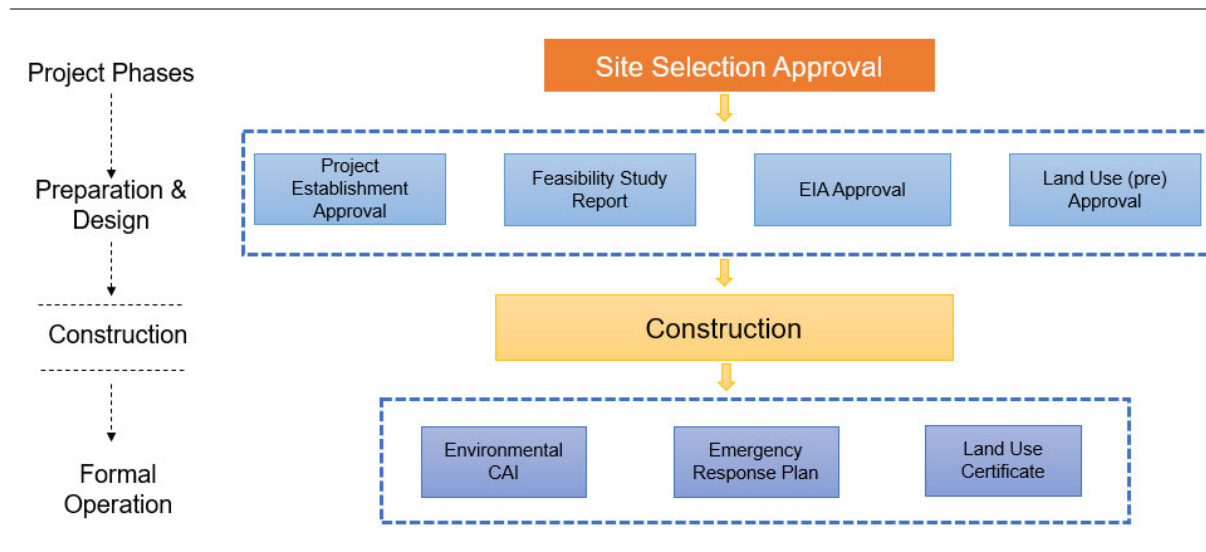
Figure 2-1 below presents the general permitting process that a project will need to maintain compliance over the full life cycle with applicable E&S regulations.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

Figure 2-1: Indicative Project Permitting Flowchart by Project Phases



Please note that the above flowchart is indicative only under the current regulatory regime, which has been and continues to evolve rapidly. Meanwhile, local implementation of the national level laws and regulations often varies, which may lead to variations to the permitting flowchart presented in this report.

2.3 METHODOLOGY

2.3.1 Approach

An integrated approach with three steps was proposed by Stantec for the ES Audit as stated below. This approach was subsequently agreed by SZWG.

Step 1: Document Request and Desktop-based Review:

Stantec requested documents from the Company including (i) the Company's EHSS procedures; (ii) Information about the system for project planning to manage environmental and social risks; (iii) Information about the Sites' training records for staff regarding environmental and social safeguards; (iv) Human Resource (HR) management and procurement policies and procedures, gender disaggregated information, labour contract, attendance sheet and salary records in the Project; (v) Information about the Project's main stakeholder groups, activities through which they are engaged and consulted, and any grievance redress system and its results log; and (vi) Information about the EHSS monitoring records, pollutant prevention and reporting system.

Step 2: Site Visit

Stantec conducted onsite visit at the Project on 26 and 27 April 2021. During the onsite visit, Stantec's E&S team:

- Reviewed documentation available for the Project (listed in Annex A);
- Conducted selected interviews with site representatives (listed in Annex B);
- Conducted a limited visual observation of the Project (areas observed with photos are in Annex C);
- and



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

APPLICATION STANDARDS AND METHODOLOGY

- Reviewed the implementation and compliance status of the E&S mitigation and management measures.

Step 3: Gap Analysis and Reporting

Based on the information obtained during Steps 1 and 2, gaps against the AESRs were identified at the Project (refer to Section 3). A CAP setting out the steps that would be required to close the identified gap(s) is outlined in Section 4.

2.3.2 Risk Categorization

Risk levels were adopted in evaluating identified E&S risks and issues against the AESRs “High”, “Medium” and “Low” risks as defined in **Table 2-3**.

Table 2-3: Definition for Risk Categorization

Risk Level	Definition
Red Flag	Trigger of ADB SPS Prohibited Activities or issue with potential severe consequences and limited opportunities of mitigating, leading to operation shut down (e.g. catastrophic or multiple-casualty accidents; large community or NGO protest(s); reputational damage/possibilities of significant reputational risks arising in the future; impacts to sensitive environmental and social receptors including critical habitats and Indigenous Peoples/Ethnic Minorities/Tribes and criminal proceedings).
High	Significant non-conformance with the AESRs, which may result in operation /construction interruption; and/or affect sensitive receptors, and/or induce community opposition that may damage Owner's/Investor's reputation.
Medium	Non-conformance with the AESRs, which may result in rectification cost or fine, and is unlikely to result in the short-term business discontinuity in current regulatory enforcement context.
Low	Minor regulatory or safeguard non-compliance, which may result in limited cost or only require management time to address the issue.
Best Practice	Best practice; approach is considered prudent but does not pose a compliance issue.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

