



NAWT

National Association of **Wastewater** Technicians

THE LIFE CYCLE OF OWTS INTRODUCTION

KIM SEIPP, NAWT

INTRODUCTIONS

- NAWT –
 - NATIONAL ASSOCIATION OF WASTEWATER TECHNICIANS
- KIM SEIPP
 - HIGH PLAINS SANITATION SERVICE – OWNER
 - NAWT – EDUCATIONAL COORDINATOR
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National Association of Wastewater Technicians

Introduction – Life Cycle & Principles of OWTS

Beginning of the Life Cycle – Design Principles

Beginning & Early Life – Installation Principles

Mid-Life – Operations & Maintenance Principles

Mid-Life – Inspection

All during the Life – Basic Business Principles

After Life – Waste Treatment Principles

Summary – Why we care and where we go from here

**NAWT
TRACK
PLAN FOR
TODAY**

Short History of Human Sanitation

Life of an Onsite Wastewater Treatment System

Why a Principled Approach

Introduction to the Business End of OWTS

Summary and Introduction of Sessions to Follow

INTRODUCTION

Short History of Human Sanitation

INTRODUCTION



A SHORT HISTORY OF HUMAN SANITATION 12,000 BC TO 476 AD

- **CAVE DWELLERS**

12,000 BC

- **NOMADS**

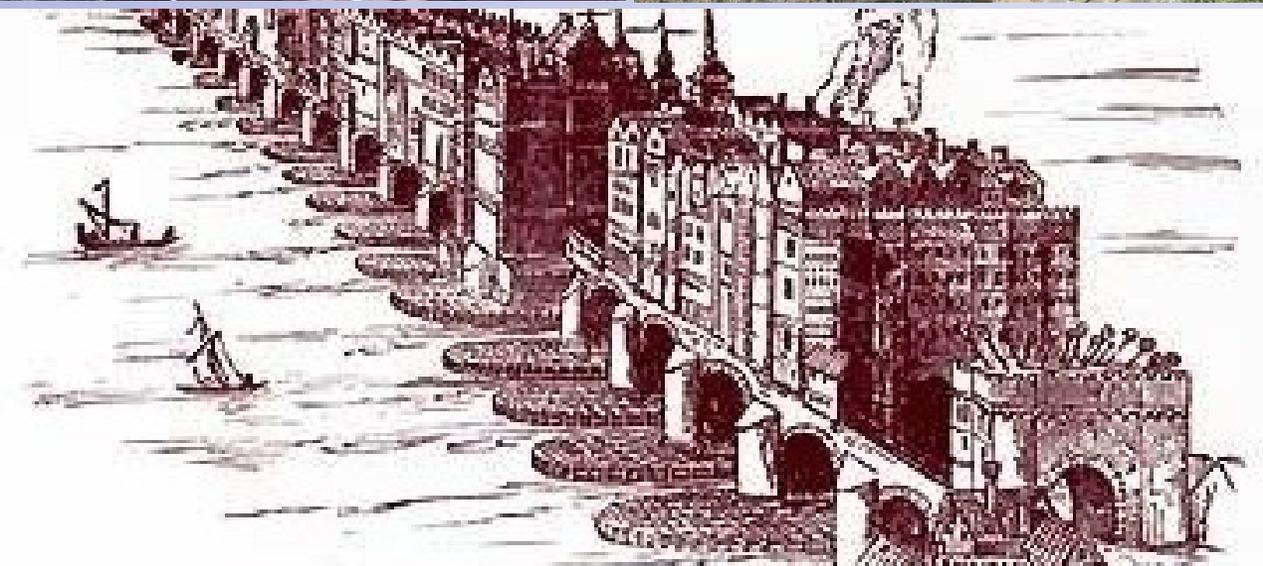
- **EARLY
CIVILIZATIONS**





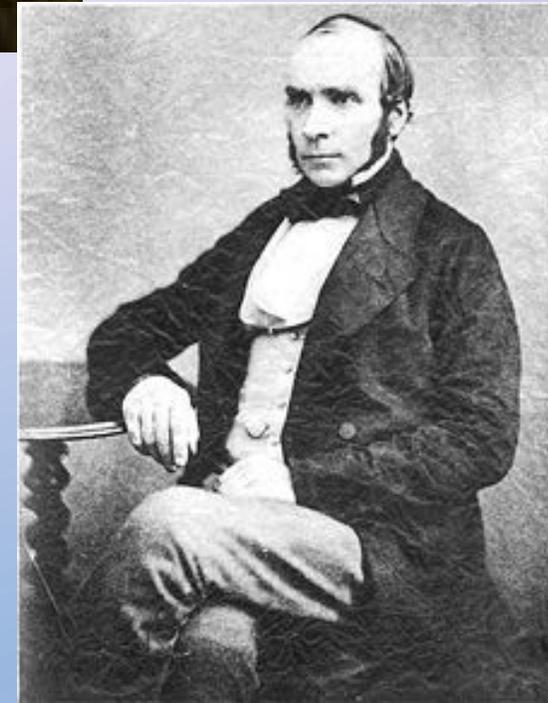
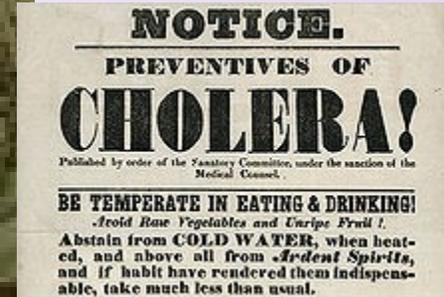
A SHORT HISTORY OF HUMAN SANITATION 476 AD TO 1854

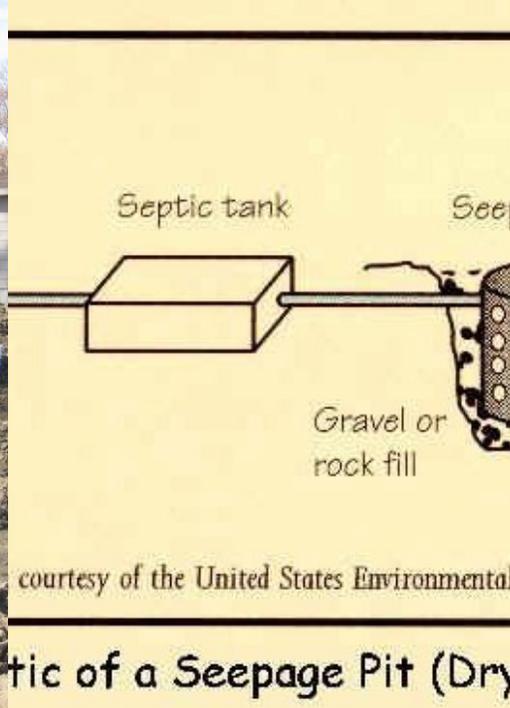
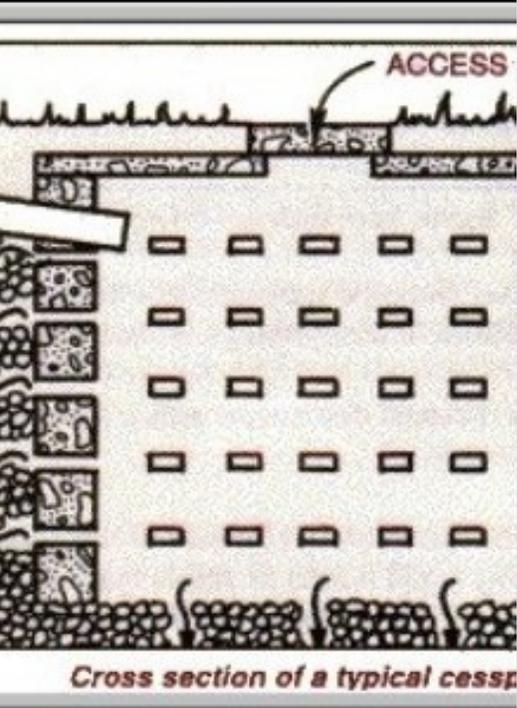
- **MIDDLE AGES**



