North Carolina Pretreatment Consortium
PRETREATMENT CERTIFICATION GRADE III NEEDS-TO-KNOW

CHAPTER ONE – PRETREATMENT PROGRAM ADMINISTRATION

What are the objectives of the general pretreatment regulations?
What are the Federal pretreatment program requirements?
Know the definition of Approval Authority and Control Authority.
What legal document requires control authorities to implement the pretreatment program?
What general statute was passed to implement the State of NC Pretreatment program?
What is the definition of "modified" program in NC?
Where does the CA get the legal authority to implement the pretreatment program?
Know the basic pretreatment program procedural requirements.
What items need to be submitted to NC with the pretreatment program application?
What are some of the resources needed for the pretreatment program?
Name other function areas that may be needed to implement the pretreatment program?
List some of the budget items that need to be included in the pretreatment program?
Name several ways that a control authority can recover costs to run the PT program.
Be able to calculate surcharges based on the pounds formula.
Name some of the equipment and materials needed to maintain inventory.
What additional program responsibilities may be included in the pretreatment program that are not required by Federal regulations?

CHAPTER TWO – SEWER USE ORDINANCE DEVELOPMENT

Where would you find the legal authority to enforce the pretreatment program?
Who is affected by a Sewer Use Ordinance?
What are the eight Federal specific prohibitions?
What are local limits?
What is dilution prohibition?
What kind of fees may the pretreatment program assess?
What are the reasons to modify a permit? What are the reasons to revoke a permit?
What are reporting requirements?
What authority must you have to conduct compliance monitoring?
Describe how the control authority must handle confidential information?
When is effluent data deemed to be confidential?
Be able to discuss various enforcement actions.
What must the control authority have in place in order to assess penalties?
What is the maximum Federal civil penalty that the control authority can issue?
What actions are deemed to be criminal violations?
Define injunctive relief and remedies nonexclusive.
Why must the control authority have an appeal process?
Who chooses the level of the adjudicatory hearing?
What court has the final decision in an appeal?
What is the federal requirement for public notice for SNC?
Understand the affirmative defense to certain violations.
The affirmative defense does not apply to which prohibitions?
Define bypass.
Who must approve a Sewer Use Ordinance prior to the effective date?

CHAPTER THREE- MULTIJURISDICITONAL AGREEMENTS

Not Applicable-Read Only Chapter

CHAPTER FOUR – ADVANCED CATEGORICAL PRETREATMENT STANDARDS

What are Federal Categorical Pretreatment Standards?
Be able to recognize differences in the characteristics of Federal Categorical Pretreatment Standards and Local Limits.
Know the difference between concentration-based standards and production based standards.
Categorical pretreatment standards apply only to what type of flow?
When is a categorical pretreatment standard the same as the end-of-pipe standard?
List two ways to adjust categorical pretreatment standards where wastestreams are commingled.
Define CWF and FWA.
When should the CWF be used?
When should the FWA be used?
As it relates to the Combined Wastestream Formula:

- Define regulated wastestreams
- Define unregulated wastestreams
- Define dilute wastestreams
- Define non-regulated wastestreams

Given appropriate information be able to calculate adjusted categorical limits using the CWF
Given appropriate information be able to calculate adjusted categorical limits using the FWA
Describe the difference in the way the CWF and the FWA address the various wastestreams
Given appropriate information, be able to calculate production rate using 5 years of actual data
Given appropriate data, be able to calculate an equivalent mass limit and an equivalent concentration limit for a production based standard.
When can projected production rates be used?
What is a tiered permit?
When should tiered permits be considered?
Describe how Research and Development facilities are regulated under the Categorical Standards.

CHAPTER FIVE – HAZARDOUS WASTE
RESOURCE CONSERVATION AND RECOVERY ACT [RCRA]

What is the purpose of RCRA?
Name some of the relationships between RCRA and other Federal Regulations.
What are the subtitles to RCRA?
Who has the responsibility of determining if a particular solid waste is hazardous waste?
What are the two ways to know if a waste is regulated as a hazardous waste?
Know the four characteristics that define hazardous waste.
What does the RCRA “empty” mean for empty containers?
What are the three waste generator categories?
Who must have a NC Hazardous Waste Identification Number?
Understand the manifest process?
Who is subject to Emergency Prevention and Response Programs?
When is used oil not regulated under RCRA?
What is universal waste?
What is the mixed sewage exclusion?
What regulation requires control authorities to notify SIU’s of hazardous waste regulations?
Why would one be interested in reviewing Form R of Title III Superfund Act?

