

Reporting of County Level On-Site Wastewater Program Activities in North Carolina

Using the New Format - What We're Learning

Kae Arrington, RS, MS

Program Improvement Team

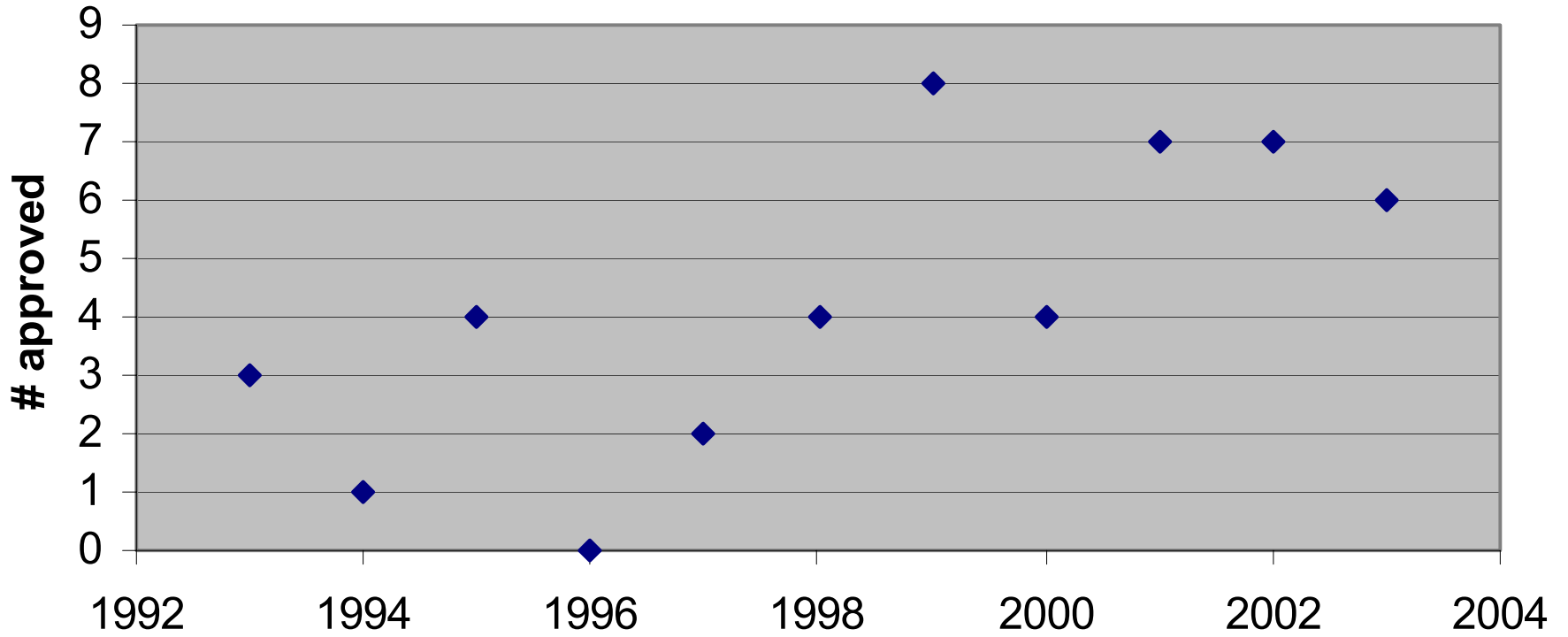
On-Site Wastewater Section

kae.arrington@ncmail.net

919-218-2234 cell

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Innovative System Approvals



Installation Tracking

Operation Permits	<i>System Classification</i>						
	I	II	III	IV	V	VI	
Issued							
<i>New (No.)</i>							
<i>Expansions(No.)</i>							
<i>Repairs (No.)</i>							
<i>TOTALS</i>							
Training/Education (Contact hours - On-site Wastewater)							<i>(Hrs)</i>

Changes to .1969

Effective 1 February 2005

Allow Accepted System Designation

Requires LHD to indicate the specific system installed on OP's in addition to System Type

Monthly activity report to include more detailed information about systems being installed and malfunctioning.

The State shall accumulate and store this installation data for future reference and surveys.

<i>For county use</i>	ACTIVITY	Number (Total)
S-1	Site Visits (Includes all OSWW field activities not counted below)	
S-1e	Sites Evaluated (Includes sites evaluated or re-evaluated for any purpose)*	
S-3	Improvement Permits Issued - New or Revision w/ PLAT (Non-expiring)	
S-4	Improvement Permits Issued - New or Revision w/ Site Plan (Valid 60 mos)	
S-4a	Improvement Permits Issued – Relocation w/ Site Plan (Valid 60 mos)	
S-5	Improvement Permits Issued - Expansion of Existing System (Valid 60 mos)	
S-6	Improvement Permits Issued – Repair or Replacement of Malfunctioning System	
S-7	Improvement Permits Denied (Documented)	
S-8	Construction Authorizations – New, Revision, or Relocation	
S-9	Construction Authorizations - Expansion	
S-10	Construction Authorizations – Repair or Replacement of Malfunctioning System	
S-11	Construction Authorizations Denied (Documented)	
S-12	Authorizations - Mobile Home Parks *	
S-13	Authorizations - Existing System Reuse other than in MHP *	
S-13d	Authorizations for System Reuse – Denied*	
S-14a	Table V Inspections w/Reports Prepared *	
S-14b	Migrant Housing Inspections w/ Reports Prepared *	
S-15	Notices of Violation Issued	
S-16	Legal Remedies - Injunctions, criminal misdemeanor, administrative penalties	
S-17	Permits Revoked (Notice)	
S-18	Permits Suspended (Notice)	
S-25	Sewage Complaints Investigated *	
S-26	Tank Yard Inspections Performed *	
S-27	Consultative Contacts	
(*) Means there is already a site visit assumed to have happened when this activity is reported.		