A SHORT HISTORY OF HUMAN SANITATION 476 AD TO 1854

- **VICTORIAN ERA**

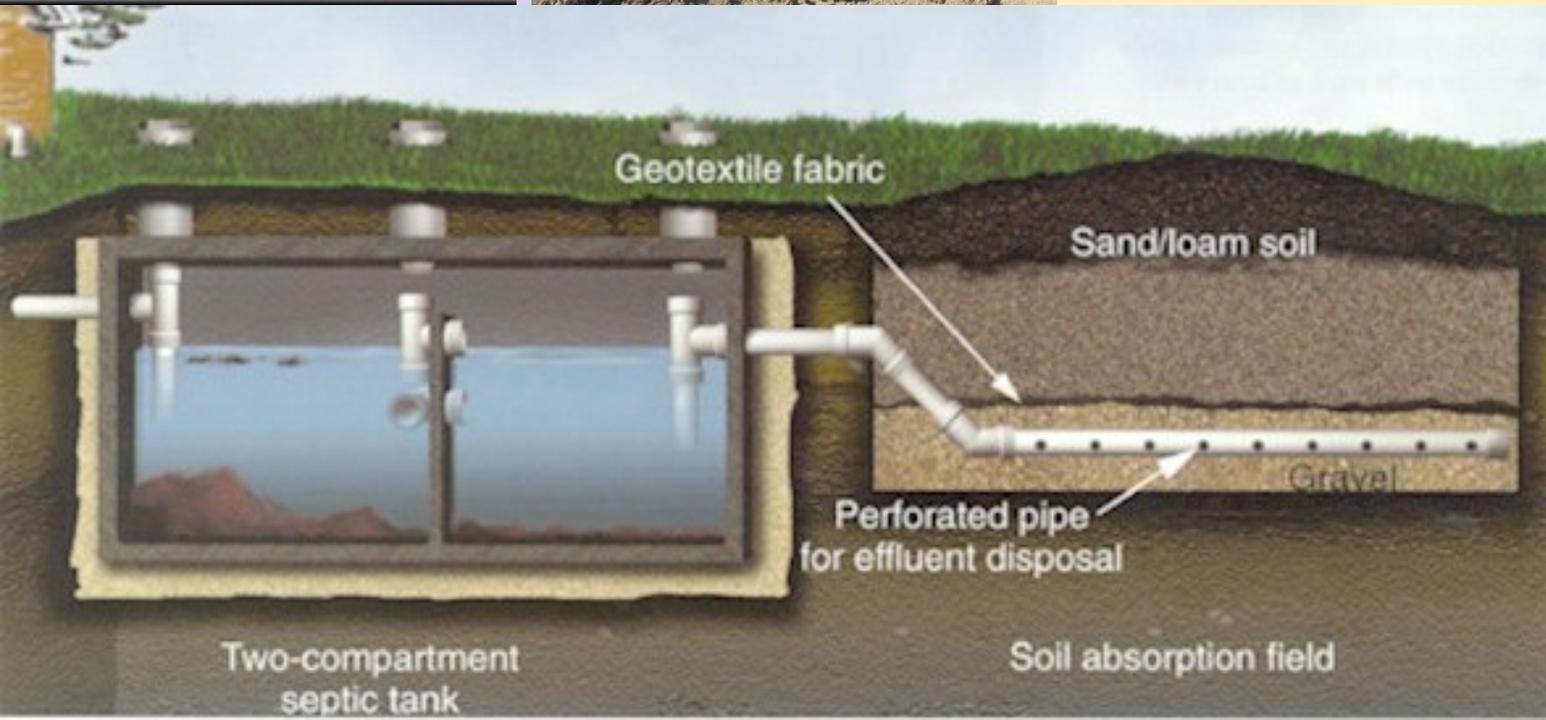




A SHORT HISTORY OF HUMAN SANITATION TODAY & THE FUTURE

- **MODERN TIMES**

- **THE FUTURE**



CURRENT WORLD SANITATION



Mumbai, India



Nairobi slum, Kenya



Durban, SA

**2.6 Billion People
w/out access to
Toilets**

**Diarrhea kills 2.2 million
people/yr in developing world**

**80% of world illness caused by
fecal matter**

1 gram of feces

**People without access to toilet
may ingest up to 10 grams of
fecal matter/day**

The background features a light blue to white gradient with several translucent water bubbles of various sizes scattered across the top and bottom edges. A large, rounded rectangular box in a dark teal color is positioned on the left side of the slide.

Life of an Onsite Wastewater Treatment System

INTRODUCTION

WHO ARE THE PLAYERS?

- REGULATOR
- DESIGNER
- INSTALLER
- HOMEOWNER
- SERVICE PROVIDER/INSPECTOR
- EQUIPMENT PROVIDERS
- OTHERS?



WHAT ARE THEIR GOALS AND OBJECTIVES?