CHAPTER SIX – PRETREATMENT SPECIAL TOPICS

What are the forms of mercury?
What form of mercury is the most toxic to aquatic organisms?
What is an amalgam separator and where is it typically used?
What is the difference between an "acute" toxicity test and a "chronic" toxicity test?
What does the toxicity test indicate?
What does TMDL stand for?
What is the 303(d) List and what agency requires it to be developed?
Be familiar with the reasons a TMDL is required.
Know the implications of LTMP data on calculation of a Reasonable Potential Analysis by DWQ.
What is a BMP and how are BMPs used in the pretreatment program?

CHAPTER SEVEN – HEADWORKS ANALYSIS AND LOCAL LIMITS DEVELOPMENT

Know what the following acronyms stand for and the accompanying definition/meaning:

- HWA, POC, LTMP, AHL, MAHL, MAIL, TBLL, ADRE, MRE, WET, DMR, IWC, 7Q10, WQS, BPJ, MGD, cfs, gpd, HASL

At a minimum, how often must a Headworks Analysis be conducted, according to NC-DWQ?
Identify other events that might require a HWA be updated prior to the five year deadline.
List the differences between Federal Categorical Pretreatment Standards and Technically Based Local Limits [Developed by? Pollutants? Objective? Regulates? Basis?].
Once established by the POTW, local limits are considered to be what for enforcement purposes?
Know the DWQ required elements, required sampling points and minimum sampling frequency for a Long Term Monitoring Plan.
Describe how site-specific POTW factors affect HWA and local limits determinations [e.g. sludge disposal method, NPDES permit limits, 7Q10 flow/IWC, receiving stream classification]
Be familiar with LTMP sampling protocols and how the PT Coordinator can maximize the use of the LTMP data [e.g. sampling coordination, detection limits, NPDES data, etc.].
What are the sources used to determine a potential "Pollutants of Concern" List?
Given appropriate information, be able to calculate/determine the following:

- POTW hydraulic retention (detention) time
- Removal Rate [% Removal]
- Removal Efficiency using ADRE [concentration and mass]
- Removal Efficiency using MRE [concentration and mass]
- Removal Efficiency using the Decile method
- Pass through AHL using NPDES permit limits
- Pass through AHL using NC Water Quality Standards
- Biological Process Inhibition AHL
- Biosolids AHL for Land Application
- Anaerobic Digester Inhibition AHL
- Uncontrollable loading in pounds using POTW influent and SIU data
- Uncontrollable loading in pounds using sampling data from uncontrollable sites
- Maximum Allowable Headworks Loading
- Maximum Allowable Industrial Loading
- SIU determination based on 5% of any MAHL [North Carolina definition]
- When the use of a HASL may be appropriate

Given a specific MAIL value and other pertinent information be able to calculate (and describe the rationale for and the advantages and disadvantages of) the following:

- Uniform Concentration local limits for a city with one POTW

- Uniform Concentration local limits for a city with more than one POTW
- "What You Need is What You Get" local limits
- Industrial User Contributory Flow local limits
- Selected Industrial Reduction allocation of MAIL

Based on a specific data set and sampling protocols, be able to recognize which removal efficiency calculation method(s) could be appropriately used for that data set.
Name the "EPA 15" Pollutants of Concern (the minimum list of pollutants) that must be evaluated during a HWA.
Be able to convert numerical values between all of the following units: (ppm, ppb, ppt, mg/l, ug/l ng/l, percent), (gpd, MGD, cfs).
Identify the various options for *allocating and implementing* local limits and be able to describe the advantages and disadvantages of each option.
List 5 five Federal and North Carolina environmental regulations that are used as resources during HWA and Local Limits development.
List the disadvantages of concentration based limits.
Read and understand the implications of the DWQ *North Carolina Local Limits Procedure* [from September 1993].
Given the appropriate information be able to use the pounds formula and rearrange the pounds formula to solve for any unknown.
In relation to HWA, know the difference between a North Carolina Water Quality *Action Level* and a North Carolina Water Quality *Standard*.
List the pollutants which currently have a NC Water Quality *Action Level*?
Which potential POCs can be removed from the final POC list because they cannot be evaluated using standard HWA calculation techniques.
Describe the difference between land application of biosolids and surface disposal of biosolids.
What information/regulation is contained in 40 CFR Part 503?
Identify the additional requirements for HWA and Local Limits development that are specific to North Carolina.
What is the purpose of a safety factor and is a safety factor required by North Carolina DWQ?
Be able to determine the appropriate HWA decision/action given the following:

- More than one stream classification is assigned to a POTW's receiving stream
- More than half of the of LTMP data for the POTW influent and POTW effluent is below detection limit
- More than one method of sludge disposal is used by the POTW
- LTMP data Negative removal efficiencies
- Domestic/Uncontrollable calculated load is greater than MAHL
- Very stringent Land Application Cumulative Load AHL is the MAHL

Know the mathematical relationship between the following: MAHL, Uncontrollable Load, Safety Factor, Hauled Waste Load, MAIL
A PT Coordinator will need copies of what documents, permits and regulations in order to complete a HWA and Local Limits determination?
A PT Coordinator will need what POTW information in order to complete a HWA and Local Limits determination?
A PT Coordinator will need what Industrial User/discharger information in order to complete a HWA and Local Limits determination?

CHAPTER EIGHT – ENFORCEMENT PROCEDURES AND ERP

Where does the legal authority come from to implement the pretreatment program?
What is an administrative fine?
What are the two basic methods used to assess fines?
When determining a fine, what circumstances should be considered before issuing the fine?
Define economic benefit.
Be able to list and recognize the purposes of economic benefit.
What are administrative orders?
List the 4 types of administrative orders be familiar with the pros and cons of each.
What is civil litigation?
Where does the authority come from to enforce the Pretreatment Program?
What is the maximum fine as defined by Federal law?
What is the maximum fine as defined by North Carolina law?
When is it appropriate to pursue civil litigation?
What are the two elements that define a criminal violation?
When is it appropriate to use criminal prosecution?
What are the advantages and disadvantages of criminal prosecution?
What are the ways to terminate service?
What are reasons to terminate sewer service?
What is an ERP?
Be able to identify the elements of an ERP.
What are the benefits/purpose of an ERP?
What are the five tasks in developing an ERP?
Why is it important to identify appropriate personnel in an enforcement action?
What is the most common form of enforcement action taken by a CA?
When should data be screened?
Why should one establish a range of responses?
What criteria should be evaluated when determining an enforcement action?
Why is timely action necessary in an enforcement response?
How do you apply an ERP?
What are informal enforcement actions?
Be able to list informal and formal enforcement actions.
Name some formal enforcement actions and when should they be applied?
What activity should occur when an IU refuses to accept hand-delivered mail?
Why is follow-up action required in an enforcement action?
Define good faith effort.
Be able to discuss the different enforcement actions taken against an IU.
What is a compliance review meeting?
Why are compliance meeting follow-up letters important?
Know the general types of actions required for each enforcement action.
Name three formats that could be used for an ERP.
What format is used in the NC Model ERP?
Describe the Public Notice Requirement**.**
Be familiar with the SNC definition and how it relates to the Public Notice**.**
Be familiar with the use of civil penalties and the North Carolina required penalty amount.
Be able to read an IU permit, review sampling data, recognize permit violations and use an ERP to determine appropriate enforcement actions.

CHAPTER NINE – PRETREATMENT ANNUAL REPORT [PAR]

What are the three regulatory references used to require the Pretreatment Annual Report?
What information is required to be submitted with the PAR?
What is the Narrative and Pretreatment Program Summary?
What is the Pretreatment Program Info Database?
What is the Pretreatment Program Summary?
What is the SNCR?
What is the SIUs in SNC Historical Report? Where does this report come from?
What is the IDSF?
What is the Allocation Table?
Where do you get the Public Notice?
What are Waste Reduction Activities?
What other information may be included with the PAR?
What is the reason for the narrative and summary in the PAR?
What must be included about the SIUs in the Narrative Summary?
Why is the Pretreatment Program Summary Form required?
How do you count the Number of SIUs in SNC for the PPS Form?
What is the IDSF?
What information must be included on the IDSF?
How do you report results that are "BDL" in the IDSF?
How do you report SIU Waste Reduction Activities?
What is required by a "Modified" Pretreatment Program for the Annual Report?