Number of Operation Permits Issued*
Based on Management System Types from Rule .1961 Table V(a)

	Type I	Type II	Type III	Type IV	Type V	Type VI
Initial/New						
Expansion						
Repair						
Re-permitted						

OPERATION PERMITS ISSUED

County _____

Date _____

GRAVEL SYSTEMS								
System Code	System Description	New		Expansion		Repair		TOTAL
		Gravity	Pressure	Gravity	Pressure	Gravity	Pressure	
GTR	Trench							
GBD	Bed							
MODIFIED SYSTEMS								
PPBPS	PPBPS							
LDP8	Large Diameter Pipe 8"							
LDP10	Large Diameter Pipe 10"							
ACCEPTED SYSTEMS								
EZ1203H	Ezflow EZ 1203H							
IS	Infiltrator Standard							
ISW	Infiltrator Standard Sidewinder							
ISC	Infiltrator Standard SC							
IQ4W	Infiltrator Quick 4 Standard W							
IHC	Infiltrator High Capacity							

System Code	System Description	New		Expansion		Repair		TOTAL
		Gravity	Pressure	Gravity	Pressure	Gravity	Pressure	
INNOVATIVE SYSTEMS								
BBIF	Brunswick Bed in Fill							
CHA	Chamber							
BIOS	Biodiffuser Standard							
BIO3	Biodiffuser Bio 3							
CEZ24	Cultec Contractor EZ 24							
CC74	Cultec Contractor 75							
CC100	Cultec Contractor 100							
CC125	Cultec Contractor 125							
CC1	Cultec C-1							
CC2	Cultec C-2							
CC3	Cultec C-3							
CC4	Cultec C-4							
HEC	Hancor Envirochamber							
ISWSC	Infiltrator Standard Sidewinder SC							
IQ4	Infiltrator Quick 4 Standard							
IHCSW	Infiltrator High Capacity Sidewinder							
IEQ	Infiltrator Equalizer							
	Drip							
DDEL	Delta							
DGEO	Geoflow							
DPR	Perc Rite							
PSA	Polystyrene Aggregate							
EZ1003T	Ezflow EZ 1003T							
EZ1203T	Ezflow EZ 1203T							
MLTP	Multi-Pipe							
TCHP	Tire Chips							

Pre-treatment

Code		New	Expan	Repair	TOTAL	Code		New	Expan	Repair	TOTAL
	ATU						Trickling Filter				
NORS	Norweco Singular					BCLE	Bioclere				
AQUA	Aquarobic					BKIN	Bio-kinetic				
CONS	Consolidated						Sand Filter				
DELT	Delta					PDSF	Pressure Dosed				
BIOM	Biomicrobics					ORSF	Orenco				
HOOT	Hoot						Other				
CLST	Clearstream					ADGE	Advantex Geotextile				
	Peat					EZT	E-Z Treat				
ECO	EcoFlo					FAST	Biomicrobics FAST				
PURA	Puraflo					SPT	SeptiTech				

OPERATION PERMITS ISSUED*

Other Than Ground Absorption Systems

Code	Description	New	Repair	TOTALS
PRV	Privy or Vault Privy			
CHEM	Chemical Toilet			
INCT	Incinerating Toilet			
TANK	Tank or Pump Tank only			
OTHER	Other Toilet System			
PH	Pump & Haul			

Code	Causes of Malfunction
S	Site Problems: Soil, Inflow, Landscape Position, Gutters, Roots
M	Maintenance: Tank not pumped, Filter clogged, etc.
U	Use: Water leak in house, too much flow for design, grease, etc.
D	Damaged or Destroyed
E	Effluent distribution device, step down, or drop box
P	Pressure Dosing Problems
A	Age - Normal exhaustion of hydraulic conductivity
T	Tank or Pump Tank not Watertight
X	Pretreatment failure
Z	System Undersized
Q	Couldn't determine

Code	Type of Distribution
GP	Gravity – parallel (eg. d-box)
GS	Gravity - serial
PM	Pressure Manifold
PG	Pump to Gravity Dispersal
S	Siphon
D	Drip
LPP	Low Pressure Pipe Dispersal

Code	Type of Malfunction
BU	Back up into facility
SD	Surface Discharge
FL	Free liquid w/in 3” of surface
P	Requires pumping > 1/month
GW	Discharge to Groundwater

Other Codes for Use with Malfunctioning Systems Table

EZLAY	EEEZZZ Lay
TCT	Terra Cotta Tiles
TANK	Septic or pump tank
GREA	Grease trap
RedFl	Reduced flow into tank
NR	Non Repairable
25%	25% Reduction Innovative or Accepted
DWQ	Connected to system permitted by DWQ other than sewer
SWR	Connected to Sewer
PH	Pump & Haul

Site Visits

Number of **field visits** for any purpose related to On-Site Wastewater **not** counted elsewhere; includes re-visits, partial inspections, and consultations.

Sites Evaluated*

Number of sites evaluated for any purpose including new, revision, relocation, repair of malfunction, or expansion

Improvement Permits Issued – New or Revision w/ PLAT*

Number of non-expiring IPs issued approving a site for new construction (initial or revision) where the applicant has submitted a plat that meets the definition Plat in 130A-334(7a).

Improvement Permits Issued – New or Revision w/SITE PLAN*

Number of IPs issued that expire in 60 months, approving a site for new construction (initial or revision) where the applicant has submitted a site plan that meets the definition of Site Plan in 130A-334 (13a).

Improvement Permits Issued – Relocation w/SITE PLAN*

Number of IPs issued that expire in 60 months, approving a site for changes that will require the relocation of part or all of the existing septic system where the applicant has submitted a site plan that meets the definition of Site Plan in 130A-334.

Improvement Permits Issued – Expansion of Existing System*

Number of IPs issued approving a site for enlarging or altering an existing system due to a change in design wastewater flow or wastewater characteristics.

Improvement Permits – Repair or Replacement of Malfunctioning System*

Number of IPs issued approving a site for the replacement or repair of a malfunctioning system.

Improvement Permits Denied*

Number of sites with complete applications that are denied an Improvement Permit.

Construction Authorizations – New, Revision, or Relocation

Number of CAs issued on an approved site with a valid IP for the installation of a new, revised, or relocated system.

Construction Authorizations – Expansion

Number of CAs issued on an approved site with a valid IP for the installation of an altered or enlarged system due to a design flow increase.

Construction Authorizations – Repair or Replacement of Malfunctioning System*

Number of CAs issued for the replacement/repair a malfunctioning system.

Construction Authorizations – Denied

Number of CAs denied.

Authorizations – Mobile Home Parks*

Number of System Inspections that result in written authorizations to locate a manufactured home in a mobile home park.

Authorizations Existing System Reuse*

Number of system inspections that result in a written authorization to reuse an existing system or allow a building to be located on a site with an existing system.

Authorizations for System Reuse – Denied*

Number of system inspections that result in denial to reuse an existing system.