3. PROJECT ASSESSMENT

3.1 Project Description

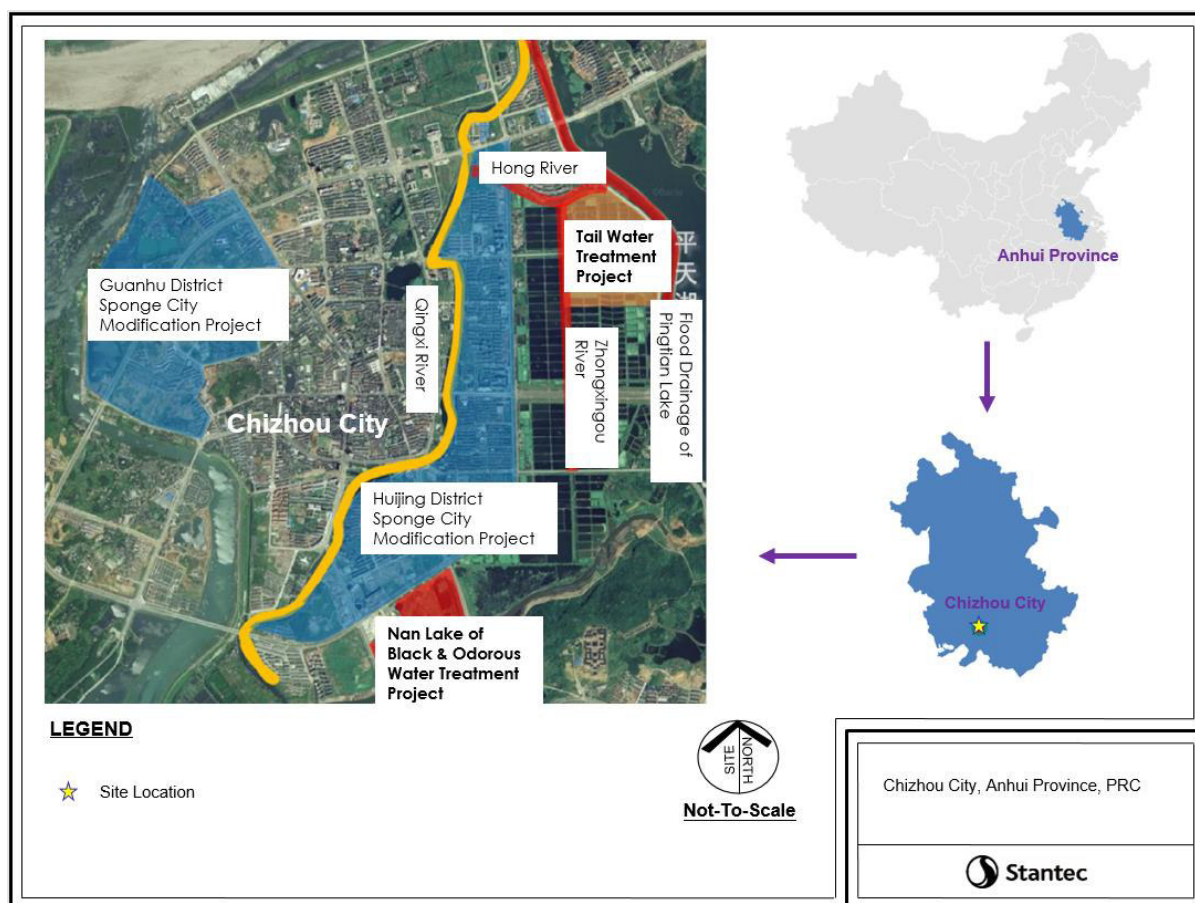
3.1.1 Tail Water Treatment Project

The visited Tail Water Treatment Project (the Wetland) is located in the Chizhou City Forest Park, East of Jiuhuashan Avenue, Chizhou City, Anhui Province, PRC. The history of the Wetland is mainly obtained through interview with onsite management and review of the historical maps on Google Earth, and is summarized as below:

- Prior to 2018: The land was farmlands and fishponds owned and operated by Guichi District Aquatic Product Liangzhong Farm (a government-sponsored institution);
- Early 2018: the previous land owner exited from the land. Construction of the Wetland was commenced;
- August 2019: Construction of the Wetland was completed. Operation of the Wetland was commenced.

The locations of the Sites are shown in *Error! Reference source not found..*

Figure 3-1: Location of the Sites



Source: Chizhou Sponge City FSR in 2015



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

According to the EIF report dated March 2016 and interview with the site management, the Wetland is an artificial wetland with an area of approximately 260,000 m² and is mainly for further treatment of the pre-treated wastewater from the Qingxi WWTP and becoming part of the flood control system in Chizhou City. The designed capacity of the Wetland is 100,000 m³/d whilst the current actual treatment amount is close to 80,000 m³/d.

The Adjacent facilities and properties of the Wetland were identified as follows:

- North: Hong River. Further is Xincheng Mingzhu Residential Area.
- West: Zhongxingou River. Further is vacant land and Jiuhuashan Avenue.
- South: Other artificial wetland constructed by the local government.
- East: Flood drainage of Pingtian Lake.

The land is classified as recreational land and is not within area of the ecological red line (which in China refers to the strictly controlled boundary demarcated in accordance with law in key ecological function zones, sensitive and fragile areas of the ecological environment). There are no natural reserves, drinking water protection zone, scenic spot, national key protected animals and plants, seed fields, cultural relics and historic sites located in the 1 km area around the Project. The Wetland meets the requirements of the overall planning of Chizhou City.

3.1.2 Nan Lake of Black & Odorous Water Treatment Project

The Nan Lake of the Black & Odorous Water Treatment Project is located at the junction of Shicheng Avenue and Changjiang South Road, Chizhou City, Anhui Province, PRC. The history of the Nan Lake project is mainly obtained through interview with onsite management and review of the historical maps on Google Earth, and is summarized as below:

- Prior to 2017: The area was the Nan Lake Park for a prolonged period;
- 2017: Construction of the Black & Odorous Water Treatment Project was commenced at the Nan Lake;
- 2018: Construction of the Black & Odorous Water Treatment Project was completed. Operation of the Nan Lake of Black & Odorous Water Treatment Project was commenced.

According to the EIF report dated March 2016, the Black & Odorous Water Treatment Project is aimed to improve the water quality of ten black & odorous water bodies in Chizhou City, including the Nan Lake, which has the area of approximately 250,000 m².

The Adjacent facilities and properties of the Nan Lake were identified as follows:

- North: Shicheng Avenue. Further is a residential area.
- West: Changjiang South Road. Further is a residential area.
- South: Dongzhi Road. Further is a residential area.
- East: Qishan Avenue. Further is a residential area.

The land is classified as recreational land and is not within area of the ecological red line (which in China refers to the strictly controlled boundary demarcated in accordance with law in key ecological function zones, sensitive and fragile areas of the ecological environment). There are no natural reserves, drinking water protection zone, scenic spot, national key protected animals and plants, seed fields, cultural relics and historic sites located in the 1 km area around the Project. The Nan Lake meets the requirements of the overall planning of Chizhou City.



