

The Metropolitan

Water Reclamation District

of Greater Chicago

**WELCOME
TO THE MAY EDITION
OF THE 2015
M&R SEMINAR SERIES**

BEFORE WE BEGIN

- **SILENCE CELL PHONES & SMART PHONES**
- **QUESTION AND ANSWER SESSION WILL FOLLOW PRESENTATION**
- **PLEASE FILL EVALUATION FORM**
- **SEMINAR SLIDES WILL BE POSTED ON MWRD WEBSITE**
(www.MWRD.org: Home Page ⇒ Reports ⇒ M&D Data and Reports ⇒ M&R Seminar Series ⇒ 2015 Seminar Series)
- **STREAM VIDEO WILL BE AVAILABLE ON MWRD WEBSITE**
(www.MWRD.org: Home Page ⇒ MWRDGC RSS Feeds)

Edward W. Podczerwinski, P.E.

Current: Managing Civil Engineer, Environmental Monitoring & Research Division, MWRDGC

Experience: Managing Civil Engineer in M&R. Manages Process Facilities Capital Planning and Wastewater Treatment Process Research Groups (Since March 2013)

Other District Positions Held (August 1997 to March 2013):

- Principal Civil Engineer, Plant Design Management, Process Facilities Division
- Senior Civil Engineer, Process Design
- CAD Manager, Process Facilities Division
- Associate Civil Engineer, Process Design
- Assistant Civil Engineer, Process Design

Consulting Company - PECO & Associates. Inc., (1991 to 1997):

- Project Manager
- Project Engineer
- Design Engineer
- Construction Engineer
- Land Surveyor
- CAD Drafter

Education: BS in Civil Engineering , Warsaw University of Technology | Warsaw, Poland
MS in Structural Engineering , Warsaw University of Technology | Warsaw, Poland

Professional: Registered Professional Engineer in Illinois
Registered Professional Engineer in Wisconsin

Jonathan Grabowy, P.E.

Current: Principal Civil Engineer, Capital Facilities Planning, M&R, MWRDGC (Since 2013)

Experience: Senior Civil Engineer, Stormwater Management, Engineering, MWRDGC (2006-13)

- Project Manager – *Poplar Creek and Cal-Sag Detailed Watershed Plans*
- Project Manager – *Various Stormwater Capital Improvement Feasibility Studies*
- Project Manager – *Various Stormwater Capital Improvement Final Designs*

Associate Civil Engineer, Engineering Department, MWRDGC (2001-06)

Assistant Structural Engineer, Engineering Department, MWRDGC (1999-01)

Education: **B.S. Civil Engineering** (1999), Purdue University, West Lafayette, IN
Master of Engineering Management (2004) *Northwestern University, Evanston, IL*
M.S. Computer Science, Telecommunication and Information Systems (2002), DePaul University, Chicago, IL

Professional: Licensed Professional Engineer – Illinois and Wisconsin
Certified Floodplain Manager



Project Vetting Process & Long Term Capital Plan

Edward Podczerwinski, PE

Managing Civil Engineer

MWRDGC | Wastewater Research & Capital Planning

Environmental Monitoring & Research Division

Jonathan Grabowy, PE

Principal Civil Engineer

MWRDGC | Process Facilities Capital Planning

Environmental Monitoring & Research Division



District's Project Vetting PROCESS





- Provide an objective decision making process
- Appropriately allocate limited resources
- Assign priorities based on organizational goals and needs
- Promote a more informed decision making process



- Understandable
- Provide level of confidence for Board
- Standard (repeatable and defensible)
- Sustainable
- Enables continuous improvement and expansion

PROJECT VETTING PROCESS



- ❑ Projects Reviewed by Interdepartmental Panel
 - ✓ *Economics (Cost vs. O&M)*
 - ✓ *Method (Repair, Retrofit and Replace)*
 - ✓ *Project Need (Regulatory, Safety, Process, etc.)*

- ❑ Panel Approved Projects Sent to Executive Team for Final Approval

CIP Questionnaire

- Project Name & Description
- Scope of Work & Estimated Cost
- Project Justification
- Urgent Needs & Priorities
- Impacts:
 - *O & M*
 - *Economic Sustainability*
 - *Environmental Sustainability*
 - *Social Equity Sustainability*
- Scoring Weighting Factors



CIP Prioritization Questionnaire

Project Name:	Project Number:
Project Manager:	Estimated Project Cost:
Department Head Name & Approval Date:	Project Category:
Vetting Panel Approval Date:	Executive Team Approval Date:

Project Description:
Scope of Work:
Project Justification:
Consequences of Delaying the Project:

Urgent Needs:

Does this project address any of the following urgent needs that either are occurring or will most likely occur if not addressed within the 5-year CIP planning horizon?

- Serious public health, safety or security threat(s)? _____
- Serious infrastructure failure(s)? _____
- Significant degradation of service(s) or compromise to delivery of service(s)? _____
- A legal judgment, court order, regulatory mandate, or state or federal law? _____
If yes, please cite the specific judgment, court order, mandate or law.

If you selected "Yes" to any of the urgent needs above:

Which fiscal year of the CIP planning horizon will the negative impact(s) occur or most likely occur? _____

Please briefly describe how the project will address the urgent need(s) selected above.

Planning Priorities:

Does this project directly implement:

- A priority project(s) or recommendation(s) identified in Master Plans? _____
Please cite the project(s) or recommendation(s) and briefly describe how this project will implement them.

- Strategies identified in strategic/business plans? _____

Please cite the strategies and briefly describe how this project will implement them.

Policy Directives:

Does this project directly address a policy directive, or directives, approved by the Board? _____

If yes, please cite the resolution(s) and briefly describe how it will be addressed with the CIP.

Cost Impact:

Does this project reduce the District's financial commitments by:

- Decreasing current operating and maintenance costs? _____
- Preventing future operating and maintenance costs? _____
- Preventing future capital costs? _____
- Increasing - or preventing anticipated loss of - District revenue? _____

If you selected yes to any of the above, please briefly describe how this project will reduce the District's existing or future financial commitments.

Operating and Maintenance Impact:

If available, please provide either the positive or negative impact this project will have on the following Operating and Maintenance costs:

- Annualized O&M _____
- FTEs (Full-Time Employees) _____
- Revenue _____

Please provide supporting evidence for any positive impacts noted above.

Economic Sustainability Impact:

Does this project increase the economic sustainability by:

- Facilitating activities that will produce jobs? _____
- Facilitating activities that will attract new companies? _____
- Facilitating activities that will retain and/or grow local business? _____
- Integrating or leveraging investments in local innovation and emerging technology? _____

If you selected yes to any of the above, please briefly describe how this project will increase the economic sustainability.

Environmental Sustainability Impact:

Does this project increase the environmental sustainability by:

- Making critical assets or services more resilient so they can adapt to or recover from disruptive events? _____
- Improving environmental conditions (greenhouse gas reduction, water quality effects)? _____
- Demonstrating an innovative approach to more sustainable, environmentally friendly service delivery _____

If you selected yes to any of the above, please briefly describe how this project will increase the environmental sustainability.