1. REGULATOR
 2. DESIGNER
 3. INSTALLER
 4. HOMEOWNER
 5. SERVICE PROVIDER/INSPECTOR
 6. EQUIPMENT PROVIDERS
 7. OTHERS? REALTORS, FINANCE, ETC
1. ENSURE SYSTEM IS ACCORDING TO CODE
 2. CREATE A DESIGN BASED ON SITE CONDITIONS
 3. BUILD THE DESIGN BASED UPON CODE
 4. SYSTEM THEY DON'T HAVE TO DO ANYTHING TO EV-ER!
 5. ACCESSIBILITY AND FUNCTIONALITY
 6. BUILDING OR SUPPLYING THE "NEW MOUSE TRAP"
 7. WHO KNOWS!

WHY THINK “LIFE CYCLE”?

Cradle to Grave

THERE IS A BEGINNING, MIDDLE AND END TO THESE SYSTEM

EACH SECTOR DOVETAILS INTO THE NEXT

ALL PRACTITIONERS NEED TO HAVE A BASIC UNDERSTANDING AND RESPECT FOR THE NEXT AND PREVIOUS STAGE IN THE LIFE CYCLE OF AN OWTS

Why a Principled Approach

INTRODUCTION

BEST PRACTICES BY SECTORS

Regulators

Designers

Installers

O&M and Service Providers

Inspectors



HOMEOWNERS

- UNDERSTANDING
- GOALS
- RULES
- COSTS
- CITY PEOPLE

EPA MANAGEMENT GUIDELINES

- GUIDELINES
- 5 LEVELS
- APPLICATIONS





REFEREES

ENFORCEMENT

- LEVELS THE FIELD
- CREATES RESPONSIBILITY
- MUST BE:
 - QUICK
 - FAIR
 - EFFECTIVE

MAKING IT HAPPEN

- REPORTING
- ENFORCEMENT
- COMPLIANCE BASED?