Table V Inspections w/Inspection Report Prepared*

Number of inspections/reports on system performance as required by Table V in Rule .1961.

Migrant Housing Inspections w/Inspection Report Prepared *

Number of inspections/reports on performance of systems serving Migrant Housing as required by various agencies.

Notices of Violations Issued

Number of Notices related to a violation of laws and rules governing on-site wastewater systems.

Legal Remedies Issued – (Injunctions, criminal misdemeanor, administrative penalties)

Number of criminal or administrative penalties prepared and served (Rule .1967 or .1968); also includes injunctions.

Permits Revoked Notice

Number of notices prepared and served to revoke a permit.

Permits Suspended Notice

Number of notices prepared and served to suspend a permit.

Sewage Complaints Investigated*

Number of sewage complaints investigated. (Count one per complaint; subsequent visits are ‘site visits’)

Tank Yard Inspections Performed*

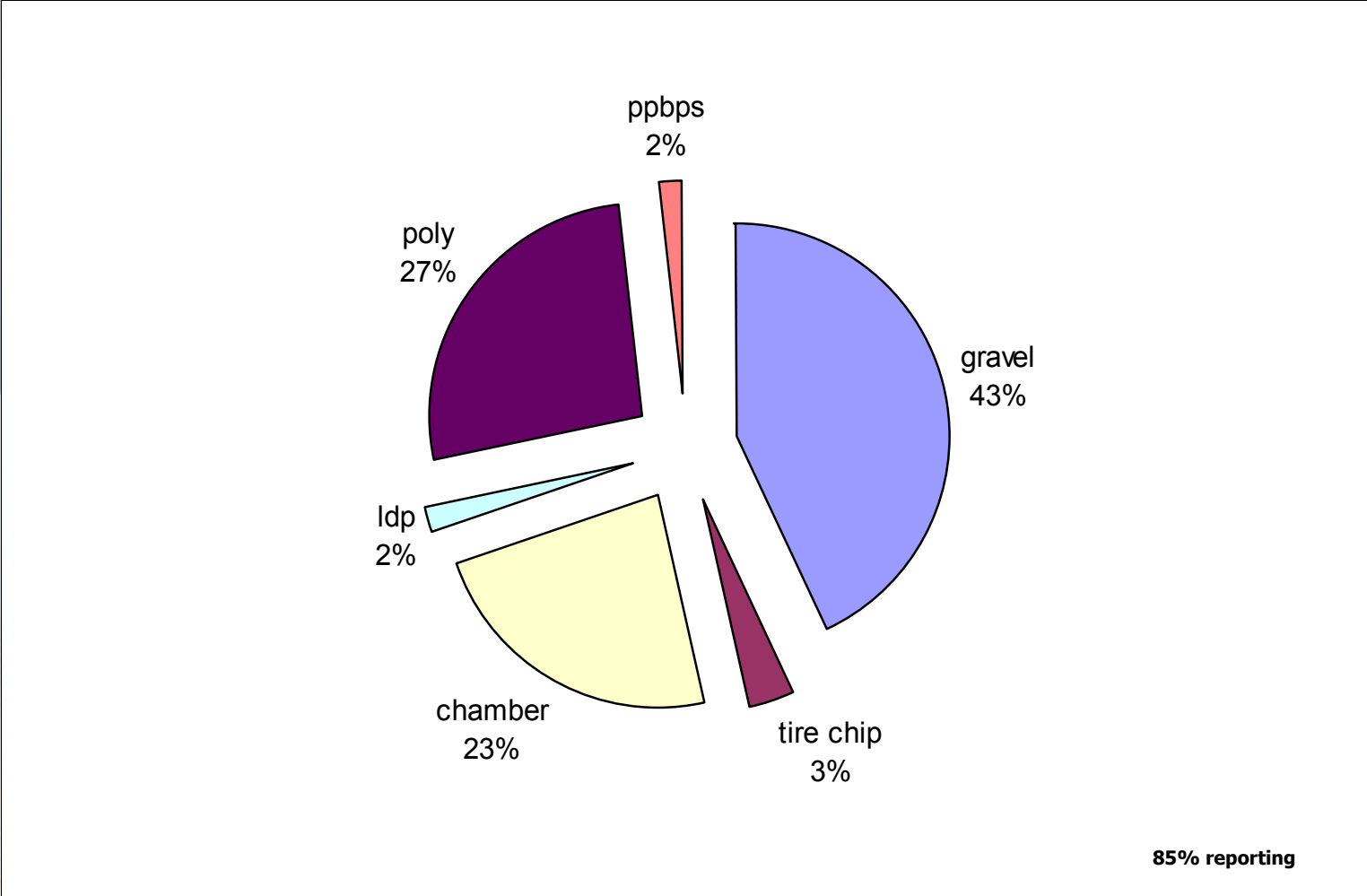
Number of visits made to inspect septic tank manufacturing plants (with or without OSWS Staff present).

On-Site Consultative Contacts

Number of non-field contacts made such as phone calls, office visits, presentations or talks, etc.

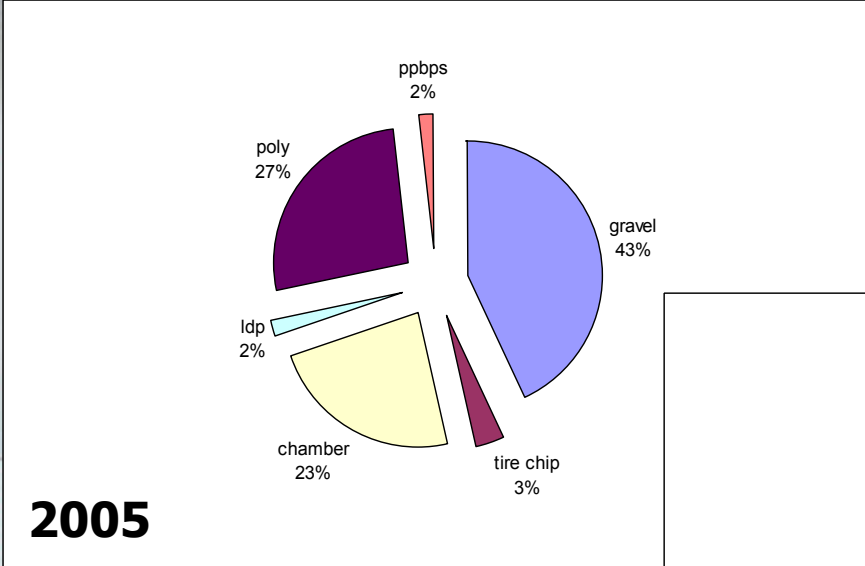
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System Installations Last Quarter 2005