Social Equity Sustainability Impact:

Does this project increase the social equity sustainability by:

- Providing infrastructure or services to a previously underserved geographic area or population? _____
- Directly contributing to the preservation or vitality of cultural or historical assets? _____
- Providing cultural and recreational opportunities? _____

If you selected yes to any of the above, please briefly describe how this project will increase the social equity sustainability.

Scoring Weighting Factors:

Provide weighting factors that will be using for project scoring: _____ %

- Mission Critical, Improvements to Environmental Quality _____
- Preservation/Replacement to Maintain Acceptable Service Levels _____
- Commitment to Community/Return on Investment _____

Total: 0

Provide justification for the proposed weighting factors.

Capital Projects are Grouped into (3) Categories

(only like projects compete against each other)

<u>Project Type A</u>	<u>Project Type B</u>	<u>Project Type C</u>
Mission Critical / Improvements to Environmental Quality	Preservation / Replacement to Maintain Acceptable Service Levels	Commitment to Community / Return on Investment
Strategic Goals / Plan and Vision	Asset Management / Protection	Improves public Image
Legal/Regulatory Requirement	Service Disruption	Supports community vision and excellence in service delivery
Natural Resource Protection	O & M / Cost Savings	Support Region Planning/Goals
Environmental Impact	Equipment Life / Asset Damage	Contractual Requirements and Mandates
Public Health and Safety	Employee Safety / Code Compliance	Sustainable Responsible Financial Service
Capacity Needs	System Reliability / Risk Reduction	Financing availability

CIP Scoring Sheet



CIP Prioritization Scoring Sheet

Project Number: _____
 Project Name: _____
 Project Cost: _____
 Project Type: _____
 Date: _____

A. Mission Critical, Improvements to Environmental Quality	50%		0%	0	
B. Preservation/Replacement to Maintain Acceptable Service Levels	30%		0%	0	
C. Commitment to Community/Return on Investment	20%		0%	0	
TOTAL	100%			0	

Parameter		Weighting Factor	Scoring Criteria	Score	Points	Score Justification
A. Mission Critical / Improvements to Environmental Quality		50%				
A.1	Strategic Goals	30%	5 - Multiple Strategic Goals 3 - Single Goal with High Priority 1 - Single Goal without High Priority 0 - No Strategic Goal Supported	0	0	
A.2	Consistency with Existing Approved Plans and in Alignment with the Strategic Plan and Vision of the District	5%	5 - Consistent 3 - Somewhat consistent 1 - Inconsistent 0 - Conflicts with existing laws, regulations and/or policies	0	0	
A.3	Environmental Impact	15%	5 - Significant effect on environment improvement 3 - Modest effect on environment improvement 1 - No effect - environmentally neutral 0 - Adverse effect on the environment	0	0	
A.4	Legal/Regulatory Requirement	25%	5 - Meet projected future regulations 3 - Exceed current regulations 1 - Meet current regulations 0 - None	0	0	
A.5	Consistent with Existing Legislation and/or Policies	25%	5 - Consistent 3 - Somewhat consistent 1 - Inconsistent 0 - Conflicts with existing laws, regulations and/or policies	0	0	
Parameter Subtotal		100%	sum of parameter scores; max =	500	0	
Subtotal A				0%		(sum of parameter scores) / (maximum possible score)

CIP Scoring Sheet

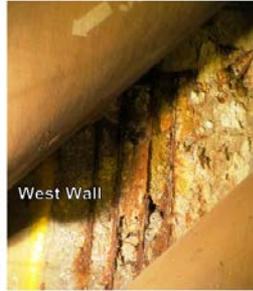
Parameter		Weighting Factor	Scoring Criteria	Score	Points	Score Justification
B. Preservation/Replacement to Maintain Acceptable Service Levels		30%				
B.1	Asset Management / Protection	30%	5 - Failing, needs replacement 3 - Poor Asset Condition 1 - Good Asset Condition 0 - New or nearly new	0	0	
B.2	Operations & Maintenance	20%	5 - Significant reduction in O&M costs 3 - Modest reduction to O&M cost 1 - Has a neutral effect on O&M costs 0 - Will cause increase in O&M costs	0	0	
B.3	Process Improvement	15%	5 - Improves a key process (more than 15%) 3 - Modest Impact by (5% to 15%) 1 - Low Impact (1% to 5%) 0 - No Impact	0	0	
B.4	Safety and Code Compliance	20%	5 - Conforms to mandatory compliance and prevents potential injury 3 - Necessary to meet recommended compliance 1 - Contributes to meeting safety but is not required for compliance 0 - Does not address safety and/or code compliance	0	0	
B.5	System Reliability & Risk Reduction	15%	5 - Significant improvement 3 - Minor improvement 1 - Project does not enhance reliability or reduce performance risk 0 - Will cause decrease in reliability or increase performance risk	0	0	
Parameter Subtotal		100%	sum of parameter scores; max =	500	0	
Subtotal B						0%
						(sum of parameter scores) / (maximum possible score)

CIP Scoring Sheet

Parameter		Weighting Factor	Scoring Criteria	Score	Points	Score Justification
C. Commitment to Community/Return on Investment		20%				
C.1	Community Vitality	30%			0	
	<i>a. Public health, safety, and welfare</i>	40%	5 - Significant improvement 3 - Minor improvement 1 - Low improvement 0 - No improvement	0	0	
	<i>b. Social justice and equity</i>	30%	5 - Significant improvement 3 - Minor improvement 1 - Low improvement 0 - No improvement	0	0	
	<i>c. Economic growth</i>	20%	5 - Significant growth 3 - Modest growth 1 - Low growth 0 - No growth	0	0	
	<i>d. Cultural and recreational opportunities</i>	10%	5 - Significant improvement 3 - Minor improvement 1 - Low improvement 0 - No improvement	0	0	
C.2	Community Acceptance	10%	5 - Accepted by all communities 3 - Accepted by most communities 1 - Accepted by most; may create some burdens 0 - Not likely to be accepted by any community	0	0	
C.3	Number of People to Benefit	10%	5 - More than 100,000 people 3 - 50,000 to 100,000 people 1 - 10,000 to 50,000 people 0 - Fewer than 10,000 people	0	0	
C.4	Benefit to Cost Ratio	40%	5 - Ratio is greater than 3 to 1 3 - Ratio is between 2 to 1 and 3 to 1 1 - Ratio is between 1 to 1 and 2 to 1 0 - Ratio is less than 1 to 1	0	0	
C.5	Financing availability	10%	5 - >\$10 million; or >50% of cost of project 3 - \$5million +/-; or 25% of cost of project 1 - \$1million +/-; or 10% of cost of project 0 - \$500,000; or <5% of cost of project	0	0	
Parameter Subtotal		100%	sum of parameter scores; max =	500	0	
Subtotal C			(sum of parameter scores) / (maximum possible score)		0%	