ENGAGEMENT

- EVERYONE HAS A ROLE
- EVERYONE MUST BE INVOLVED
- GOOD CHOICES
- AVOID COMPLAINTS





ROLES

LOCAL GOVERNMENT

- LOCAL SPECIFICS
- LOCALLY FAIR
- LOCALLY FLEXIBLE

STATE

- CONSISTENCY
- CLEARING HOUSE
 - PERFORMANCE
 - SYSTEMS
 - PROFESSIONALS



ROLES



ROLES

INDUSTRY

- FORWARD THINKING
- FORWARD ACTING
- FOLLOW THRU



ROLES

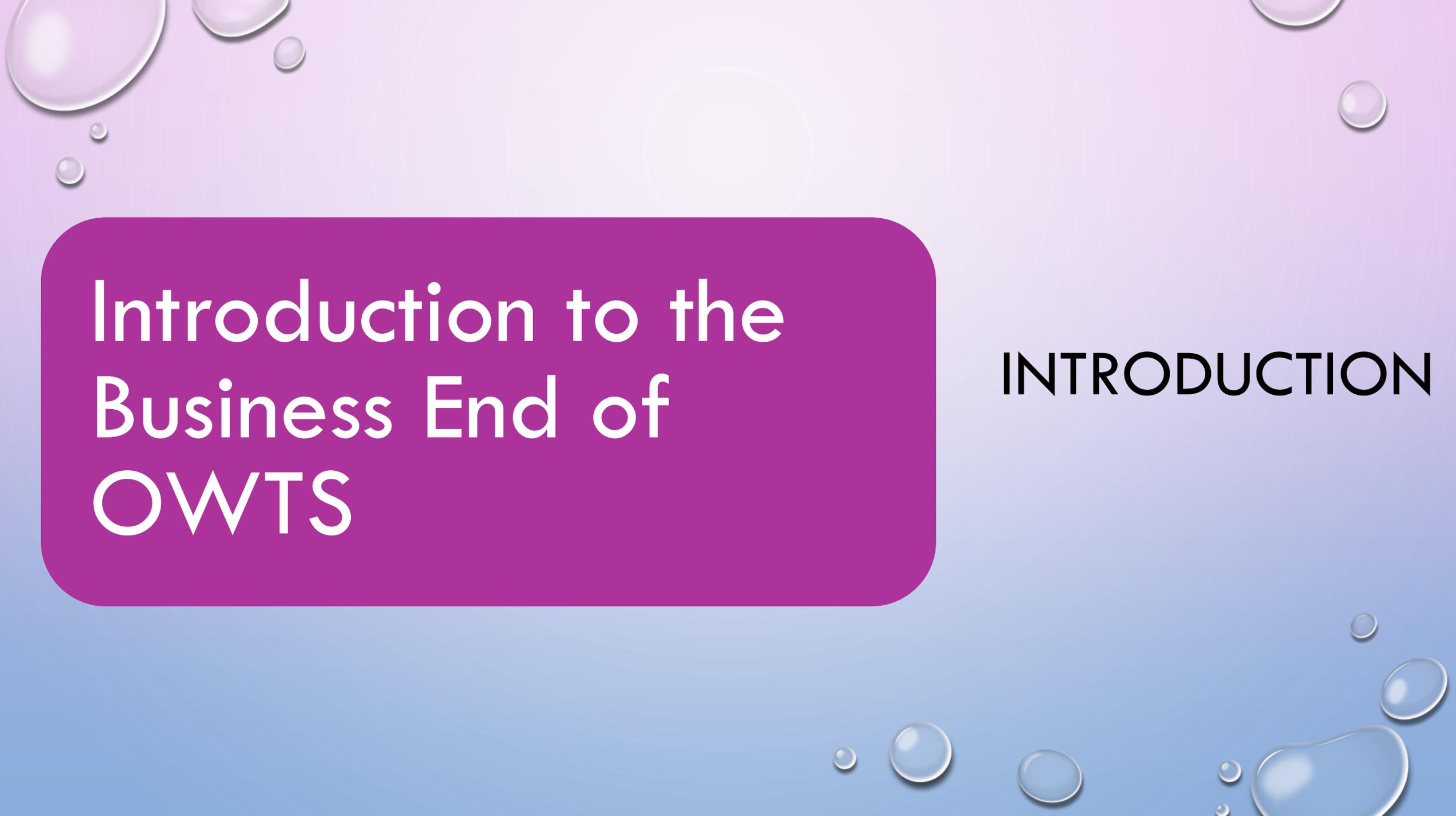
RESPONSIBLE MANAGEMENT ENTITY

- GOOD
 - MAKE IT HAPPEN
 - COST EFFECTIVE
- BAD
 - LACK OF EXPERTISE
 - MONOPOLY
 - FOX IN THE HEN HOUSE



AMERICA

- BETTER PLACE



Introduction to the Business End of OWTS

INTRODUCTION

INDUSTRY BASICS

THE BUSINESS OF

Being a professional in the
OWTS industry

Knowledge is key

Communications and the
treatment train



UNDERSTANDING THE BUSINESS SIDE OF OWTS

Service – what services will you be providing – can you expand?

Finances – understanding the numbers

Training – Everyone needs it – how you can provide it

Marketing – selling yourself and your business

Sales – income!

Team – what comprises your team – there is no “I” in team

Equipment needs

Values and foundation – the base structure of your business philosophy

THINGS TO KNOW



THE BIG THREE

- E IS FOR EVERYONE
 - EDUCATION
 - ENGAGEMENT
 - ENFORCEMENT

THE SEPTIC FAIRY TALE

- EVERYONE UNDERSTANDS SEWAGE
- EVERYONE WILL DO WHAT IS RIGHT
- THE MORE YOU ARE RESPONSIBLE THE MORE YOU'LL BE INTERESTED IN THE DOING THE RIGHT THING





EDUCATION

GIVING PRACTITIONERS THE
TOOLS TO MEET THE DESIRED
GOALS

PROFESSION

- CERTIFICATION
- CONTENT
- BEYOND THE RULES
- PROFESSIONAL ORGANIZATIONS
 - LOCAL
 - NATIONAL
- PULLING EVERYONE FORWARD



WHAT IS AN OWTS PROFESSIONAL

- **ETHICS FOR SEPTIC PROFESSIONALS**
- **DOING WHAT IS BEST FOR:**
 - **CUSTOMER**
 - **ENVIRONMENT**
- **BEING A PROFESSIONAL CONTRACTOR**

'Good Systems'

