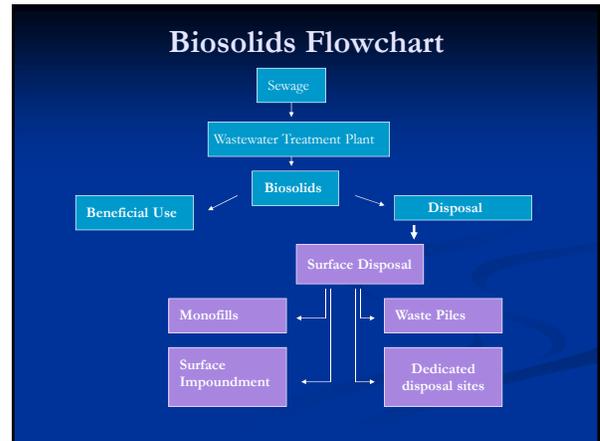
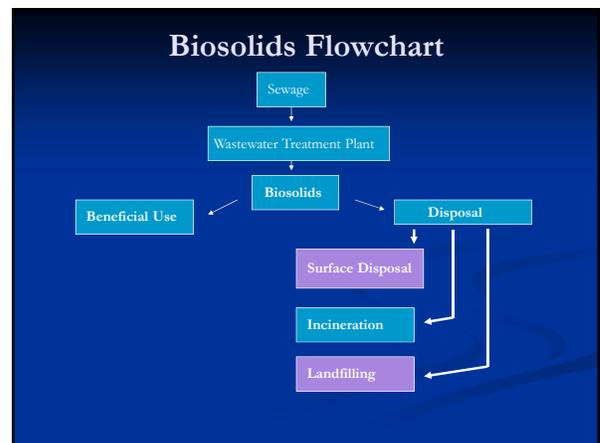


- ### What are the differences?
- Land Application
    - Beneficial use
  - Storage
    - Placed and remain on land < 2 years
  - Surface Disposal
    - Final disposal



- ### Surface Disposal
- General requirements
  - Pollutant limits
  - Management practices
  - Operational standards for pathogen and VAR
  - Monitoring and record keeping requirements
  - Reporting Requirements



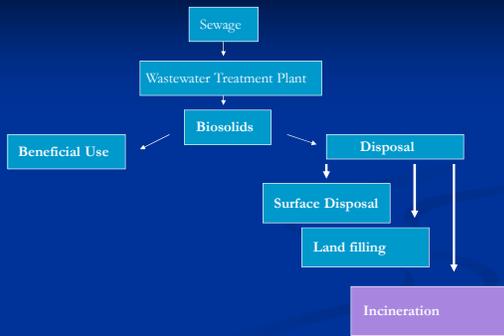
## Landfilling

- Regulated by Part 258 of Landfill Rule
  - Pass the paint-filter liquids test
    - (dewatering biosolids to about 20 percent solids or more will generally meet this goal)
  - Cannot contain > 50 ppb of polychlorinated biphenyls (PCBs) (40 CFR Part 761)
  - Must not meet the definition of hazardous wastes

## Landfill Operators

- Ask for documentation for
  - Hazardous waste characterization
  - Paint filter test results
- Procedures in operation plan for how they will manage biosolids
  - Waste Acceptance Criteria

## Biosolids Flowchart



## Biosolids Incineration

- Involves the high temperature burning of biosolids in an enclosed devise
- Uses an auxiliary fuel supply
  - Gas, oil, wood chips, coal
- The resultant ash is significantly lower in volume than the feedstock (biosolids)



## Biosolids Incineration

- Concentrates the trace metals
- Ash
  - Non hazardous ash is not covered by Part 503 rule when it is used or disposed
  - Ash is disposed according to solids waste disposal regulations in 40 CFR Part 258
  - If ash is land applied then 40 CFR Part 257 applies

## Biosolids Incineration

- Part 503 Incineration Requirements include:
  - Pollutant limits
  - Limits for total hydrocarbons
  - General requirements and management practices
  - Monitoring, record keeping and reporting requirements

	Total Hydrocarbon Concentrations		Carbon Monoxide Concentrations	
	2002	2003	2002	2003
Average	27.11	26.65	32.82	26.62
Maximum	72.00	94.00	75.00	75.00
Minimum	1.00	0.40	5.20	3.95
Median	20.63	21.54	23.75	21.54

## Other Sludge Wastes

- Biosolids
- Domestic Septage
- Industrial and Commercial Pumpable Wastes
- Domestic Septage Mixed with Industrial or Commercial Pumpable Wastes

## The Septic Tank connection... Septage and Pumpable wastes

- Septage is classified according to the environment in which it is generated.
  - Domestic septage
  - Industrial or commercial pumpable wastes
    - This is non-domestic waste
  - Domestic septage mixed with non-domestic pumpable wastes