Project Supporting Data

Deterioration Under Influent Conduit



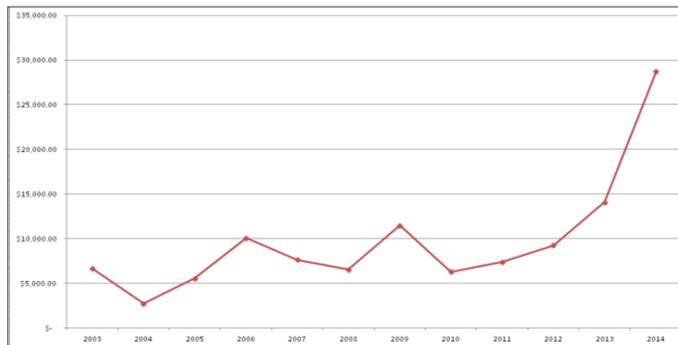
GS-1 Hydraulic Oil Leak

- Due to corrosion of the hydraulic operator's rod, the cylinder packing has been damaged and a hydraulic oil leak has developed that can not be repaired in the field.
- Hydraulic operator inspected by Bosch Rexroth technician on 9/25/2013. Technician confirmed corrosion of rod is damaging the cylinder packing during each stroke of roller gate and removed shims to increase pre-stress of packing on rod to reduce leakage.
- Due to failure of the packing and the hydraulic oil leak, GS-1 may fail closed and the Torrence Avenue leg of the Calumet TARP System could not be dewatered.
- The operating procedure has been changed due to the risk of failure. GS-1 is now normally closed to relieve the hydraulic oil pressure, lessening the capacity of the Torrence Avenue leg for rain events.



Current Issues

- Increasing Maintenance Costs



PROJECT 14-714-21 PARKING LOT REPLACEMENT AT EWRP

- EXISTING CONDITIONS



- EXISTING CONDITIONS



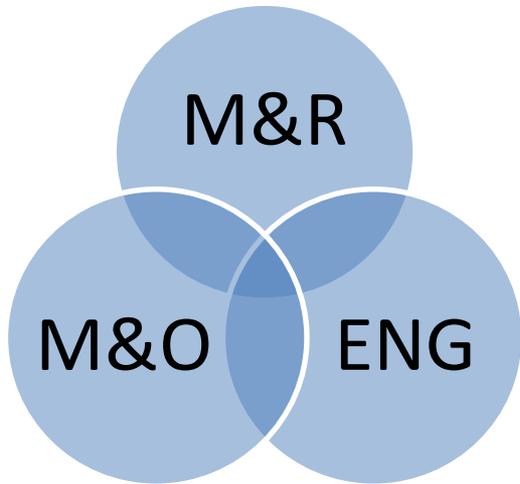
VETTING PANEL



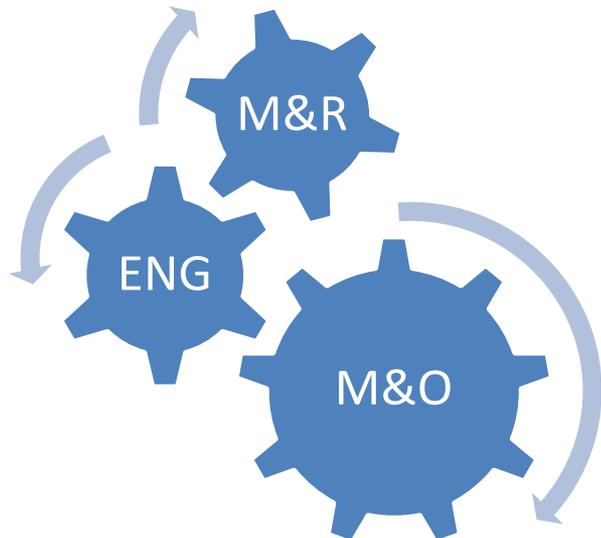
*I Like the Panel's
New Approach to
Project Vetting.*