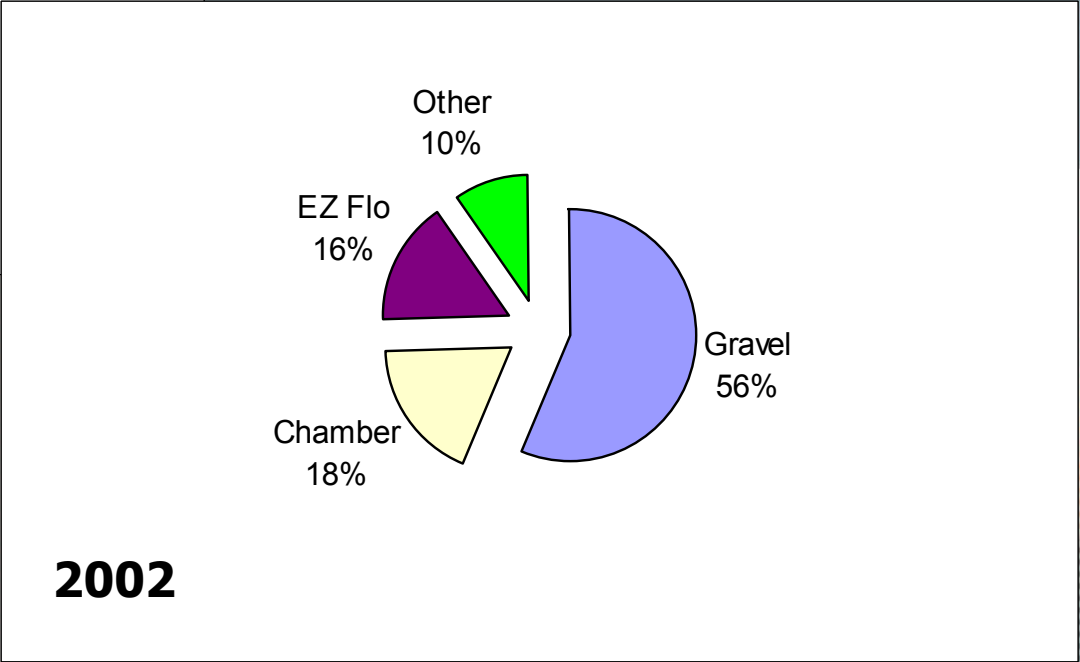


ldp=large diameter pipe ppbps=panel block poly=polystyrene aggregate

System Installations



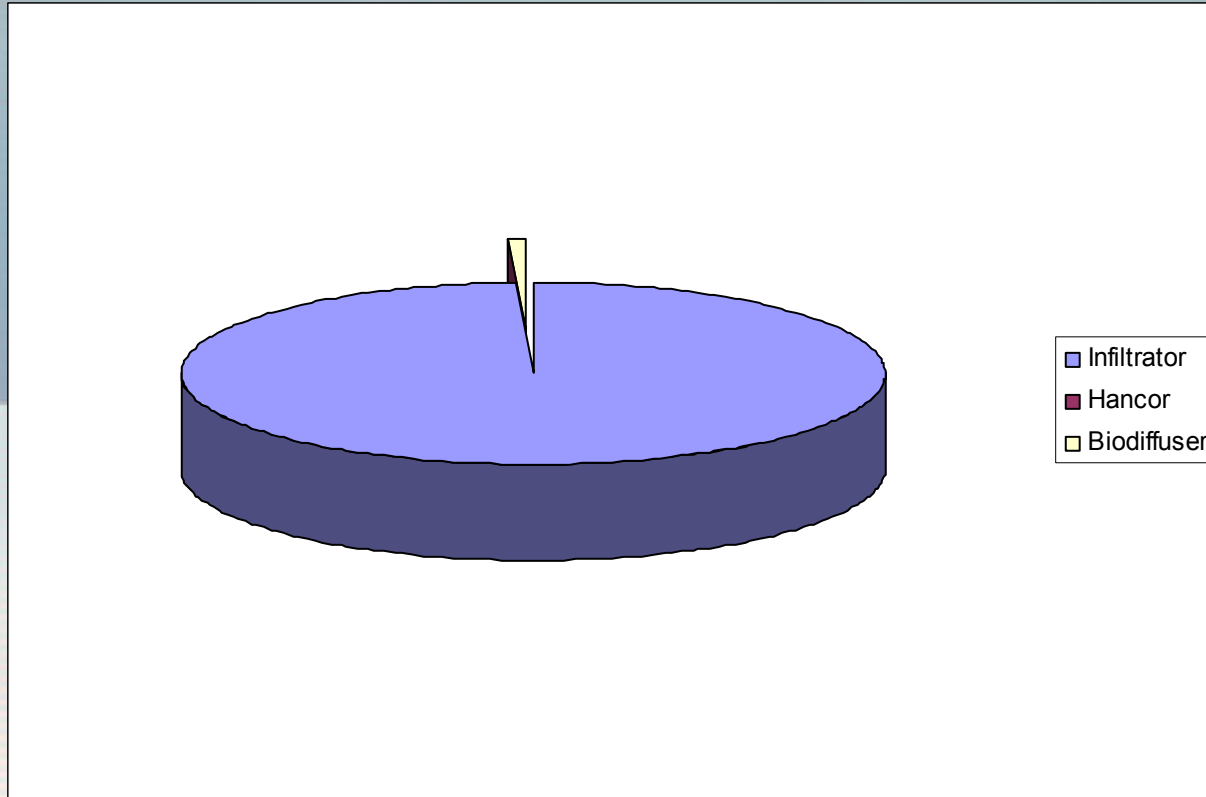
2005



2002

ldp=large diameter pipe ppbps=panel block poly=polystyrene aggregate

Chamber System Installations



Infiltrator 99%

Hancor 0.2%