PROJECT ASSESSMENT

3.2 PROJECT DESCRIPTION

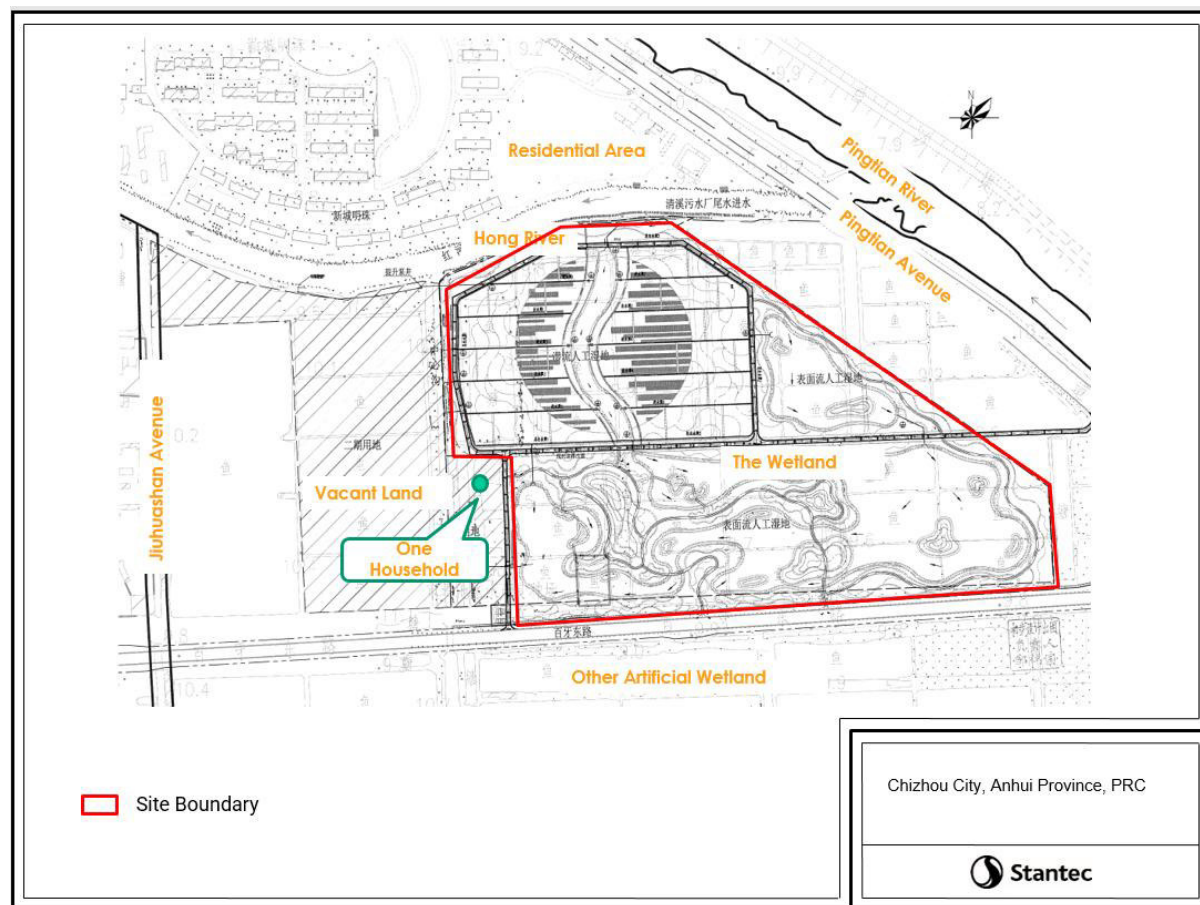
3.2.1 Tail Water Treatment Project

At the time of the site visit, the Wetland was in normal operation. The key components of the Wetland include:

- One ecological gravel bed with an area of about 70,000 m². The ecological gravel bed is filled with biofilm and plant roots to filter pollutants in water.
- Two surface flow wetlands with areas of about 100,000 m² and 60,000 m², respectively. The surface flow wetlands receive water from ecological gravel bed through PVC perforated pipes to avoid wetland blockage.
- Two ecological stability ponds with areas of about 20,000 m² and 10,000 m², respectively. The ecological stability ponds use algae photosynthesis and atmospheric oxygen enrichment of upper water layer, and use anaerobic reaction of lower water layer, to remove nitrogen and phosphorus from water.
- Corresponding pipelines with the total length of 4.5 km.
- Associated pumps and valves.

The layout of the Wetland is presented in **Figure 3-2**.

Figure 3-2: Layout of the Wetland



As per the EIF report dated March 2016, the water source of the Wetland is the pre-treated wastewater from the Qingxi WWTP, with the amount of 80,000 m³/d. Upon treatment by the Wetland, the water