**PROJECT SPONSOR
TEAM**



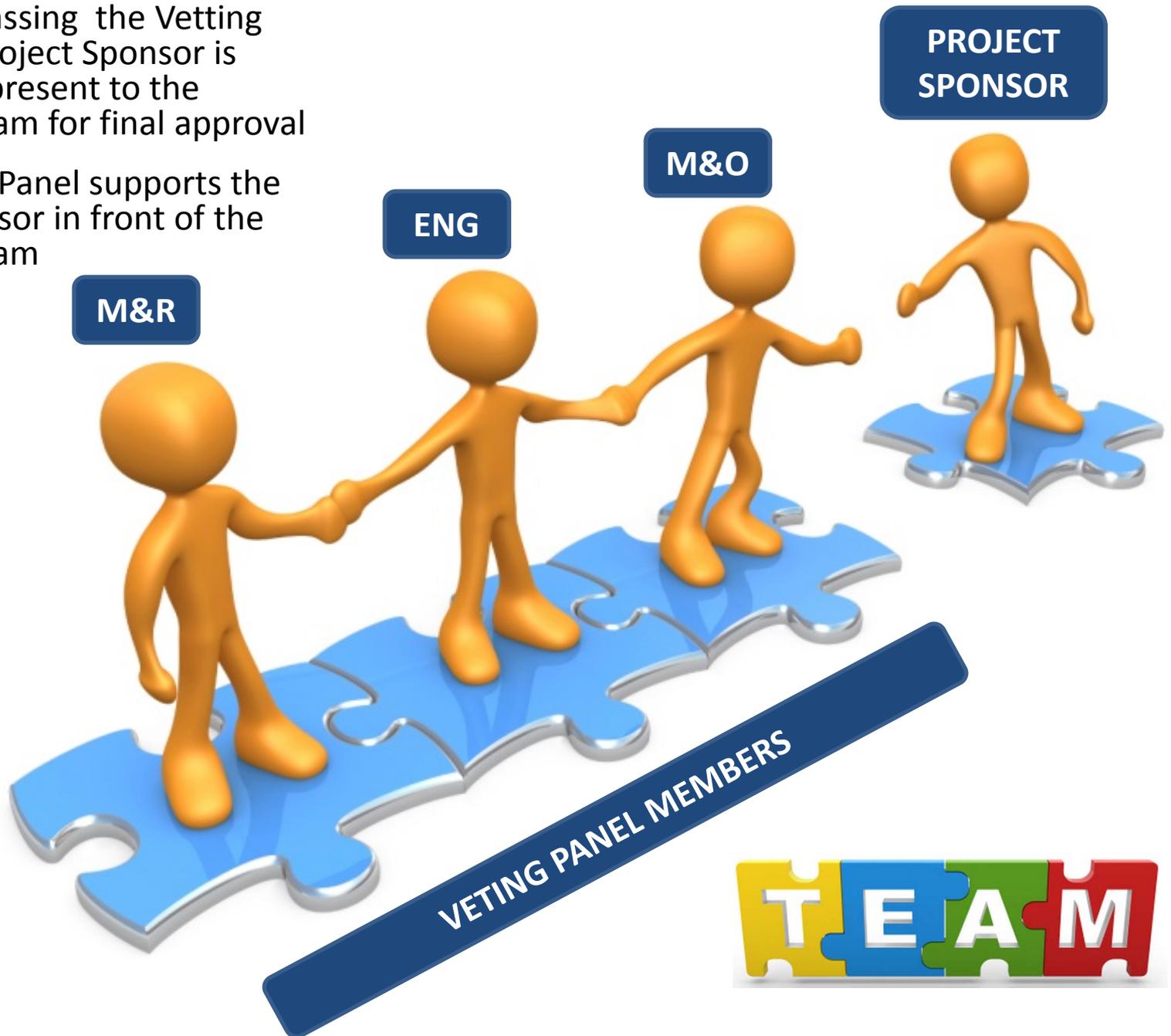
Vetting Panel



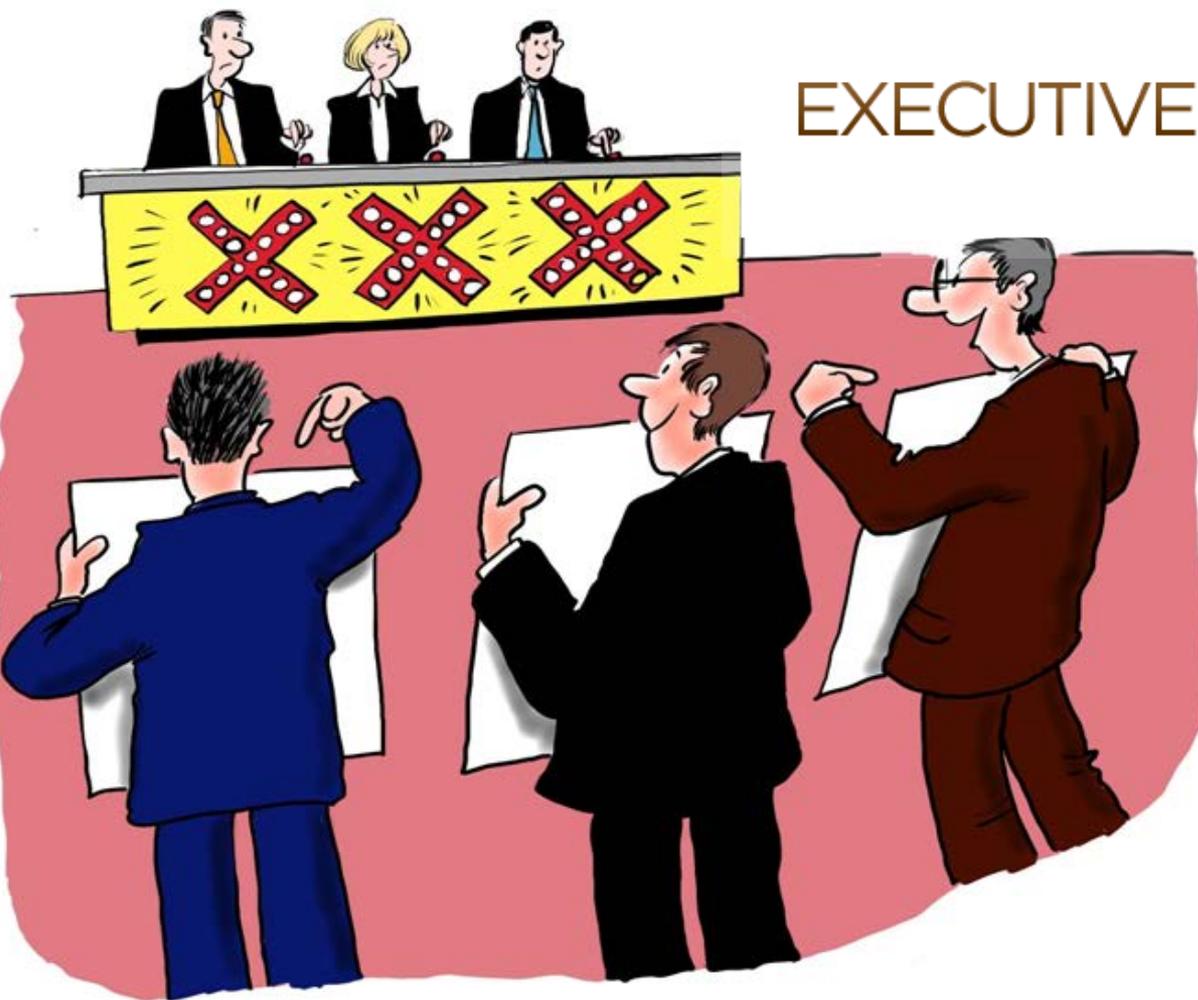
- ❑ Vetting Panel consisting members from M&O, M&R and Engineering
- ❑ Vetting Panel reviews the CIP Prioritization Questionnaire and the Matrix Scoring Sheet
- ❑ Panel reviews project scoring and reasons/justification for the scoring along with project supporting data
- ❑ Projects not sufficiently justified or projects that require more information, are returned to the Project Sponsor
- ❑ Projects approved by the Vetting Panel are then presented to the Executive Team for review and approval

❑ After passing the Vetting Panel, the Project Sponsor is required to present to the Executive Team for final approval

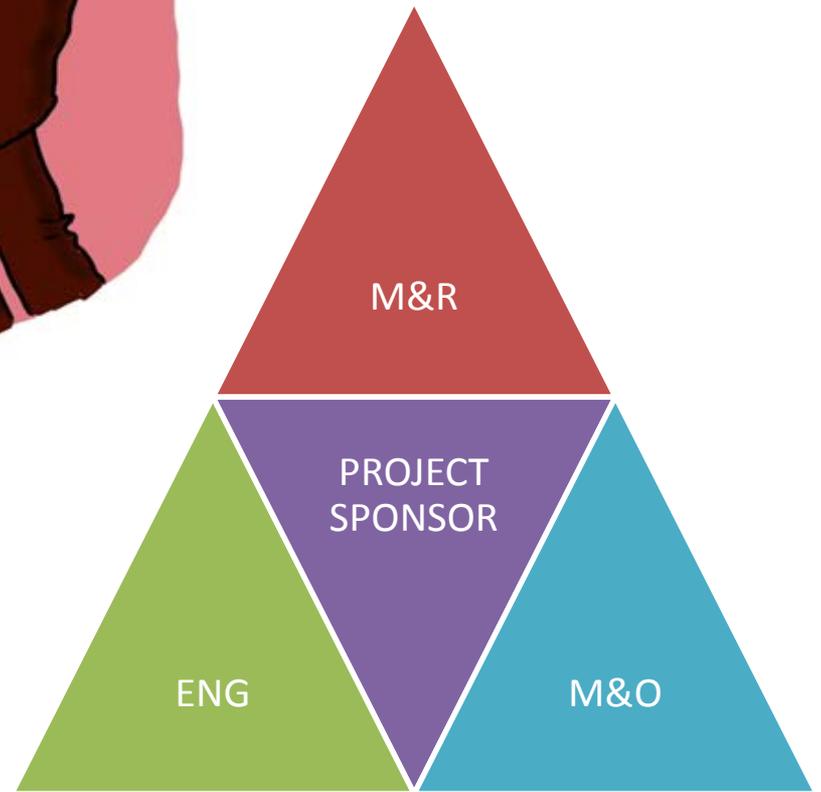
❑ Vetting Panel supports the Project Sponsor in front of the Executive Team