Biodiffuser 0.8%

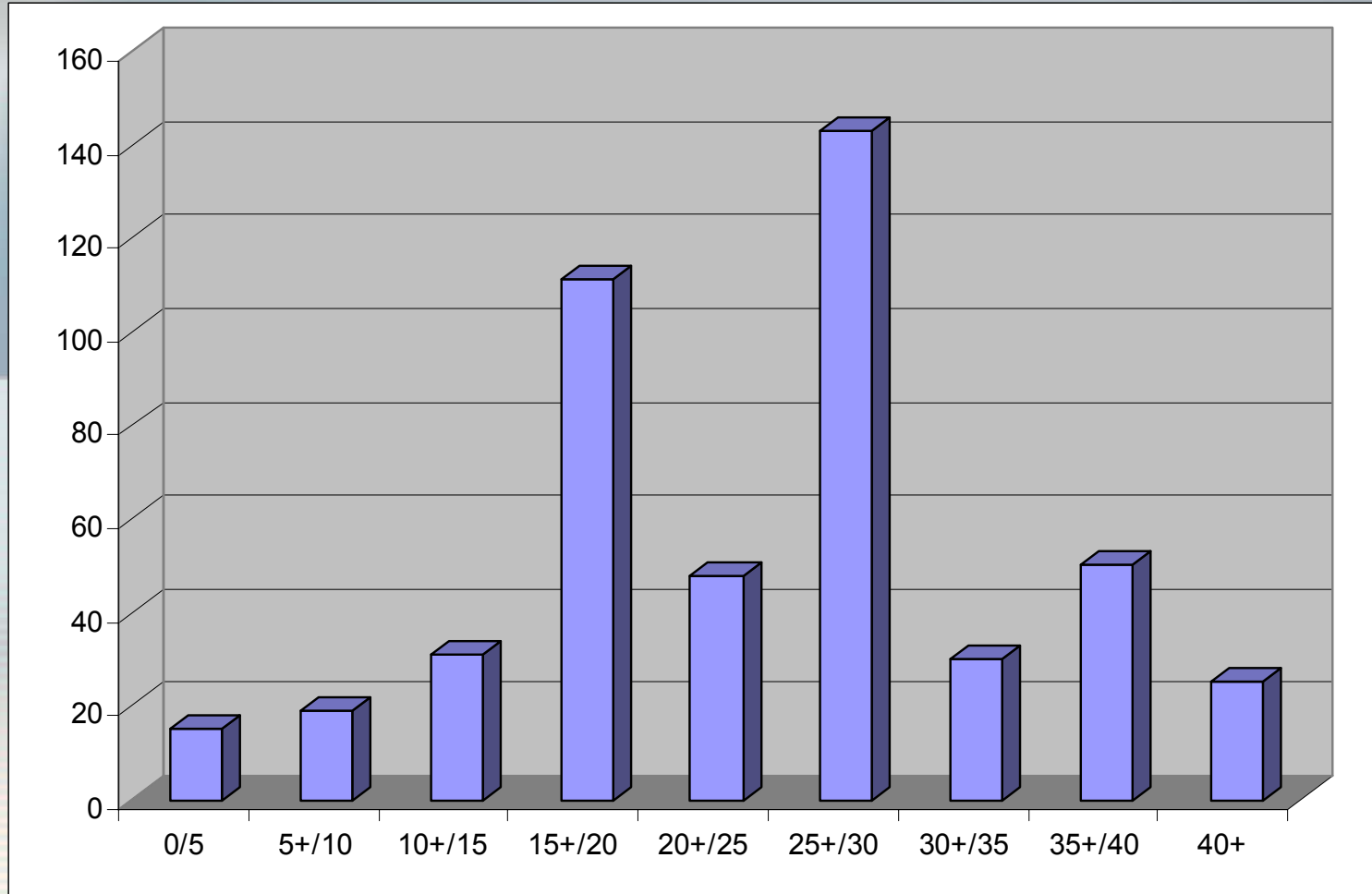
Last quarter 2005

Malfunctions

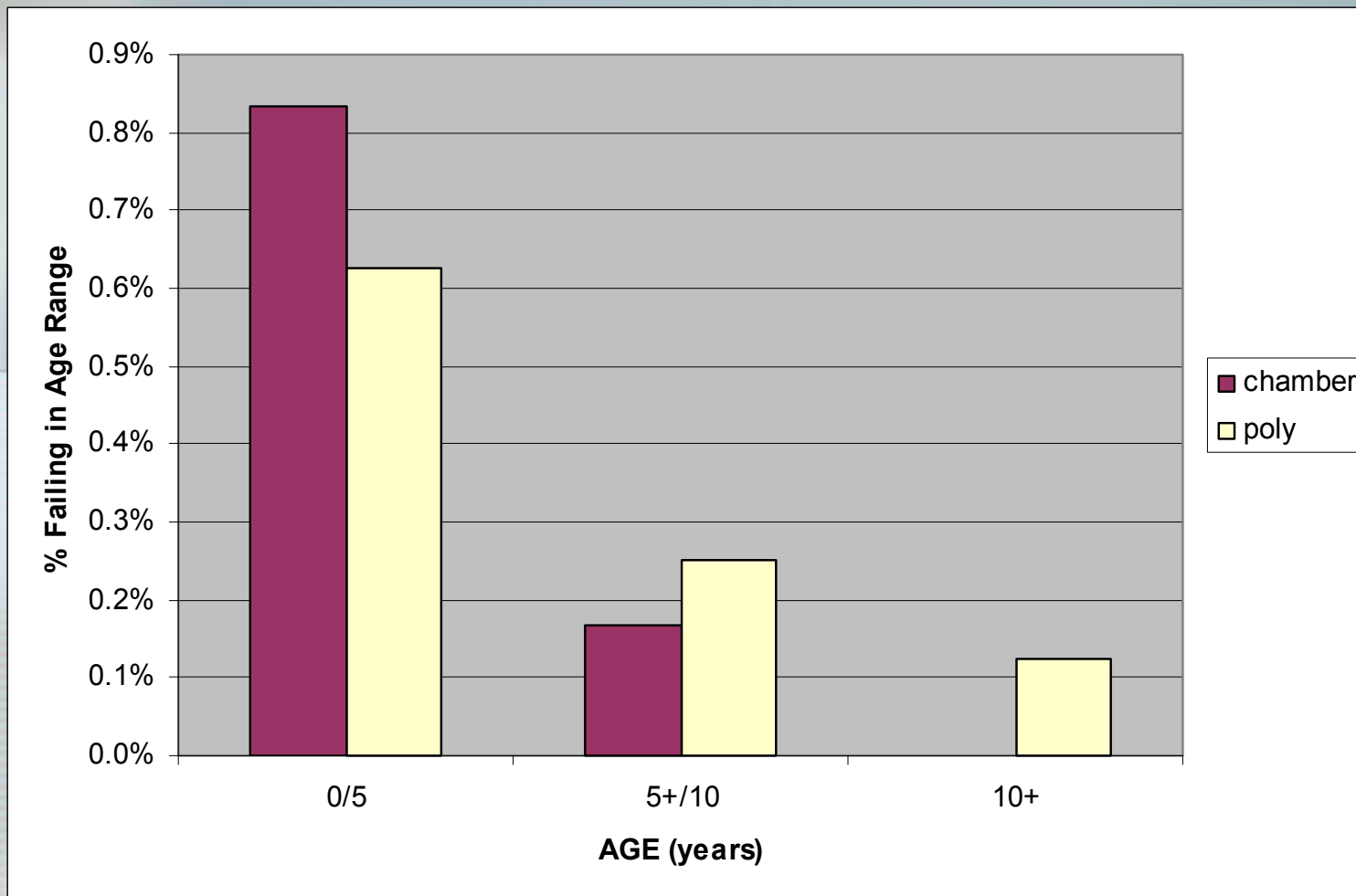
505 Reported

SYSTEM	gravel	chamber	poly	lpp	ldp	ppbps	terra
AVERAGE AGE	26.5	3.4	5.4	16	12.5	24	38.8
MEDIAN AGE	28	2.8	5				
# REPORTED	467	6	8	1	2	2	19
Range	1 to 75	1 to 10	.05 to 15	16	10 to 15	24	25-60