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

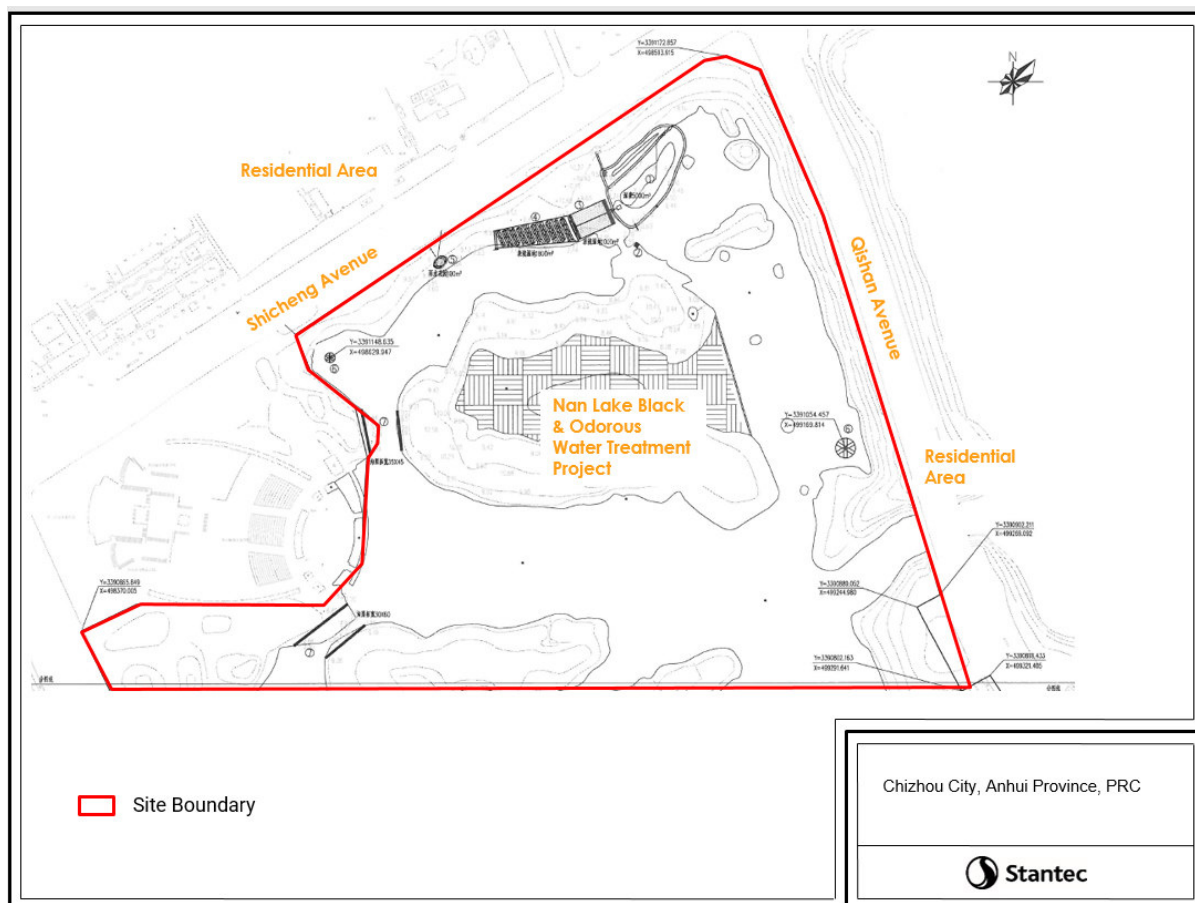
shall meet the water quality of Type IV water body under the Environmental Quality Standard for Surface Water (GB3838-2002) (Type IV surface water bodies are classified as those general industrial water zones and water recreation areas where no direct contact with humans occurs) then discharged to the Yuelang Lake, and ultimately discharged to the Qingxi River.

3.2.2 Nan Lake of Black & Odorous Water Treatment Project

At the time of the site visit, the Nan Lake of Black & Odorous Water Treatment Project was in normal operation. The key components of the water treatment include (1) control of wastewater inflow generated in the city; (2) modification on the banks of the water bodies; (3) improve the sediment sludge by dredging and the sludge was reportedly treated by the local environmental sanitary station; (4) adoption of biological treatment method, i.e. construction of artificial wetland in the Nan Lake; and (5) reform aquatic ecosystem by installing drains to improve/control water flow.

The layout of the Nan Lake is presented in **Figure 3-3**.

Figure 3-3: Layout of the Nan Lake Black & Odorous Water Treatment Project



As per the design document and the BOT agreement dated 2016, the water source of the Nan Lake is from the municipal storm water network. Upon treatment through the Nan Lake, the water shall meet the water quality of Type IV water body under the Environmental Quality Standard for Surface Water (GB3838-2002) (Type IV surface water bodies are classified as those general industrial water zones



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

and water recreation areas where no direct contact with humans occurs). The treated water stays within the Nan Lake.

3.3 E&S ASSESSMENT

3.3.1 ESAP Update

During this ES Audit the efforts spent on findings' closure in the ESAP dated 2018 were reviewed and checked. The status updates are summarized in **Table 3-1** below.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

Table 3-1: ESAP Status

#	Findings/Gap Analysis	Risk Level	Recommendation	Update in April 2021
1	The Environmental Impact Assessment Forms (EIF) of the projects were not provided for review.	H	Communicate with the governmental partner and gain access to all required EHS documents and permits.	Closed. The EIF reports dated March 2016 were provided for review during this ES Audit and no additional issues in this regard were identified.
2	Water and Soil Conservation Approval (WSCA) for the projects were not provided for review.	M	Engage licensed third party to prepare Water and Soil Conservation document, and submit the document to the corresponding governmental agency for approval.	Closed. The Company representative reported that no such document was prepared by the governmental side (as per the BOT agreement the governmental side of the project is responsible for the E&S permitting). Given the Sites are now in operation phase, no retrospective recommendation is proposed at this stage.
3	No detail on subcontractor EHS supervision for construction activities was provided	M	Follow up with the governmental side and monitor the subcontractor EHS supervision for construction activities.	Closed. During this ES Audit, the EHS agreements signed between the Company and contractors, and corresponding records (e.g. EHS inspection records, training records, etc.) were provided for review and no additional issues in this regard were identified.
4	The project has not developed a subproject-specific comprehensive environmental management plan (EMP).	M	Develop subproject-specific comprehensive EMP.	Closed. During this ES Audit, an EMP was provided for view. The EMP covering water monitoring, water quality standards, treatment of solid waste generated from routine maintenance, corresponding frequencies and responsible parties was developed based on the EIF reports and corresponding monitoring/inspection have been implemented accordingly. Based on review of the EMP, it covers the environmental factors during the operation phase and no gaps were identified.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

#	Findings/Gap Analysis	Risk Level	Recommendation	Update in April 2021
5	The subproject company does not have a mechanism to track the status of the applications of the EHS permits.	M	Establish a mechanism to track the status of the applications of the EHS permits.	Closed. During this ES Audit, an EHS permit tracker was provided for review and no additional issues in this regard were identified.
6	A formal EHS management system is not developed.	M	Establish a formal EHS management system	Closed. The Company inherits the corporate Environmental and Social Management System (ESMS) and has developed its own project-specific EHS procedures. In addition, dedicated safety department has been setup for EHS management of the components.
7	There is one household at the construction site not been relocated in the Wetland. Resolutions have not yet been provided to deal with this situation.	H	Further investigation needs to be conducted to understand the reasons and the previous engagement process. Resolutions need to be proposed to deal with this. If the household is to be resettled, proper compensation should be provided to the household to mitigate the loss to assets and livelihood. If the design would be changed to avoid the impact to this specific household, protections will need to be put in place to avoid the impacts to the household from the project construction activities.	Closed. Based on interview with Mr. Yu Jing, Director of Water Discharge Office of the Chizhou City Housing and Construction Bureau, who is also the former officer in the Chizhou City Sponge City Office, the previous planning of the Wetland was changed to avoid the impact to that specific household. Therefore, there is no longer a need to resettle the household. Based on onsite observation, the household is still living in the original houses and no impact from the operation of the wetland was observed.
8	Interview with Chizhou BOLAR has also identified that majority of the SZWG's Chizhou Sponge City project has not followed the normal land acquisition process to access the land. According to interview with	H	1) No matter what process would be followed, SZWG should consult Chizhou BOLAR and reach an agreement on the land process to be followed; 2) From risk consideration, it is understandable no land acquisition or land	Closed. For the Wetland, based on interview with Mr. Yu Jing and Company management, it is understood that the land has been state-owned land for a prolonged period before the establishment of the Wetland and it is still state-owned land for the Wetland serving as a park. No