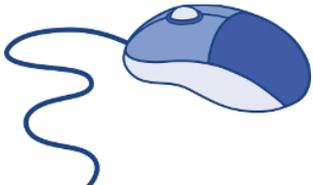
EXECUTIVE TEAM



- Executive Team decides which projects are authorized to move forward
- Executive Team decides which projects require further evaluation



Project Vetting






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Metropolitan Water Reclamation District of Greater Chicago →
Engineering

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Employee Interest
Featured Events
Vetting\Capital Plan
Bidding Documents Q&A Board-ADMIN

- Project Vetting Process**
- Overview
 - Long Term Capital Plan
 - **Project Vetting Process**

On January 24, 2014, the Executive Director presented the formal project vetting procedure to the staff of M&R, Engineering and M&O Departments ([presentation](#)). Projects anticipated costing more than \$250,000 and are due for award in 2015 and beyond are subject to vetting by a multi-department vetting committee and approval by the District's Executive Team ([memo](#)). The Vetting Panel has authority to approve projects less than \$500,000. A flow chart of the process is available [here](#).

All projects are required to have a project sponsor complete a project [questionnaire](#) and complete a project [scoring sheet](#) and submit both via e-mail to the [vetting committee](#). The subject line of the e-mail should have a brief description of the project. If the sponsor would like to include any additional information on the project, the sponsor should create a folder in the [vetting committee drop box](#) ([\\hawk\Capital Project\ProjectDropBox](#))

The Vetting Panel typically meets on every **third** Friday of the month at SWRP. The 2015 Vetting Panel Date are:

January 29	July 17
February 20	August 21
March 20	September 18
April 17	October 16
May 15	November 20
Jun 19	December 18

The 2015 Executive Team Meetings Dates to Review to review project (over \$500,000) are as follows:

March 2
June 3
September 2
December 2

Approved Projects

- ✓ Replacement of Sacrificial Deep Anode at MSPS
- ✓ Inspection and Rehab of Mainstream Pump #8
- ✓ 04-132-3D A/B & C/D Service Tunnel & Connecting Tunnel Rehabilitation, SWRP
- ✓ Hydraulic Operator at TARP Gate No. 1 in CSA
- ✓ 14-714-21 Egan WRP Parking Lot
- ✓ 14-824-2D Rehabilitation of Bridges on the North Shore Channel, North Service Area
- ✓ 15-711-21-OWRP Process Control Building Restorati
- ✓ Replacement of 125th Street Boiler
- ✓ Replacement of M&R Area 6 Roof
- ✓ Installation of Baffle Plates in OBWRP Final Tanks
- ✓ Central Heat DCS Upgrade at SWRP

Total Estimated Cost: **\$17 Million**



Projects Scheduled for Presentation to the Executive Team on June 3, 2015

- Compost Turners for LASMA and CALSMA
- 06-212-3M: Digester Sludge Heating System Upgrades and Boiler Removal, CWRP
- 15-069-3D Rehab of Steel Beams of Pump & Blower House at OBWRP
- Rehabilitation of Centrifuge Rotating Assemblies, Stickney WRP
- 14-823-3D Safety Railings Around Tanks, SWRP

Total Estimated Cost: **\$23 Million**





1

IDEAS



Project Vetting Funnel



Project Vetting Funnel

VETTING PANEL

2

EVALUATION



DESIGN
CONSTRUCTION

EXECUTIVE TEAM

VETTING PANEL

M&R



Heng Zhang



Joe Kozak



Jonathan Grabowy



Ed Podczerwinski

ENG



Lou Storino



Justine Skawski



Steve Schwartz



Ted Szyszka

M&O



Sergio Serafino



Steve Carmody



Sanjay Patel



Joe Ford



Brian Perkovich



Neil Dorigan



END OF PRESENTATION on Vetting

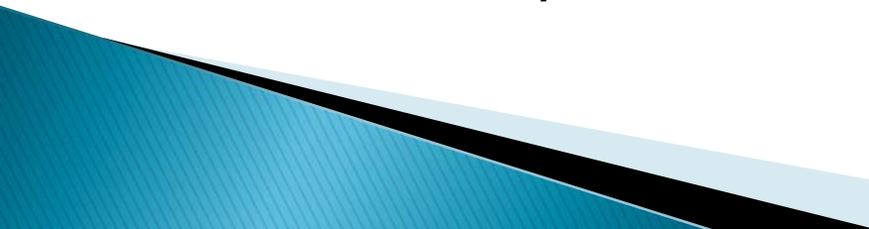




Developing a Long Term Capital Plan



Why Do We Need to Plan?

- ▶ **Ensure District Vision, Mission and Goals are Aligned**
 - Promotes clarity of direction
 - Align our organization with our strategic direction
 - Goals change– we need to constantly adapt
 - ▶ **Public Awareness & Responsible Governance**
 - Promotes organizational transparency and cooperation
 - Proactive verses reactive
 - ▶ **Be a Leader in the Wastewater Industry**
 - Regulatory concerns
 - Business initiatives
 - Community service level expectations
- 

Why Do We Need to Plan?

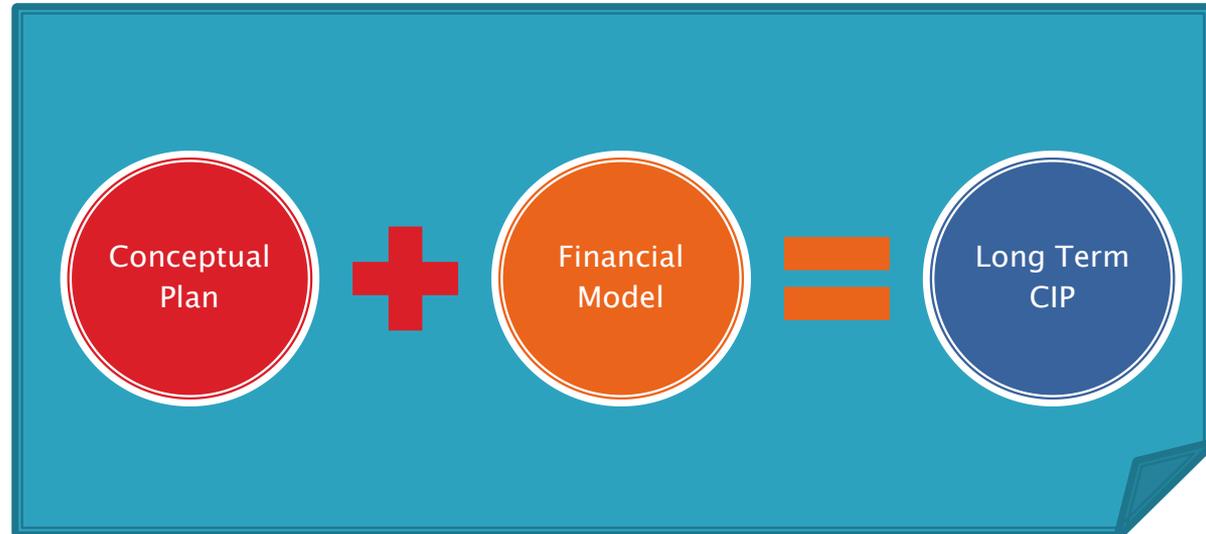
- ▶ Road Map to Ensure/Maintain Financial Stability
 - Provides clear direction of future needs
 - Ensures responsible use of capital funds
 - Live and operate within our means
 - Adhere to bonding limits
 - ~\$200 Million for limited and unlimited
 - ~\$50 Million for stormwater