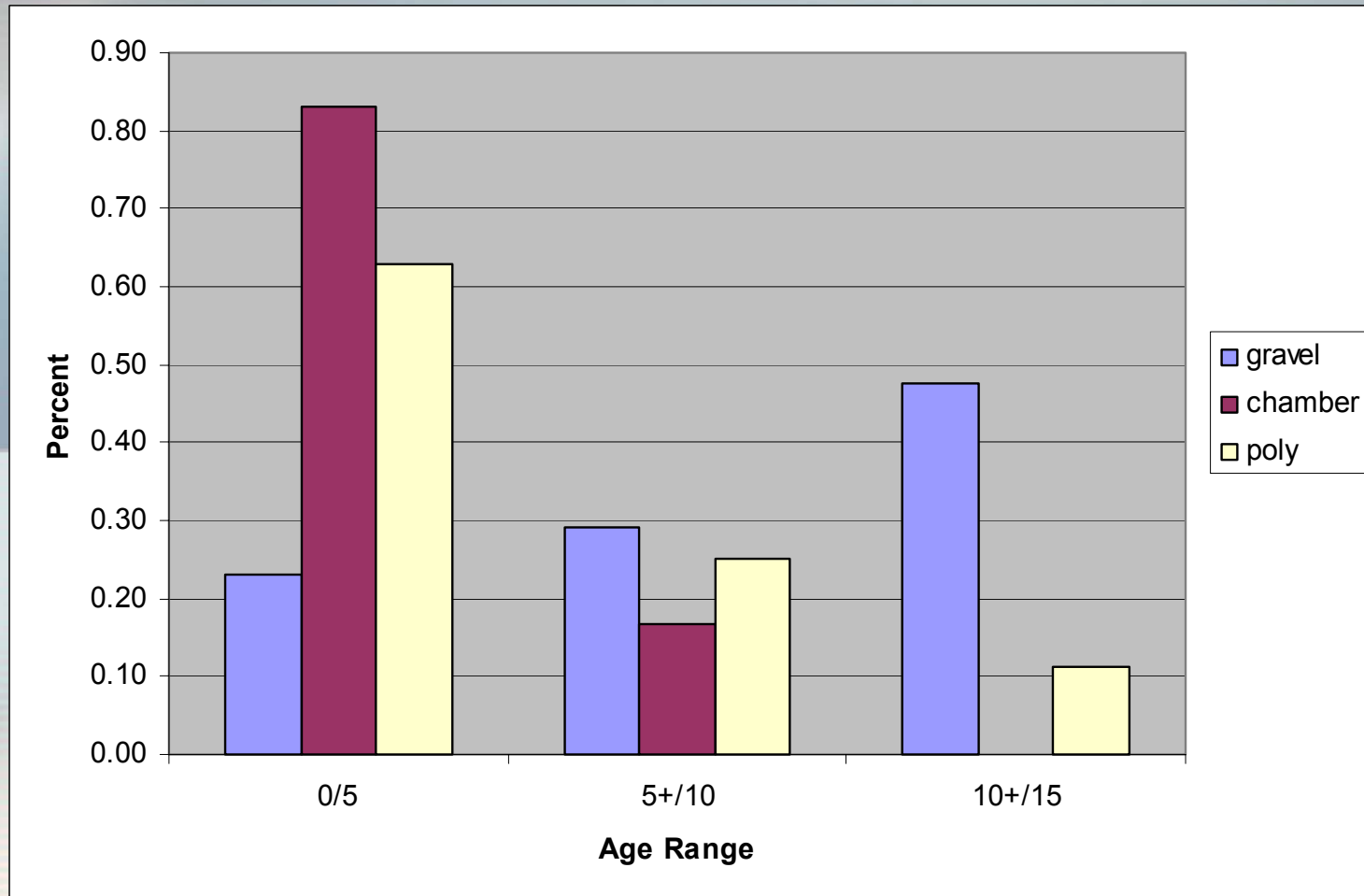
Gravel Malfunctions



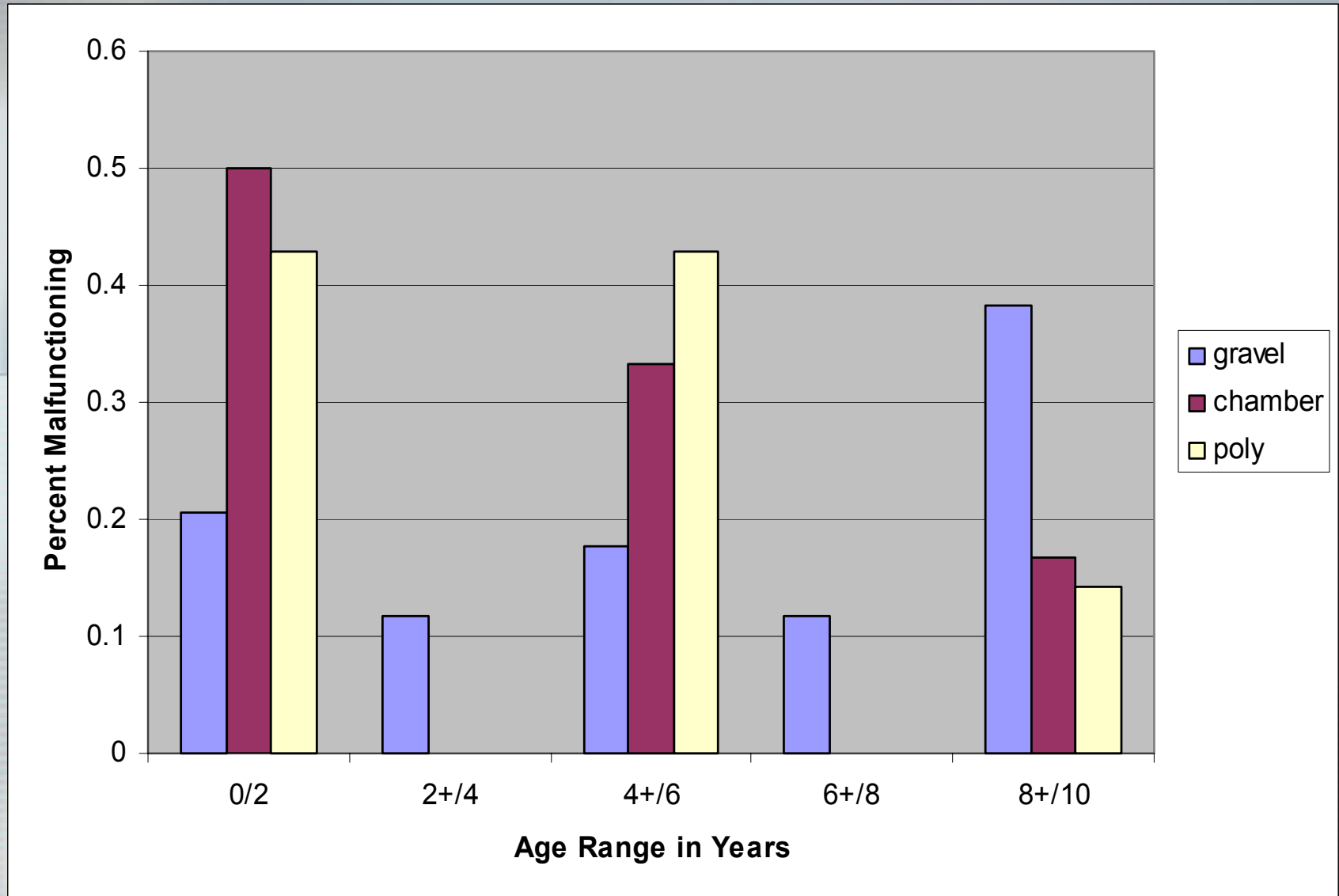
Chamber & Polystyrene Aggregate Malfunctions