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

#	Findings/Gap Analysis	Risk Level	Recommendation	Update in April 2021
	SZWG's management team in Chizhou City, this has been acknowledged and considered as a common issue for sponge city projects across China. SZWG believes sponge city project is quite special and should follow different process for land access. According to records of Chizhou BOLAR, a normal land acquisition process is to be followed for SZWG.		permit are required for LID (Low Impact Development) projects, which is also aligned with the understanding of Chizhou BOLAR; 3) For wetland projects, it is recommended a normal land acquisition process be followed so that relevant title can be held by either the project company or the government partner of the company prior to project construction. This will make sure project impacts are identified and documented. And mitigations are implemented to obtain the land for projects.	land use right permit or other land use permit/approval will be needed for the Wetland. Although there is still no written document obtained from Chizhou BOLAR to confirm this, it is considered sufficient to close this finding as per the confirmation obtained during the interview with Chizhou Housing and Construction Bureau.
9	No document (such as asset inventory, PAP, compensation agreement, etc.) regarding project land use for rural subproject is held by the Project Company. There is no in place procedure to document land compensation, as well as monitor and evaluate the payment status, which is a non-conformance against ADB SR2.	M	The Project Company should follow the corporate Resettlement Policy Framework to document the compensation payment and evaluate its status.	Closed. The Company inherits the corporate ESMS. No land acquisition was involved.
10	There is no formalized mechanism to manage labour and social issues for subcontractors.	M	Develop a mechanism as part of ESMS for subcontractor management.	Ongoing. Currently there are two contractors engaged by the Company for maintenance of the components and landscaping. However, a mechanism has not yet been developed to manage the labour and social issues for these contractors.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

#	Findings/Gap Analysis	Risk Level	Recommendation	Update in April 2021
				As confirmed with the management, relevant procedures of SZWG's ESMS will be implemented in the Project upon confirmation of ADB's draw down. Relevant trainings will be provided to the Project to raise the capability of managing this issue.
11	There is no system/ procedure in place to record and track the complaints raised by the local community. Thus, no record of previous grievances was available for review, which is a non-conformance against ADB safeguards.	L	Develop a site-specific grievance redress procedure to collect and document any complaints and grievances raised by the PAP and the broader local community.	Closed. An external grievance mechanism has been developed and implemented. Corresponding procedures and records were provided for review during the ES Audit. The records mainly included complaint of broken facilities such as chairs, lamps, missing manhole covers, etc, and housekeeping issues from the people visiting the park.
12	There is no system/ procedure in place to guide the company to identify stakeholders, make analysis, and conduct engagement.	L	Develop a procedure as part of ESMS for the purpose of managing stakeholder engagement process.	Ongoing. The Company has identified two groups of its main external stakeholder (a) government authorities, such as Chizhou City Housing and Construction Bureau, Chizhou City Sponge City Office, Chizhou EEB, etc; (b) local communities. The Company is responsible for routine liaison with the aforementioned governmental agencies as well as regular engagement with the local residential area committees with corresponding photo records provided for review. However, a specific procedure has not been developed in this regard. As confirmed with the management, relevant procedures of SZWG's ESMS will be implemented in the Project upon confirmation of ADB's draw down. Relevant trainings will be provided to the Project to raise the capability of managing this issue.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

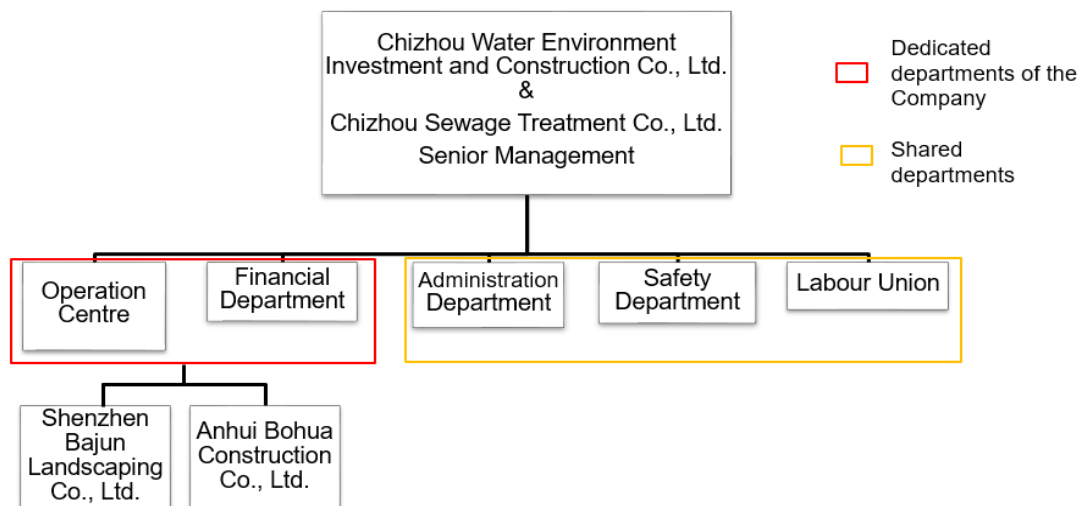
PROJECT ASSESSMENT

3.3.2 E&S Management Overview

The E&S issues arising from the Sites are under the jurisdiction of Chizhou City Housing and Construction Bureau, which is the governmental side of the PPP agreement, as well as Chizhou City EEB, Chizhou City Water Affair Bureau.