Who Does The Planning?

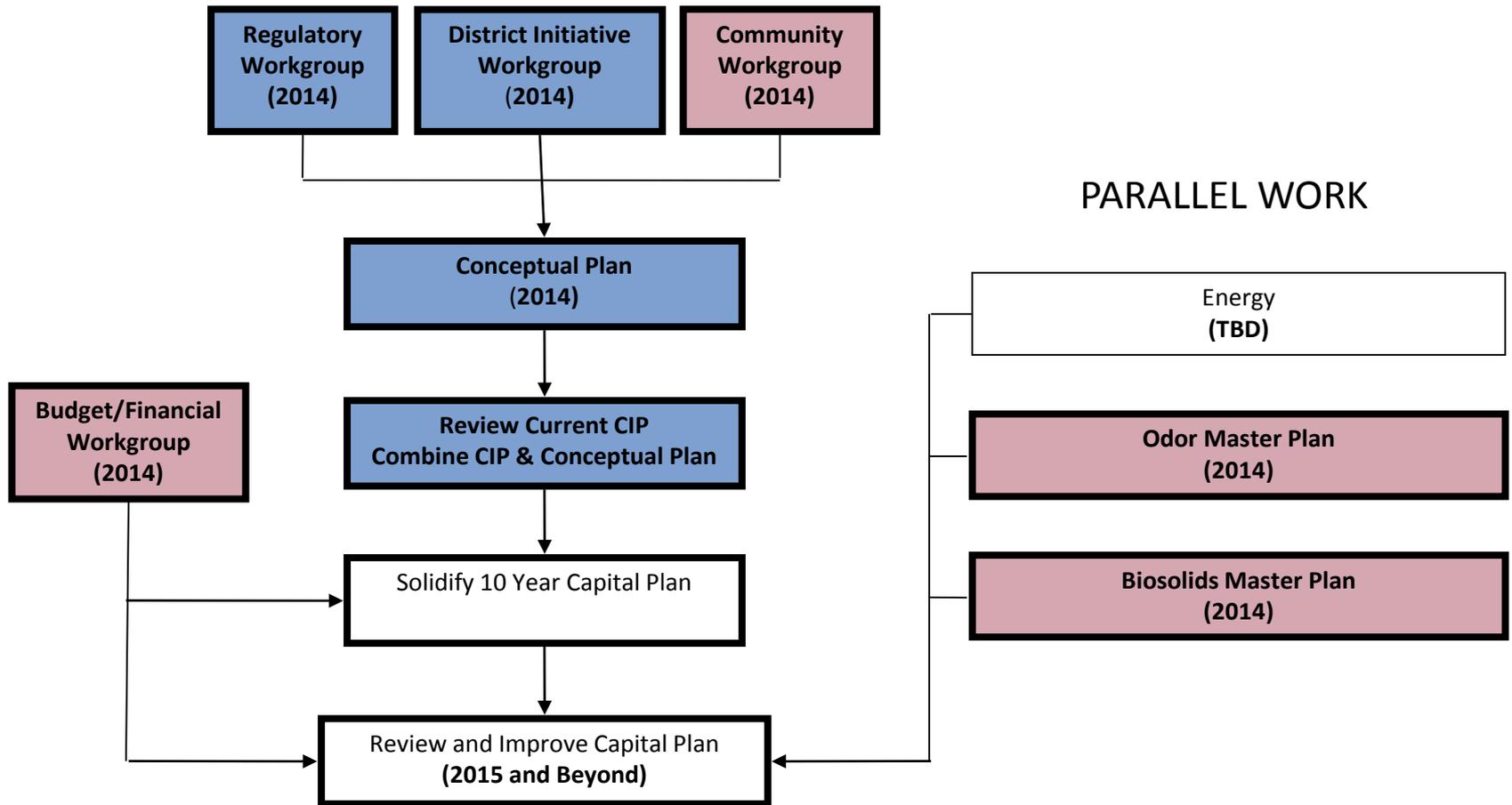
- ▶ Hint– It is the most capable people
 - Engineering
 - Maintenance & Operation
 - Monitoring and Research
 - Treasury
 - General Administration
 - Finance
 - Purchasing
 - Law

Planning Coordination

- ▶ Planning Group Placed in Environmental Monitoring and Research Department
 - Centralized Location
 - Synergy with Wastewater Research Section
 - Multidisciplinary Section (Civil, Mechanical, Electrical, Research Scientists)
 - Facilitates Data Driven Analysis
- ▶ Project Evaluation/Selection
 - Uniform Process
 - Triple Bottom Line
 - Economics
 - Technical Factors
 - Social / Environmental Considerations



How Are We Planning?