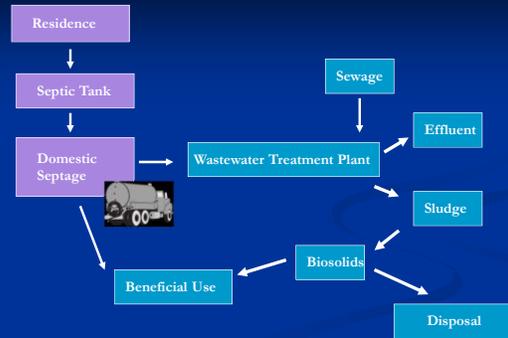
## Domestic septage

- Domestic septage is the liquid or solid removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, or a similar system that receives only domestic septage

- Household
- Non-commercial
- Non-industrial

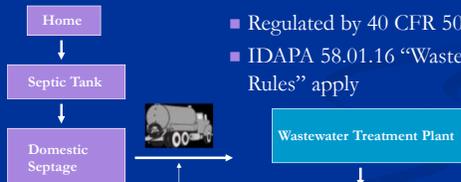


## Biosolids Flowchart



## Domestic Septage

- Domestic septage mixed with any sewage sludge is considered sewage sludge.



- Regulated by 40 CFR 503
- IDAPA 58.01.16 "Wastewater Rules" apply

- Regulated by IDAPA 58.01.15 "Rules Governing Cleaning of Septic Tanks"

## Domestic Septage Land Applied

- Domestic septage land applied

- Regulated by 40 CFR 503
- IDAPA 58.01.16 "Wastewater Rules" apply
  - Needs a DEQ approved Plan



## Industrial (or Commercial) Pumpable Wastes

- Material pumped from septic tanks or other devices used in the collection, pretreatment, or treatment of any water-carried waste from any process of industry, manufacturing, trade, or business
- Examples:
  - Grease Traps
  - Car Wash Sumps
  - Industrial by products



<http://www.boynewaste.ie/sludge.htm>

## Non-Domestic Pumpable Wastes Land Applied

- Not regulated by 40 CFR 503
- Regulated by IDAPA 58.01.16 "Wastewater Rules"
  - Needs a DEQ approved Plan



## Mixed Domestic and Non-Domestic Pumpable Wastes Land Applied

- Not regulated by 40 CFR 503
- Regulated by IDAPA 58.01.16 "Wastewater Rules"
  - Needs a DEQ approved Plan



## Land Applied Sludge Wastes need an approved Plan

- Biosolids
  - 40 CFR 503
  - IDAPA 58.01.16 "Wastewater Rules"
- Domestic Septage
  - 40 CFR 503
  - IDAPA 58.01.16 "Wastewater Rules" apply
  - IDAPA 58.01.15 "Rules Governing Cleaning of Septic Tanks"
- Industrial and Commercial Pumpable Wastes
  - No requirements under 40 CFR 503
  - IDAPA 58.01.16 "Wastewater Rules"
  - IDAPA 58.01.15 "Rules Governing Cleaning of Septic Tanks"
- Domestic Septage Mixed with Pumpable Wastes
  - No requirements under 40 CFR 503
  - IDAPA 58.01.16 "Wastewater Rules" apply



## DEQ's Website: Sludge & Biosolids

<http://www.deq.idaho.gov/water-quality/wastewater/sludge-biosolids.aspx>

- Reviews the Regulation of Biosolids in Idaho
- Has links to many sites including
  - More links to EPA's Documents
- Biosolids Management Plan
- Guidance for Land Application of Municipal Biosolids
  - Development of a Biosolids Management Plan
  - Checklist

## DEQ Wastewater Program Staff

- Chas Ariss, P.E.
  - Engineering Manager – Program Lead
- Tressa Nicholas, MSCE
  - Wastewater Analyst, Biosolids, Training & Conference Coordinator
- A.J. Maupin, P.E.
  - Program Lead Engineer
- Olga Cuzmanov
  - Permits, Compliance & Enforcement Analyst
- Lindsey Stanton
  - Administrative Assistant





## Thank you!

- Workshop Webpage will have post workshop material
- Make sure you have signed in for CEU's
- Thank you again, to Bob Brobst and Jim Ippolito!!!

## Resources

- Northwest Biosolids Management Association
- Emerging Technologies for Biosolids Management EPA 832-R-06-005 September 2006 <http://www.epa.gov/owm/mtb/epa-biosolids.pdf>
- A Plain English Guide to the EPA Part 503 Biosolids [http://water.epa.gov/scitech/wastetech/biosolids/503pe\\_index.cfm](http://water.epa.gov/scitech/wastetech/biosolids/503pe_index.cfm)