Site management reported that in 2019 the Company has been reformed to a lean management as instructed by SZWG. At the time of the ES Audit the Company comprised of two departments, namely Operation Centre and Financial Department. At the same time, the Company shared the senior management (board of directors, general manager), Administration Department, Safety Department and Labour Union with another Tier 2 subsidiary of SZWG in Chizhou City, namely Chizhou Sewage Treatment Co., Ltd. (Chizhou Sewage). All the shared employees signed contract with Chizhou Sewage. In addition, the Company engaged two contractors for the components' maintenance and landscaping, namely Shenzhen Bajun Landscaping Co., Ltd (Bajun) and Anhui Bohua Construction Co., Ltd. (Bohua).

Figure 3-4: Management Structure



Ms. Jin Jing, director of the Operation Centre of the Company is responsible for the day-to-day on-site E&S management with support from Mr. Liu Hao, Deputy Director of the Operation Centre. In addition, one safety officer and five operational personnel from the Safety Department also provide support in this regard.

Stantec developed the ESMS for SZWG in 2020. The Company inherits the corporate Environmental and Social Management System (ESMS) and has developed its own project-specific EHS procedures including ERPs, drill requirements, training program, wastewater monitoring program, etc.

According to the management interview and document review, at the Sites, EHS inspections were conducted as follows:

- The operational personnel from the Safety Department conduct two inspections every day covering observation of the water bodies, visual inspection on the facilities and landscaping, etc.
- SZWG internal EHS inspections were conducted on a quarterly basis.
- The Anhui Provincial Housing and Construction Bureau engages a third party to conduct water quality test at the Sites on a monthly basis.
- The Chizhou City and Guichi District Housing and Construction Bureaus engage third parties to conduct water quality test at the Sites irregularly.
- The Company engages Chizhou Sewage Treatment Water Quality Monitoring Co., Ltd. to conduct water quality test at the Sites twice per month.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

3.3.3 E&S Permit

The permit compliance status of the Sites is summarized as follows in the table below.

Table 3-2: Permit Compliance Status

Permit	Review
FSR	FSR dated August 2016
EIF and approval	Four EIF reports for the Sites separately dated March 2016 and the corresponding EIF approvals issued by Chizhou EEB dated March 2016
Environmental CAI and approval	On December 27, 2017 and March 12, 2019, two Project CAI reports issued by the Chizhou Housing and Urban Construction Committee were issued for the Nan Lake and the Wetland, respectively. Chizhou EEB also stamped in the reports. Chen Lin of EIA and Discharge Division, Chizhou EEB (tel: 0086 566 2022801) confirmed that these two reports with Chizhou EEB's stamp serve as the environmental CAI for the Sites.
Emergency Response Plan (ERP)	One set of ERPs for sudden environmental incidents and the registration form issued by Chizhou EEB dated December 2018

3.3.4 EHS Performance During Operation Period

Water Supply and Wastewater

Both the Sites do not generate wastewater during their operation. As per the EIF report dated March 2016, the water source of the Wetland is the pre-treated wastewater from the Qingxi WWTP, with the amount of 80,000 m³/d. Upon treatment by the Wetland, the water shall meet the water quality of Type IV water body under the Environmental Quality Standard for Surface Water (GB3838-2002) then discharged to the Yuelang Lake, and ultimately discharged to the Qingxi River.

As per the design document and the BOT agreement dated 2016, the water source of the Nan Lake is from the municipal storm water network. Upon treatment through the Nan Lake, the water shall meet the water quality of Type IV water body under the Environmental Quality Standard for Surface Water (GB3838-2002).

The Company engages Chizhou Sewage Treatment Water Quality Monitoring Co., Ltd. to conduct water quality test at the Sites twice per month and the monitoring reports in the past 3 months were provided for review. The latest monitoring results are shown in the tables below.

Table 3-3: Water Quality Test in the Wetland (23 March 2021)

Parameters	Unit	Sampling Locations					Local Standard	IFC Standard	Compliance Statue
		Main Channel (Inlet)	Sub-surface Flow Wetland	Surface Flow Wetland 1	Surface Flow Wetland 2	East Qiupu Road (Outlet)			
Ammonia Nitrogen	mg/L	0.40	0.16	0.19	0.48	0.48	<1.5	/	Meet the standards



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

Parameters	Unit	Sampling Locations					Local Standard	IFC Standard	Compliance Statue
		Main Channel (Inlet)	Sub-surface Flow Wetland	Surface Flow Wetland 1	Surface Flow Wetland 2	East Qiupu Road (Outlet)			
Dissolved Oxygen	mg/L	6.90	6.50	6.70	7.00	6.40	>3	/	Meet the standards
Redox Potential	mV	135.8	148.3	164.7	160.8	162.9	/	/	Meet the standards
Transparency	cm	0.4	0.16	0.19	0.48	0.48	/	/	Meet the standards

Table 3-4: Water Quality Test in the Nan Lake (23 March 2021)

Parameters	Unit	Sampling Location			Local Standard	IFC Standard	Compliance Statue
		North (inlet)	Middle	South (outlet)			
Ammonia Nitrogen	mg/L	0.12	2.18	0.15	<1.5	/	Meet the standards
Dissolved Oxygen	mg/L	6.90	6.00	7.20	>3	/	Meet the standards
Redox Potential	mV	155.8	164.2	132.8	/	/	Meet the standards
Transparency	cm	>30	>30	>30	/	/	Meet the standards

*Note:

1. The monitoring was conducted by Chizhou Sewage Treatment Water Quality Monitoring Co., Ltd.
2. Local Standard refers to Environmental Quality Standard for Surface Water (GB3838-2002).
3. The IFC standard refers to Environmental, Health, and Safety (EHS) Guidelines: General EHS Guidelines (2007).

Air Emission

At the time of the site visit, no sources of air emission were identified.

Noise Emission

No significant sources of noise were identified during the site visit.

Chemical Management and Solid Wastes

No chemicals were reported by the site management and none was observed during the site visit.

The main source of waste is domestic waste and branches and leaves collected during the landscaping activities by the contractors. Based on interview with the contractors, such waste stream is transported and treated by the local environmental Sanitary station on a regular basis. No sources of hazardous waste were identified.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

Soil and Water Conservation

No sources of soil and groundwater impact were observed during the site visit. The Company representative reported that no Soil and Water Conservation Plan or related document was prepared by the governmental side. Based on onsite observation, the Sites are public parks and the site areas are covered by water bodies, landscaped areas and internal roads with no signs of soil erosion observed.