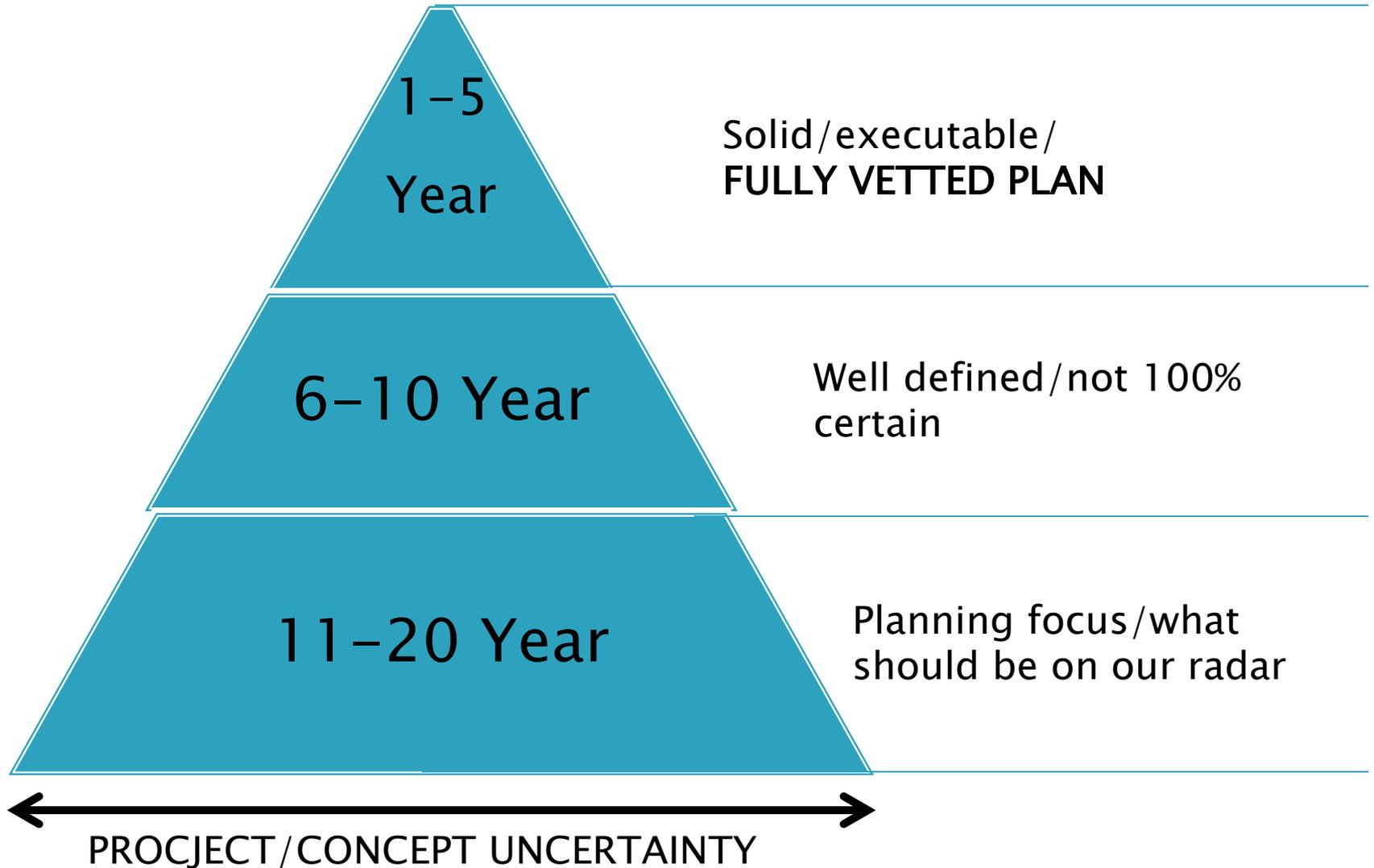
Regulatory Work Group

- ▶ Reviewed Current and Anticipated Regulatory Issues
 - ▶ NPDES Permits
 - ▶ Nutrients (P&N)
 - ▶ Ammonia
 - ▶ Bacteria
 - ▶ Clean Air
 - ▶ CSOs
 - ▶ DO
 - ▶ Discretionary Diversion
 - ▶ Part 503 (Biosolids)

