A WATER LEADER'S GUIDE
TO FINANCING DISTRIBUTED INFRASTRUCTURE

Presented by WaterNow Alliance and Earth Economics

Green and "distributed infrastructure" (DI) programs can be an important part of how water agencies – drinking, wastewater, stormwater – meet their communities' needs. These smaller scale, localized programs perform the same functions as traditional infrastructure, safeguarding water supply and quality, protecting ecosystems, and managing urban runoff. They're often less expensive and easier to implement than conventional alternatives.

For many water agencies the challenge to scaling up – or even initiating – DI projects is **how to pay for them**. Since distributed solutions do not result in traditional fixed assets, utilities generally fund these programs out of annual operating cash, rather than using debt-finance. This limits their scale and impact. But DI programs provide lasting, multi-year benefits and so are not annual expenses either. This Fact Sheet is a brief guide to how public water agencies can invest their capital dollars in DI strategies that benefit their communities.

WHAT DO YOU WANT TO DO?

Create innovative, effective, affordable community-based programs to:

- Conserve water and use it more effectively.
- Avoid stormwater flooding.
- Prepare for sea level rise and droughts.
- Preserve local open space and streams.
- Keep water clean, safe, and healthy.

WHAT KINDS OF DI PROGRAMS CAN SUPPORT THESE GOALS?

DI programs can often be more flexible and less expensive than centralized alternatives. Examples include:

- Cash for grass rebates
- Incentives for permeable pavements
- Direct installation of high efficiency toilets for schools or lower income families
- Rebates for smart irrigation controllers or efficient indoor appliances
- Lead line replacement programs

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HOW DO I SCALE UP THESE PROGRAMS?

Large-scale investments in DI can provide significant public benefits. Here's how you get there:

- Start putting these solutions into your long-term capital planning process where you make decisions about large, multi-year spending.
- Think BIG!
- Use capital instead of cash to finance these programs.

WAIT - HOW CAN I USE CAPITAL INSTEAD OF CASH FOR DI?

GASB Statement 62 allows public agencies to book the cost of "business-type activities" as assets instead of annual expenses. These are called "regulatory assets" and can be capitalized.

- The regulated assets approach is a complete alternative to traditional public agency accounting for capital assets.
- This allows utilities to access debt-financing for DI.
- GASB has issued draft guidance clarifying that water utility spending on DI can qualify for GASB 62 accounting. Final guidance is expected in April 2018.

WHAT'S REQUIRED FOR MY UTILITY TO DO THIS?

GASB 62 has three requirements that apply to virtually all public water utilities:

- Does your agency have a governing Board empowered to set rates for your agency?
- Can your board set rates to pay for the cost of the specific programs you want to finance (as you would for ordinary capital spending)?
- Can your board commit to setting rates in the future to pay for the cost of these programs today (as you would for ordinary capital spending)?

If you answer YES to all three, you are good to go with the Regulated Assets approach to finance your DI investment with capital instead of annual operating cash.

HOW/WHERE DO I START?

Decisions always require back and forth with your team, and getting answers to everyone's questions. Here's guidance to get you started:

- Identify and prioritize DI solutions that could benefit for your community.
- Check with your bond counsel to make sure there are no legal impediments.
- Check with your outside auditor to make sure they are aware of the new GASB 62 guidance and are comfortable with your proposal.
- Check with your financial advisor about potential benefits of "green" bonds.
- Go for it.

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TURF REPLACEMENT / "CASH FOR GRASS"

- 30-60% of residential water is used outside
- Replacing turf with a low water landscape or drought tolerant "xeriscape" can save up to 70%
- Maintains urban green space, avoids heat islands

SMART IRRIGATION CONTROLLERS

- ~50% of water used for landscape irrigation is wasted
- Use satellite weather data and site-specific conditions to adjust watering schedules and limit over-watering

LEAK DETECTION DEVICES

- 13% indoor urban water use lost to leaks
- Monitor water flow, send alerts
- Can include remote shutoff

RAINWATER CAPTURE

- Collect/store water from roofs, hard surfaces
- Water mainly for landscaping
- Reduce stormwater runoff and sewer overflows

GREYWATER REUSE

- Greywater includes "soapy" from sinks, showers, laundry
- Uses a 3-way valve to redirect grewater for irrigation
- Safe for plants, but needs some landscape design

RESIDENTIAL HIGH EFFICIENCY INDOOR APPLIANCES

- The toilet alone can use up to 27% of household water
- Toilets, clothes washers, dishwashers

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ONSITE NON-POTABLE RE-USE SYSTEMS

- Capture/treat/reuse water generated onsite
- Black, grey, storm – for irrigation, toilets, air conditioning
- Mainly large buildings, new community developments

CONSTRUCTED WETLANDS

- Wastewater and stormwater treatment
- Uses natural processes with specific vegetation, soils and bacteria
- Fewer chemicals, less energy to operate, fewer greenhouse gasses than conventional treatment

COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL UPGRADES

- Retrofits to improve cooling tower efficiency
- Replacing water-cooled with air-cooled equipment
- Commercial appliances for kitchens and laundries

GREEN STORMWATER INFRASTRUCTURE

- Permeable pavements allow water to soak slowly into ground
- Green roofs filter contaminants, absorb rainfall, delay runoff
- Both reduce stress on stormwater systems

WATERSHED RESTORATION / LAND CONSERVATION

- Active forest and land management to protect source water quality
- Fire and flood protection
- Groundwater recharge

LEAD LINE REPLACEMENTS

- Address major health risks, social equity issues
- Children particularly vulnerable
- Large-scale, community-wide replacement programs or financial incentives can accelerate removal

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