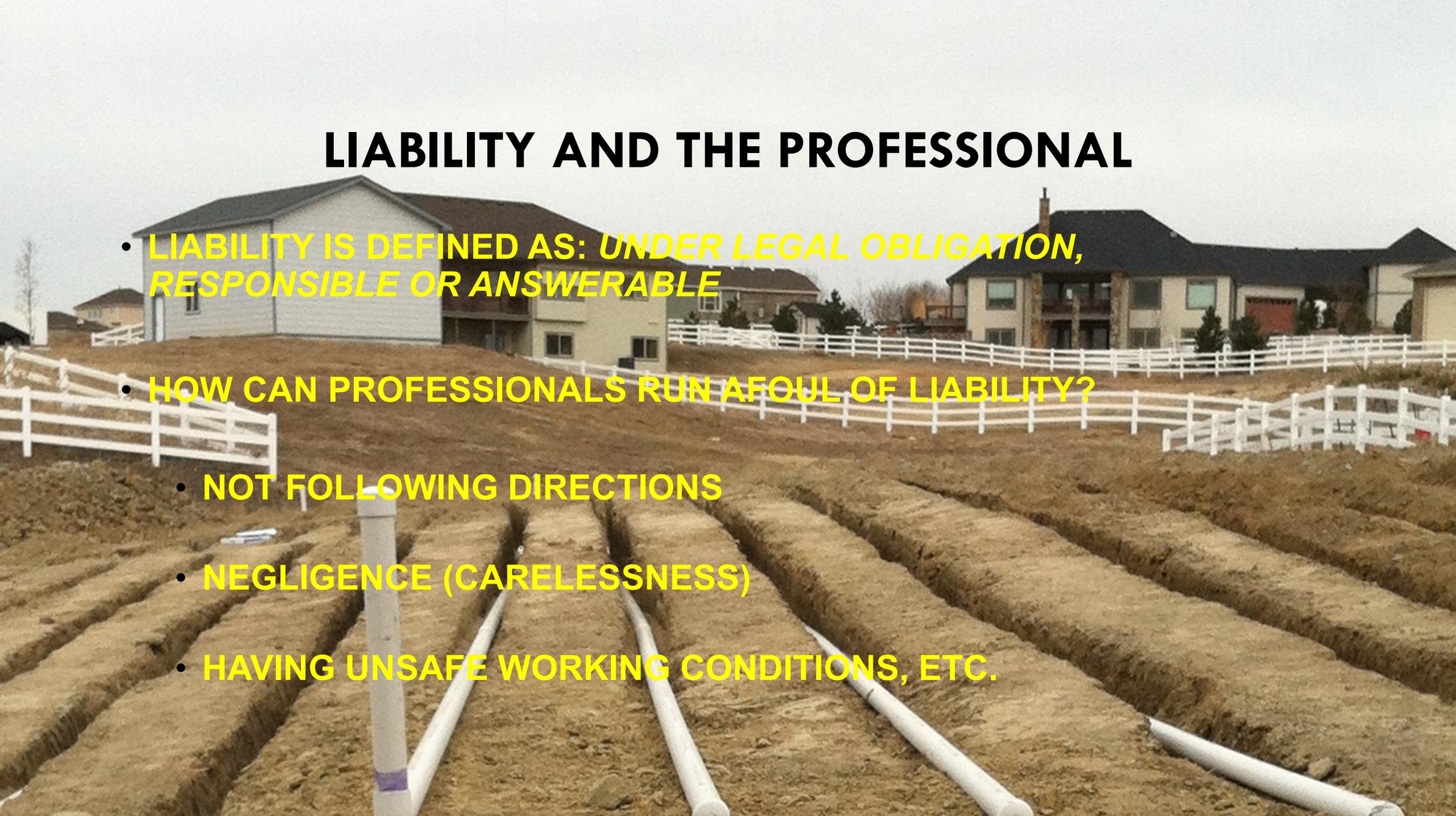
OTHER “ETHICS” ITEMS

- CREDIBILITY
- RESPECT
- ADMIRATION



LIABILITY AND THE PROFESSIONAL

- **LIABILITY IS DEFINED AS: *UNDER LEGAL OBLIGATION, RESPONSIBLE OR ANSWERABLE***
- **HOW CAN PROFESSIONALS RUN AFOUL OF LIABILITY?**
 - **NOT FOLLOWING DIRECTIONS**
 - **NEGLIGENCE (CARELESSNESS)**
 - **HAVING UNSAFE WORKING CONDITIONS, ETC.**





Summary and Introduction of Sessions to Follow

INTRODUCTION