



**IOWA DEPARTMENT OF NATURAL RESOURCES**  
**WATER SUPPLY ENGINEERING SECTION**  
**CONSTRUCTION PERMIT APPLICATION**  
 SCHEDULE-9, Clarification- Sedimentation

Date Prepared  _____	Project Name/Description
Date Revised  _____	

1. Design Data:

Presedimentation and Sedimentation	Unit #	Unit #	Unit #
Type of Unit			
Capacity (gpm)			
Volume (gallons)			
Length (feet)			
Width (feet)			
Depth (feet)			
Detention Time (hours)			
Overflow Rate (gpm/ft <sup>2</sup> )			
<b>Sedimentation</b>			
Outlet Weir Loading Rate (gpd/ft)			
Flow-Through Velocity (fpm)			
<b>Mixing and Flocculation</b>			
Type of Unit			
Volume (gallons)			
Detention Time (hours)			
Flocculator Flow-Through Velocity (fpm)			

2. For the following, reference the page of the plans or specifications where the description can be found.

Materials and Construction Details	Page Number
Presedimentation	
Rapid Mix	
Flocculation	
Sedimentation	

3. Are mechanical sludge collectors provided?  Yes  No  
 If no, what is the side slope of the hopper bottom? \_\_\_\_\_ Spec. Page No. \_\_\_\_\_
4. Has a drain been provided for each unit?  Yes  No  
 What is the minimum air gap provided between any drain outlet and the receiving sump? \_\_\_\_\_ inches
5. Have provisions been made to control the maximum water level?  Yes  No
6. Are sedimentation, mixing, or flocculation basins located outside of a building?  Yes  No  
 If yes, do they have covers that meet the criteria for ground storage reservoirs?  Yes  No  
 Spec. Page No. \_\_\_\_\_
7. What provisions are being taken to control short-circuiting and inlet and outlet velocities?  
 \_\_\_\_\_ Spec. Page No. \_\_\_\_\_
8. What precautions are being taken to prevent clogging of sludge withdrawal piping?  
 \_\_\_\_\_ Spec. Page No. \_\_\_\_\_
9. Diameter of sludge withdrawal pipes: \_\_\_\_\_ inches Spec. Page No. \_\_\_\_\_
10. Are cleanouts provided at all changes in direction of the sludge piping to facilitate cleaning?  Yes  No  
 Spec. Page No. \_\_\_\_\_
11. Are all valves located outside of the tanks?  Yes  No
12. What is the minimum air gap provided between any sludge outlet and the receiving sump? \_\_\_\_\_ inches
13. Can the operator observe and sample sludge?  Yes  No Spec. Page No. \_\_\_\_\_  
 If sludge lines, collectors or basins are provided with potable water flushing systems, are cross connection control devices provided which meet AWWA standard C506 and are approved by the USC Testing Lab?  Yes  No  N/A