Occupational Health and Safety

Based on document review and onsite observations, major safety hazards identified by the Company are falling to water. Warning signs (no swimming or fishing) were posted at the Sites with life rings provided. No occupational disease hazards (ODHs) were identified.

Routine medical check-ups are provided to all employees of the Company.

Specially, the COVID-19 prevention methods and procedure were established according to SZWG and local authorities' requirements. The COVID-19 prevention equipment, including masks, clinic thermometer, hand washing liquid and disinfection agent were provided onsite. In addition, management measures such as travel restriction, disinfection, access registration, body temperature measuring as per the local authorities were also implemented by the Company.

Project management reported that no incidents/accidents have taken place in construction and operation phases.

Emergency Preparedness and Training

The Company has developed the ERPs for sudden environmental accident including abnormal water quality, flooding, extreme weather (cold). As per the ERPs: (1) For abnormal water quality, the response includes rapid identification of the cause, shut down of corresponding outlets and temporary channel the water to other ponds for storage and treatment, etc. (2) In case of flooding, the response includes clearing of all inlets/outlets, activation of back-up pumps to allocate water as per the actual situation, etc. (3) In case of extreme weather (cold), the response includes rapid inspection of the pipelines and valves, activation of back-up pumps, etc. The Company conducts the corresponding drills on an annual basis and the drill records were provided for review.

The Company has provided regular training to its staff and the EHS topics are covered. In addition, regular operation meeting covering EHS topics is held and the need of EHS training is discussed during the meeting.

Community Occupational Health and Safety

Given the nature of the Sites, no health and safety risks from the operation of the Sites were identified.

Restricted Substances

No onsite sources of Asbestos Containing Materials (ACMs), Polychlorinated Biphenyls (PCB), Ozone Depleting Substances (ODSs) or radioactive materials were reported and none were observed at the Sites during this ES Audit.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

Notices of Violation

Based on desktop research, no nuisance or complaints regarding the Project's noise and vibration, dust or other environmental aspects were identified. The Sites receives regular/irregular inspections from the local authorities for water quality test and no notice of correction has been received.

Ecosystem

The Sites are modified habitat. The Wetland was previously farmlands and fishponds whilst the Nan Lake has been a park for years, hence, biodiversity impact of the Sites is considered limited. No protected fauna and flora were identified in the local area. Given the type of operation of the Sites, the potential impact to the local ecosystem is considered limited.

No EHS related findings or issues were identified.

3.3.5 Social Assessment During Operation Period

Land Acquisition and Resettlement

The Nan Lake has been a park for years, hence, no land acquisition was required. For the Wetland, based on interview with Mr. Yu Jing and Company management, it is understood that the land has been state-owned land for a prolonged period before the establishment of the Wetland and it is still state-owned land for the Wetland serving as a park. No land use right permit or other land use permit/approval will be needed for the Wetland. Although there is still no written document obtained from Chizhou land authority to confirm this, it is considered sufficient to close this finding as per the confirmation obtained during the interview with Chizhou Housing and Construction Bureau.

Figure 3-5: Historical Satellite Imagery for Nan Lake



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT



October 2014

Source: Google Earth Pro. Scale: 1:724 m.

Labour and Working Condition

Chizhou Water Environment inherits the HR policy and procedures from SZWG which include an internal grievance mechanism. Company management reported that no internal grievance has been received thus far. At the time of onsite visit, there were 80 persons in total working for the Company, including 6 management staff from the Company, 16 management staff from Chizhou Sewage, 16 maintenance and cleaning service workers from Bohua, and 42 maintenance and cleaning service workers from Bajun. All the 80 persons had signed formal contract with the corresponding parties.

Among the workers from the contractors, 30 were females and the rest were males. All the 30 female workers were engaged in light manual positions, such as cleaner, documenter and supporting worker. There was no indication of gender discrimination from document review, management interview, as well site visit during the ES Audit. Both the HR manager of the Company and the managers of the contractors reported that the male and female are treated equally in payment, training, promotion, and development. All employees from the Company and Chizhou Sewage are entitled to their welfares and benefits according to PRC Labour Law. There are some specific welfares and benefits for female employees, as follows:

- Women have been given the access to maternity leave according to PRC regulations. During breastfeeding period, the women have been given flexibility to working times according to the law;
- Women's toilets are separately provided in the Project; and
- On Women's Day (8 March), the Company would give women workers half day pay leave.

The working time for the employees from the Company and Chizhou Sewage is from 8:00 am to 12:00 pm, and from 14:00 pm to 17:00 pm. The working time for the workers (for water body maintenance and cleaning) from Bohua is from 7:00 am to 12:00 pm, and from 13:30 pm to 17:00 pm. The working time for the workers (for landscaped area maintenance and cleaning) from Bajun is from 7:30 am to 11:30 pm, and from 12:30 pm to 16:30 pm. Both of the contractors purchased accidental injury insurances covering the workers. Sampled labour contracts, personnel files, attendance sheet, the wages and social insurance purchase receipts for the management staff and some workers were provided for review. The wages of Bajun were paid on the 25th day of next month which complied with the legal requirement. However, the wage of Bohua were paid on the beginning of the month after the next month, which exceeded the legal requirement of the wages should be paid within one month, whilst



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

a mechanism has not yet been developed by the Company to management the labour and social issues for these contractors.

No underage or juvenile employees/workers were identified onsite.

Indigenous Peoples

Chizhou City is a traditional Chinese Han dominated area. Distinct and vulnerable ethnic minority communities are therefore limited in Chizhou and none were identified in proximity to the Sites.

No ethnic minorities employees/workers were identified onsite.

Stakeholder Engagement and Consultation

The Company has identified two groups of its main external stakeholder (a) government authorities, such as Chizhou City Housing and Construction Bureau, Chizhou City Sponge City Office, Chizhou EEB, etc; (b) local communities. The Company is responsible for routine liaison with the aforementioned governmental agencies as well as regular engagement with the local residential area committees with corresponding photo records provided for review. However, a specific procedure has not been developed in this regard.

Grievance Redress

An external grievance mechanism has been developed and implemented. The Operation Centre is the dedicated department to receive, handle and response corresponding external grievance. As per the interview with representative of the Operation Centre, normally there are three platforms to receive the comments/complaints from local communities:

- From the Chizhou City Housing and Construction Bureau, which receives online/offline (phone calls) enquiries with regard to water discharge, water quality of the Sites;
- From the Chizhou City Administration Bureau, which receives online comments/complaints with regard to the tidiness and integrity of facilities of the Sites, for instance, broken trash bins, malfunctioning road lamps, scattered litters, etc;
- From the Chizhou People.net, which receives online comments/complaints similar to those received by the Chizhou City Administration Bureau.