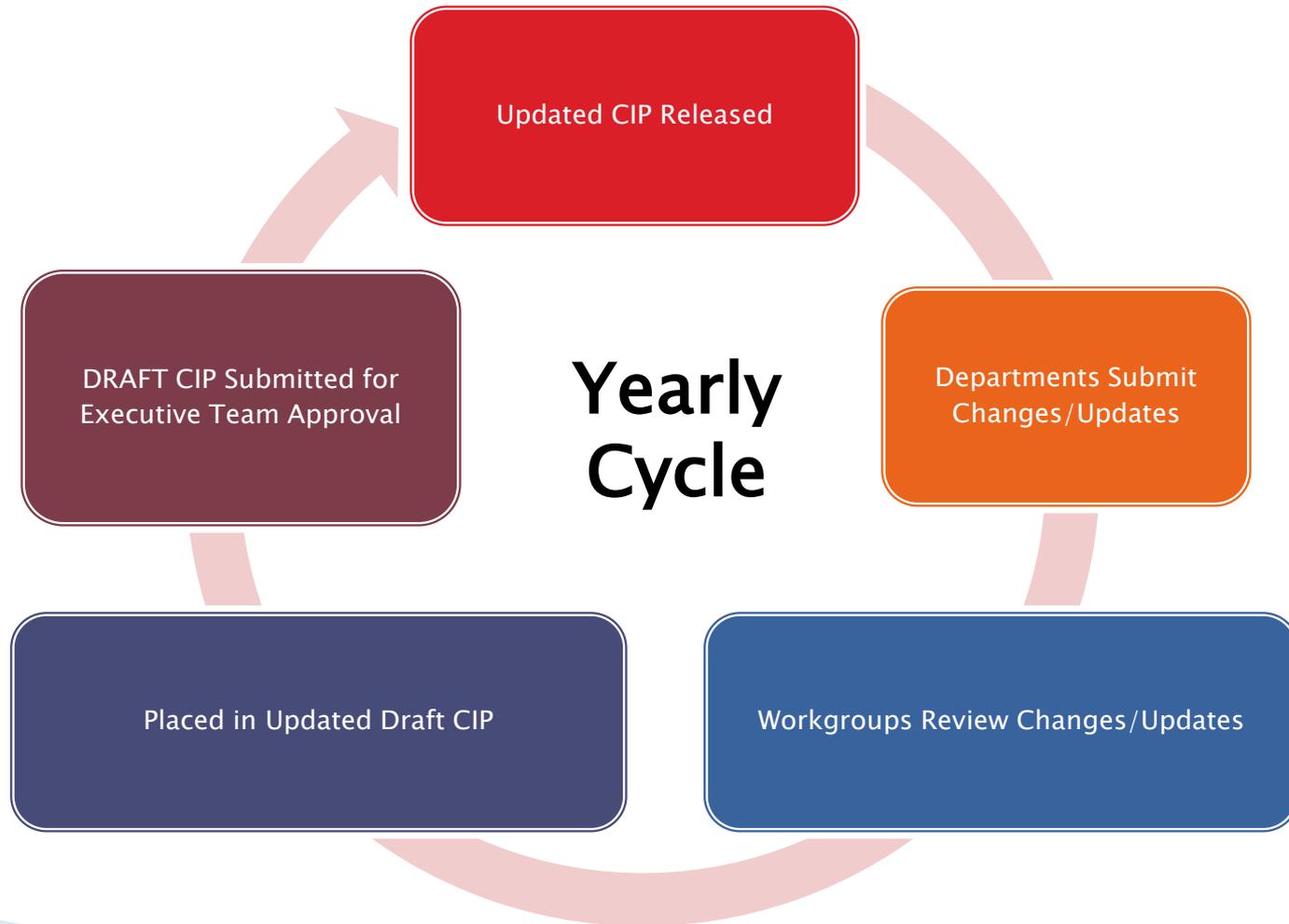
2014–District Initiatives Reviewed

- ▶ Reviewed All Current and Pending Initiatives
 - ▶ Performed SWOT Analysis
 - ▶ Identified Synergies, Competing Interests and Gaps in Knowledge
-
- ▶ Alternate Energy Evaluation
 - ▶ NH₃ Demand Based Control of Air Delivery
 - ▶ CWRP Digester Gas Utilization
 - ▶ CWRP Sidestream P Recovery
 - ▶ CWRP P Removal
 - ▶ EWRP Sidestream NH₃ Removal
 - ▶ EWRP Sidestream P Recovery
 - ▶ KWRP P Removal
 - ▶ Mainstream Shortcut Biological Nitrogen Removal
 - ▶ North Branch PS CSO Treatment
 - ▶ OBWRP Algae Treatment for Nutrient Removal
 - ▶ OBWRP P Removal
 - ▶ RAPS CSO Treatment
 - ▶ Resource Recovery
 - ▶ SWRP Digester Gas Utilization
 - ▶ SWRP Sidestream P Recovery
 - ▶ SWRP P Removal
 - ▶ SWRP Sidestream NH₃ Removal
 - ▶ SWRP WASSTRIP
 - ▶ SWRP West Side Primary Tanks
 - ▶ Treatment of TARP Reservoir Water

Capital Planning



How We Will Continue To Plan



What Have We Accomplished

- ▶ Created and Staffed Planning Section
 - ▶ Implemented and Documented a Planning Process
 - ▶ Increased Communication/Awareness
 - ▶ Identification of Areas for Further Study
 - ▶ A Better Understanding of What we Don't Know
 - ▶ Transparency
- 

Areas for Further Study

Areas of Study	Tentative Start Date
Treatment of Thornton Reservoir Water	2015/2016
O'Brien Algae Treatment/P Removal	On-Going
Mainstream Shortcut N Removal	On-Going
Lemont WRP Evaluation	2017
Hanover Park WRP Evaluation	2018
Bacteriophage Limits	2018? (EPA)
Alternate Energy	On-Going
Nitrogen Limits	2018
Stickney Disinfection	2023
Lemont Disinfection	2023
New Ammonia Limits	2023
Egan/Hanover Park/Lemont P Removal	2024
Egan Phosphorus Recovery	2024
Treatment of McCook Reservoir Water	2029
RAPS/NBPS CSO Treatment	2029

Planning Website

MWRD Long Term Capital Plan

On January 24, 2014 ([presentation](#)), the Executive Director presented a vision for long term strategic planning at the District. This vision identified the need for a plan to promote clarity of direction, provide a clear direction of future needs, and promote organizational transparency and cooperation. The vision served as the basis for the Long Term Capital Plan (Plan) framework which is predicated on a multi-department effort that will formally document the three drivers of the plan: (1) regulatory, (2) strategic business initiatives, and (3) community service level expectations. The Plan will focus on the to 20-year timeframe for the District and set a sustainable path forward with a frequent review cycle to keep the Plan in line with internal and external changes. Projects expected to be implemented prior to the 5 to 20-year timeframe are expected to go through the [vetting process](#).

A formal kickoff of the Plan was held on February 18, 2014 ([presentation](#), [minutes](#)) and set a schedule for the initial plan to be developed. The Plan development will occur in three phases and is schedule to wrap up in early 2015. The first phase of the Plan (March-May 2014) will review and document the regulatory factors and District Strategic Initiatives and will propose a methodology to understand the community service level expectations. The second phase of the plan (May - August 2014) will review the work products developed in the first phase to identify conflicts and synergies, identify gaps and overlaps, and present its findings to the Executive team. After direction is received from the Executive team, the third phase of the plan will be to review the District's CIP, make recommendations, and solidify the District's 10-year plan. Along with the three main phases of the Plan, additional parallel work will be developed to support the planning efforts including a Budget/Financial Workgroup that will bring financial constraints into the planning process as well as the Supporting Information Workgroup where tools (models, management processes, documents, etc.) will be recommended.

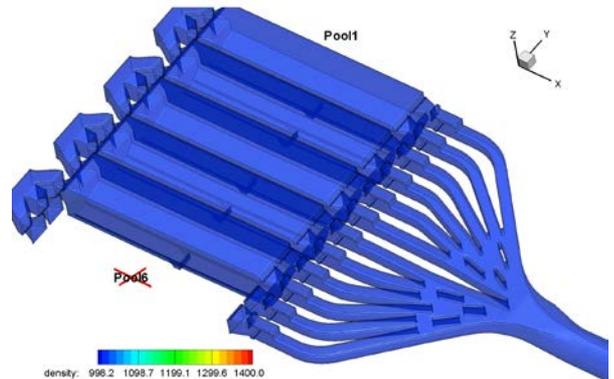
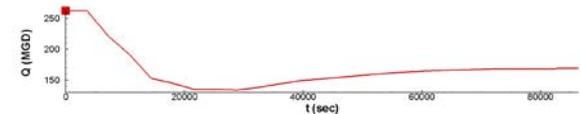
Below are links to minutes and the final work products of each process in the 2014 Plan development.

Phase 1

Regulatory Workgroup		Strategic Business Initiative Workgroup		Community Service Level Expectations Workgroup	
Group Members		Group Members		Group Members	
Jonathan Grabowy	Ed Podczerwinski	Junli Bai	Judith Moran-Andrews	Dan Collins	Ed Podczerwinski
Adam Gronski	Geeta Rijal	Reed Dring	Sanjay Patel	Jonathan Grabowy	Tony Quintanilla
Lakhwinder Hundal	Ted Szyszka, Jr	Jonathan Grabowy	Brian Perkovich	Avanti Kavathekar	Carmen Scalise
Avanti Kavathekar	Justin Vick	Avanti Kavathekar	Ed Podczerwinski	Kuldip Kumar	Joe Schuessler
Judith Moran-Andrews	Jennifer Wasik	Joseph Kozak	Heng Zhang	Tom Minarik	Jennifer Wasik
Susan O'Connell	Cameron Walker	Thomas Kunetz		Judith Moran-Andrews	Heng Zhang
Brendan O'Connor	Heng Zhang				
Minutes		Minutes		Minutes	
3-6-14		3-11-14		3-13-14	
3-24-14		4-14-14		5-2-14	
4-18-14		4-30-14			
5-16-14					
Documents		Documents		Documents	
Regulatory Summary Table		Project Forms		Summary of Involvement with Professional and Industry Groups	
Ancillary Regulatory Summary Table				Summary of Involvement with Community Groups	

Other Planning Items...

- ▶ Biosolids
 - District Biosolids Master Plan
 - Past, Present and Future
 - CWRP Biosolids Technology Evaluation
- ▶ Odor
 - District Odor Master Plan
 - CWRP Headworks/Grit
 - OdoWatch
- ▶ Modeling
 - Hydraulic
 - Process
 - Dispersion





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END OF PRESENTATION



Thank You!