% MALFUNCTIONING DURING 5 YEAR RANGES

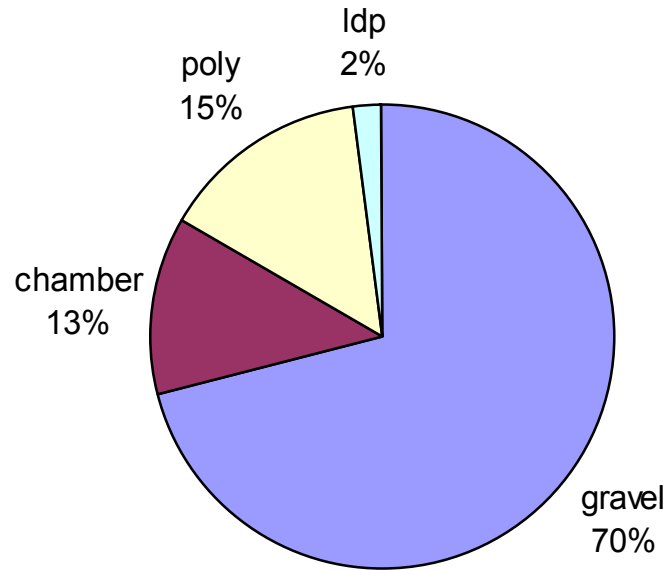


% MALFUNCTIONING DURING 2 YEAR RANGES



Systems 10 Years Old or Less

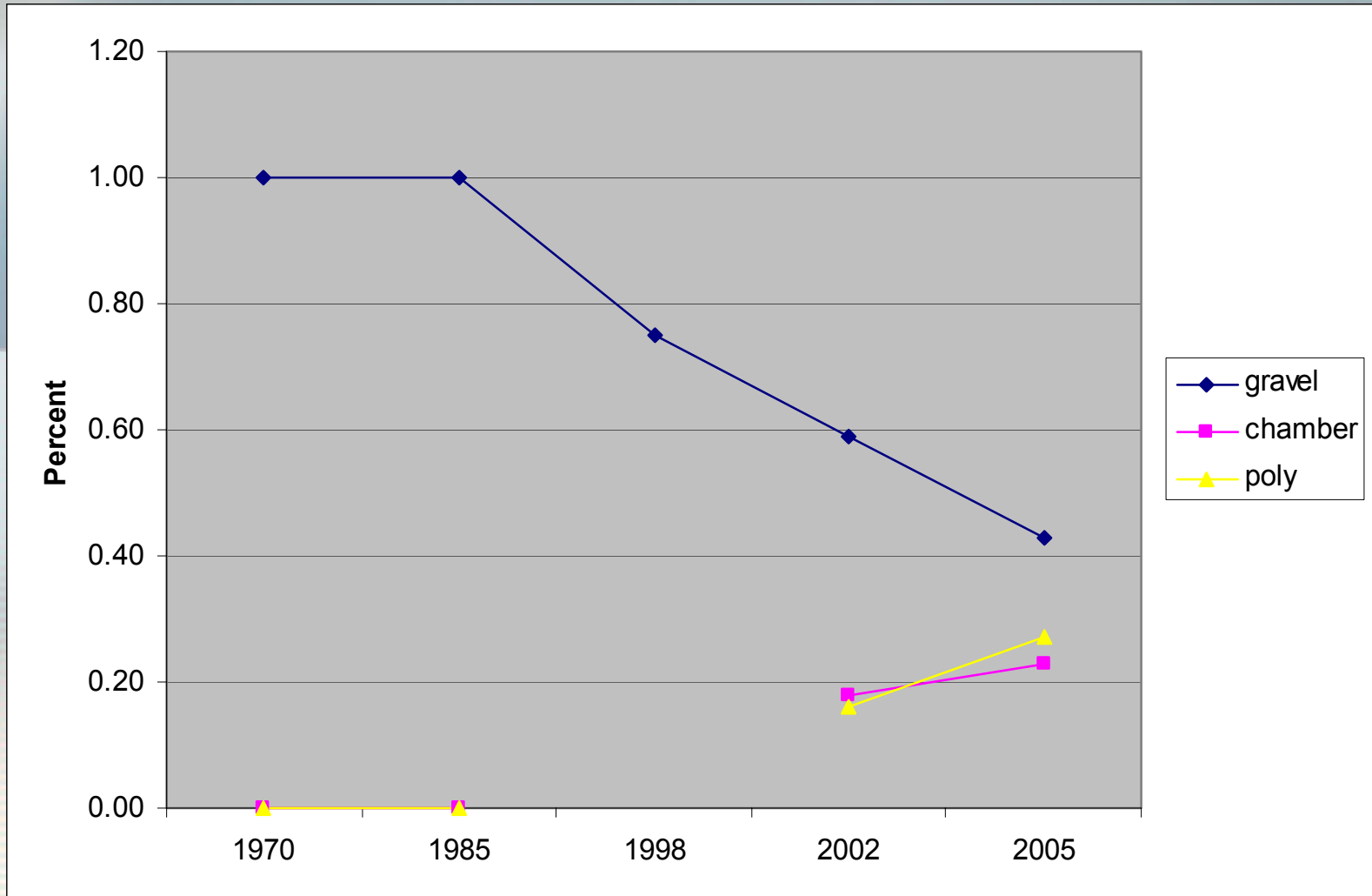
Current Malfunctions



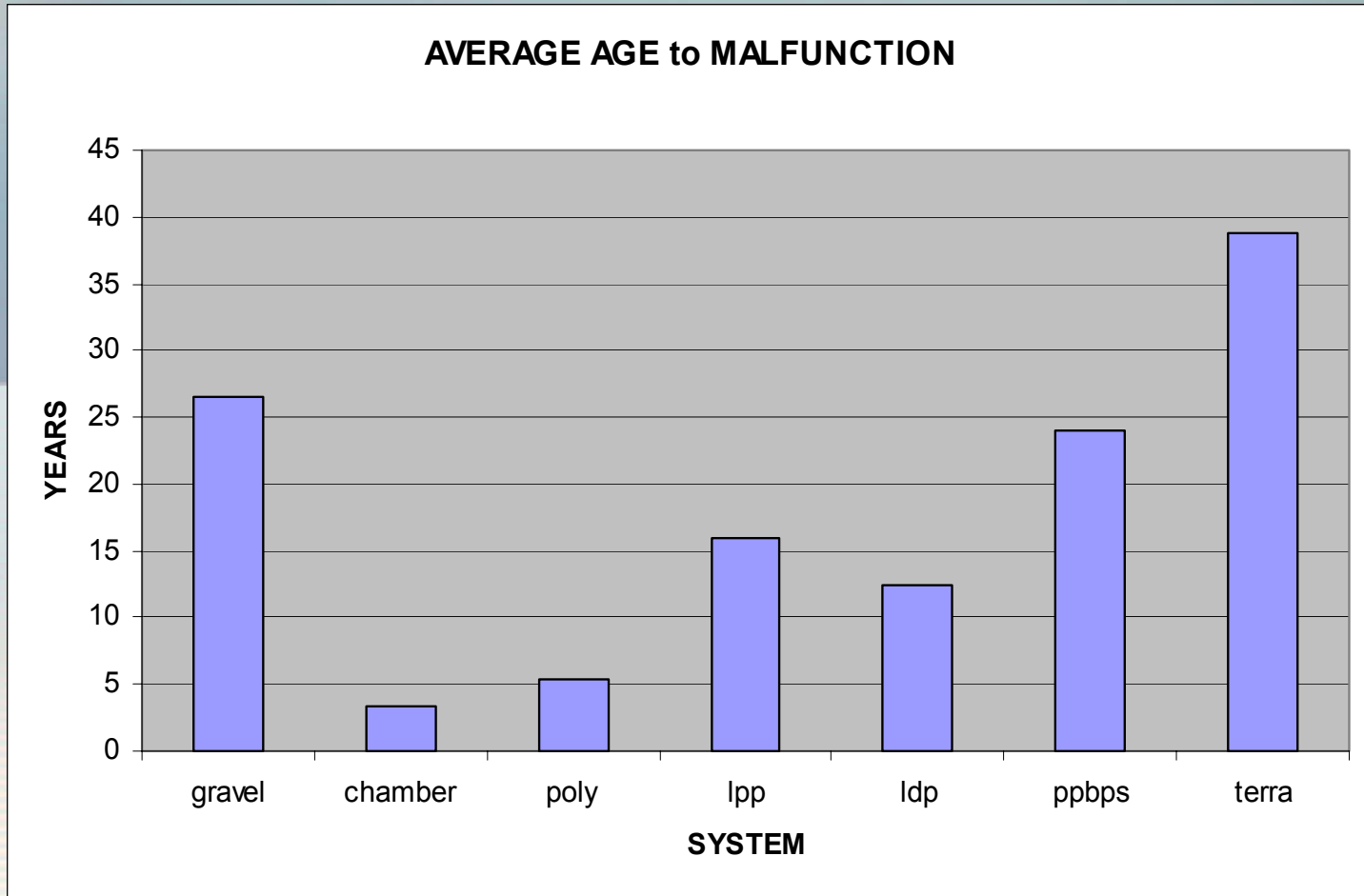
Distribution of Installed Systems

Systems	1970	1985	1998	2002	2005
Installed	1970	1985	1998	2002	2005
gravel	100%	100%	75%	59%	43%
chamber			combined total equal 25%	18%	23%
poly				16%	27%
ldp				2%	2%
ppbps				1%	2%

Percent of Installed Systems



Malfunctions



What's Next?

Complete Database

Electronic Version in Excel

Get back to 100% Submittals

Emailed to me each month

**Allows electronic importing into
database**

Answer ????