For those comments/complaints received online, the Operation Centre appoints one of the five operational personnel from the Safety Department to verify and rectify corresponding issues with photo records and such case is normally closed within 7 calendar days. For those comments/complaints received anonymously via phone calls the Operation Centre personnel conducts verification and rectification with photo records replying to the corresponding governmental agencies for their public disclosure. Corresponding records were provided for review during the ES Audit. The records mainly included complaint of broken facilities such as chairs, lamps, missing manhole covers, etc, and housekeeping issues from the people visiting the park.

Key Social related findings and issues were summarized as follow:

- The Company has comprehensive processes to manage their own workforce labour related issues, however, a mechanism has not yet been developed by the Company to manage labour and social issues for the contractors. The wage of Bohua were paid on the beginning of the month after the next month, which exceeded the legal requirement of the wages should be paid within one month.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT - CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

PROJECT ASSESSMENT

- The Company has identified its main external stakeholders and conducted some engagement, However, a specific procedure has not been developed as per the requirement of the corporate ESMS.



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

CORRECTIVE ACTION PLAN

4. CORRECTIVE ACTION PLAN

Table 4-1 summarise the E&S issues identified during the ES Audit. As implementing the actions described below might signify economic costs to different degrees, estimations were not made.

Table 4-1: Findings and Recommended CAP

No.	Applicable E&S Standards	Theme	Description of Issue(s)	Suggested Corrective Action(s)	Risk Level	Suggested Completion Time Frame	Completion Indicator(s)
1	ADB Social Protection Strategy	Labour Protection	The Company has comprehensive processes to manage their own workforce labour related issues, however, a mechanism has not yet been developed by the Company to management the labour and social issues for the contractors.	The Company to adopt the corporate ESMS of SZWG including the procedures related to contractor labour management and obtain relevant trainings from the SZWG corporate to build up the capability to do so using their existing personnel.	Medium	Prior to disbursement	Procedure document
2	ADB SPS 1	Stakeholder Engagement	The Company has identified its main external stakeholders and conducted some engagement, However, a specific procedure has not been developed as per the requirement of the corporate ESMS.	The Company to adopt the corporate ESMS of SZWG including the Stakeholder Engagement Procedure management and obtain relevant trainings from the SZWG corporate to build up the capability to implement the SEP using their existing personnel.	Low	Prior to disbursement	Procedure document





5. ANNEXURES

- Annex A: List of Documents Reviewed
- Annex B: Stakeholder Engaged during the ES Audit
- Annex C: Photo Log
- Annex D: Environmental Monitoring Plan



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

Annex A: LIST OF DOCUMENT REVIEWED

ANNEX A: LIST OF DOCUMENT REVIEWED

No.	Name
1	Sponge City FSR dated 2016
2	EIF reports and corresponding approvals for the Tail Water Treatment Project (covering construction of the Wetland) and Black & Odorous Water Treatment Project (covering the modification of the Nan Lake) dated 2016
3	Emergency Response Plan for Sudden Environmental Incident and corresponding Registration Dated 2018
4	Organizational chart
5	Drill records date 2020 and 2021
6	Water quality test reports date January and March 2021
7	Grievance handling records dated 2020 and 2021
8	EHS procedures and safety training record
9	Sampled labour contract, wages, attendance sheet and personnel file
10	EHS agreements and EHS training/inspection records for construction period dated 2017 and 2018



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

Annex B: STAKEHOLDERS ENGAGED DURING THE ES AUDIT

ANNEX B: STAKEHOLDERS ENGAGED DURING THE ES AUDIT

Name	Company	Title	Date
Mr. Yu Jing	Chizhou City Housing and Construction Bureau	Director, Water Discharge Office	26 April 2021
Ms. Wu Lianqiu	Chizhou Water Environment	Deputy General Manager	26 April 2021
Ms. Jin Jing	Chizhou Water Environment	Director, Operation Centre	26 and 27 April 2021
Mr. Zhang Wenhao	Chizhou Sewerage	Safety Officer	26 and 27 April 2021
Mr. Chen Wen	Chizhou Sewerage	Operation Team Leader	26 and 27 April 2021
Mr. He Zongfu	Anhui Bohua Construction Co., Ltd.	Project Manager	26 April 2021
Mr. Cai Congming	Shenzhen Bajun Landscaping Co., Ltd.	Project Manager	26 April 2021



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

Annex C: PHOTO LOG

ANNEX C: PHOTO LOG

Photo Log – The Wetland



Photo 1.1 Overview of the Wetland



Photo 1.2 Overview of the Wetland and the online water flow metre for inflow



Photo 1.3 The pump station



Photo 1.4 The online water flow metre for outflow



Photo 1.5 Discharge point from the Wetland



Photo 1.6 The house for the household near the Wetland



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

Annex C: PHOTO LOG

Photo Log – Nan Lake	
	
Photo 2.1 Overview of the park	Photo 2.2 Overview of the park
	
Photo 2.3 Inflow to the Nan Lake	Photo 2.4 Pump station
	
Photo 2.5 The online water flow metre for outflow	Photo 2.6 Outlet of the Nan Lake project



ENVIRONMENTAL & SOCIAL COMPLIANCE AUDIT REPORT – CHIZHOU SPONGE CITY TAIL WATER TREATMENT AND BLACK & ODOROUS WATER TREATMENT PROJECT

Annex D: Environmental Monitoring Plan

Annex D: Environmental Monitoring Plan

Tail Water Treatment Project

Item	Monitoring Point	Parameters	Applicable Standard	Required Frequency
Water Discharge	Wastewater Outlet	Ammonia nitrogen, dissolved oxygen, redox potentials, transparency	Type IV water body under the Environmental Quality Standard for Surface Water (GB3838-2002)	Every month

Nan Lake Project

Item	Monitoring Point	Parameters	Applicable Standard	Require Frequency
Water Discharge	Wastewater Outlet	Ammonia nitrogen, dissolved oxygen, redox potentials, transparency	Type IV water body under the Environmental Quality Standard for Surface Water (GB3838-2002)	Every month

